

# E Policy responses to labour market adjustment and distributional changes

If the economy is to benefit from technological change and trade, workers will often have to change jobs or occupations, a process which may cause dislocation for workers. The more smoothly this process takes place in the labour market, the lower the adjustment costs for displaced workers and the greater the net gains to society from technological change and trade. Governments and other institutions can make the labour market more responsive to economic change through a range of measures that are targeted primarily at, but not focused exclusively on, the labour market. Reducing the costs of adjustment for workers can also lower public resistance to technological change and prevent the rise of trade protectionism.



## Contents

1. Labour market adjustment policies	134
2. Competitiveness-related policies	146
3. Compensation for permanent income losses	149
4. Conclusions	152

## Some key facts and findings

- A combination of adjustment, competitiveness and compensation policies is necessary in order to maximize the benefits to society of technological changes and trade openness.
- Adjustment policies are usually intended to promote economic efficiency, assist those adversely affected by economic change, and maintain political support for trade openness.
- Active labour market policies, employment protection and compensation schemes can help to alleviate labour market dislocation arising from economic change. The balance needed between these measures varies according to the political, social and economic circumstances of the country concerned.
- Compared to industrialized countries, a larger share of the workforce in developing countries is employed in the informal sector, in agricultural work and in state-owned enterprises. Adjustment programmes in developing countries need to take into account the particular challenges that arise from those sectors.
- Self-employment and the informal sector can provide an important buffer for workers who lose their jobs in formal employment.
- Policies focusing on improving infrastructure, credit markets and education opportunities can make an economy more resistant to economic shocks and more receptive to opportunities created by technological change and trade.
- In addition to mitigating the costs of adjusting to economic change, should governments adopt measures to address how the consequences of trade and technological change are unevenly distributed? There is little support for the view that trade-opening and globalization hinder the capacity of governments to adopt such measures.



The first part of this section discusses the main types of domestic policies that countries have implemented to make the labour market more flexible and to mitigate the costs of adjustment to economic shocks. This is followed by a discussion of competitiveness-related policies that allow workers and firms to take better advantage of the opportunities offered by technological change and trade. Given that these economic changes sometimes leave some workers worse off in the long run even when they find new employment, the section goes beyond adjustment and competitiveness-related measures to discuss the role of compensation policies.

## 1. Labour market adjustment policies

This subsection discusses labour market policies intended to assist workers affected by economic change and the rationale for these adjustment policies. It develops a framework for examining these policies and discusses some of the issues that have been raised in the trade or economic literature on countries' experiences with these programmes.

### (a) Rationale for adjustment policies

We begin by exploring the reasons why governments may want to intervene in the economy, and in labour markets in particular, to respond to the impacts of technological change or trade.

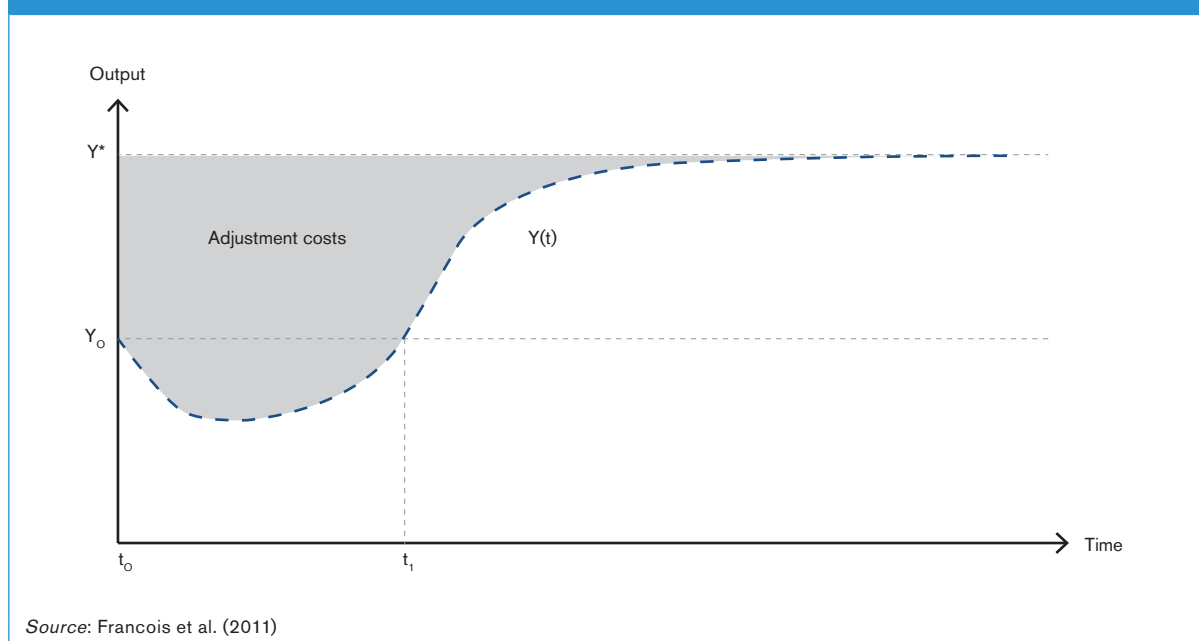
### (i) Efficiency

Adjustment policy refers broadly to measures taken to lower the cost of reallocating resources, in particular labour, as a result of technological change or greater trade competition. As was discussed in Section B, there may be frictions (arising from skills mismatches, lack of geographical mobility, etc.) that impede the ability of the economy, and in particular that of the labour market, to effect a swift and smooth transition to a new equilibrium. Market failures in credit and insurance markets, a lack of information about jobs, and inadequate infrastructure can also hamper adjustment. The costs that arise from these problems of adjustment reduce the benefits that a society obtains from technological progress or more open trade. In effect, adjustment policies should aim to make the labour market and the economy in general function more efficiently in responding to economic changes (Magee, 2001).

Francois et al. (2011) provide a useful way of conceptualizing the adjustment costs to technology changes or trade for the economy as a whole. It is the value of output that is foregone in the transition from the initial pattern of production to the new long-run production pattern because of the time taken to reallocate factors from their initial to new occupations.

In Figure E.1, trade liberalization takes place at  $t_0$  and would have resulted in output jumping immediately from  $Y_0$  to the higher value  $Y^*$  in the absence of frictions in the labour market. In the presence of

Figure E.1: Adjustment costs path following an economic shock



frictions, output will instead follow a path like the dashed curve  $Y(t)$ , where it first dips below the original output level  $Y_0$  and remains below it for some time before eventually rising above  $Y_0$  at time  $t_1$  and converging to the new equilibrium  $Y^*$ . If the “no labour market frictions” scenario is used as the benchmark, adjustment costs would be equal to the present value of the foregone output represented by the area below the line  $Y^*$  but above the dashed curve  $Y(t)$ .<sup>1</sup> This foregone output could also include any resources that are allocated for retraining workers and for job searches.

One limitation of this conceptual approach is that it may not give a full picture of how individual workers fare as a result of an economic shock. Even when the economy converges towards the new equilibrium, some workers may still find themselves with incomes that are lower than what they earned in their previous employment.

Market failures can hinder the reallocation of workers in the aftermath of disruptive technological change or greater import competition, and reduce the benefits that countries can reap from technological progress or trade (see also Section D.3(b), which discusses briefly the factors which make the adjustment process smoother). For example, credit market imperfections can constrain workers from borrowing to open a business, or pulling up stakes to seek opportunities elsewhere, or improving their skills. The faster pace of innovation and an economy’s openness to trade

may increase the level of employment uncertainty faced by a worker. In ideal circumstances, a risk-averse worker would be able to purchase insurance from the market. But the threat of moral hazard<sup>2</sup> and adverse selection<sup>3</sup> may make private insurers unwilling to provide such insurance, which would then require some form of public intervention. Under these circumstances, the most common form of such insurance is unemployment insurance.

Lack of information<sup>4</sup> on job opportunities can mean that workers remain unemployed even though there are job vacancies in the market. Inadequate infrastructure — of roads, means of transportation and housing — can make it costly for workers to move to be closer to employment opportunities. Under these conditions, government intervention to correct market failures will lower the cost of adjustment and lead to greater net benefits for society.

Box E.1 explains in some detail how the presence of one type of market imperfection — high search costs in labour markets (discussed in Section B) — can create external effects that result in a lower-than-socially-optimal level of job search.

While this discussion implies a strict economic efficiency rationale for adjustment policies, there are likely to be other reasons why governments intervene in the economy and in labour markets to respond to trade or technology changes.

#### Box E.1: Labour markets with search costs

One way to understand why adjustment programmes can improve economic efficiency is to embed the discussion in the context of a model of the labour market with search costs (Diamond, 1982; Mortensen, 1978; Pissarides, 1979). The basic idea is that workers and firms have to use up scarce resources before they can be matched up and for production to take place (Pissarides, 2000). This is because workers are heterogeneous and not perfectly substitutable, which means retraining will often be needed, and jobs will differ in requirements and in what they pay. Workers may be plentiful in one geographic area whereas jobs may be available elsewhere. Information about jobs and vacancies may also be hard to obtain. A labour market with search costs is marked by spillover effects that are created because firms and workers do not take into account the consequences of their search decisions.

Consider a worker (or a firm for that matter) who decides to increase her/his search activity. This decision will reduce the chances of other workers to find employment, the so-called “congestion” effect, but these negative external effects are not taken into account by the job-seeker (Diamond, 1982). On the other hand, if this more intensive search results in a successful match with an employer, it will remove that employer from the other side of the market, defined as the “thick market” effect, thereby saving society that firm’s search costs (Pissarides, 1984). Again, the worker does not take these societal gains into account in her/his decision-making. In general, the market outcome does not necessarily achieve an optimal balancing of these two countervailing effects.

It is possible that more import competition or technological change can result in a situation where the “thick market” effect dominates, which means that neither firms nor workers are searching enough. In this case, governments have a role to play by subsidizing more searches to achieve the efficient level of matching between firms and job-seekers.

## (ii) *Equity*

Society may judge it unfair that some citizens, who are often those less able to bear the cost of adjustment, have to shoulder the cost of more open trade or technological progress while other citizens appropriate the benefits. Adjustment policy offers a way to compensate those who lose out from the economic dislocation caused by trade or technological progress (Aho and Bayard, 1984).

Beyond the mere cost of adjustment, trade and technological progress may result in a permanent reduction in the incomes of some groups and outsized gains to others, worsening the distribution of income. Governments may take steps beyond adjustment policies to reverse some of these distributional effects. Section E.3 looks in more detail at the issue of compensation.

## (iii) *Political economy*

There can be a political dimension to adjustment programmes, particularly in those instances of economic change over which policymakers have some or a great degree of control. For example, a number of theoretical papers have shown that adjustment assistance offered to trade-impacted import-competing workers can facilitate trade liberalization (Feenstra and Lewis, 1994; Fung and Staiger, 1996; Davidson et al., 2007). Fung and Staiger (1996) suggest that the use of adjustment assistance rather than the General Agreement on Tariffs and Trade (GATT) legal escape clauses provides assurance to one's trade partners that tariff reductions negotiated under the trade agreement would not be undone. According to Davidson et al. (2007), adjustment policies increase the likelihood that the median voter will support trade liberalization.<sup>5</sup>

Other political economy models of trade may also lend support to the relevance of adjustment programmes. Olson (1965) observed that the benefits from trade are dispersed among the many while the losses tended to be concentrated on a few. Further, the transaction costs of organizing support for or opposition to trade rises with the number of people who have to be involved. This means the cost-benefit calculus of political agitation favours the few who have a lot to lose but who are less costly to organize to influence political decision-makers. If adjustment programmes are able to target precisely those adversely affected by trade and compensate them adequately, they may succeed in tempering a backlash against trade. Magee (2001) provides some evidence that declines in tariff protection lead to increased certification of workers for adjustment assistance in the United

States. However, the econometric estimates Magee obtains are very sensitive to the specification of the model, so in the end he concludes that the evidence of a political economy motivation for adjustment assistance is inconclusive.

It is unlikely that adjustment programmes will have only a single objective and far more likely that they will have multiple objectives, although the weight that policymakers place on any of them may be difficult to determine. Having multiple objectives means that there are bound to be trade-offs that policymakers will face. For example, providing unemployed workers with unemployment benefits (equity objective) may dampen their effort to search for alternative employment and thus slow down the process of reallocation of workers from the import-competing to the export sector (efficiency objective).

Furthermore, there are deadweight costs to raising tax revenues to fund adjustment programmes. This means that even if policymakers only care about efficiency, smoothing the process of adjustment by additional spending on training has to take into account the welfare cost of raising the revenues needed to finance those programmes.

## (b) A framework for examining adjustment policies targeting the labour market

While the previous subsection examined the objective(s) of adjustment policies, this subsection looks more closely at the design of the instruments used to achieve those objectives. This subsection presumes that the design of those programmes matters and that it may be possible to determine what elements in isolation or in combination work best. Given the multiplicity of possible objectives, it may at least be possible to characterize the trade-offs that specific designs create. In order to do this, it is necessary to develop a framework for examining adjustment programmes (Brander and Spencer, 1994; Davidson and Matusz, 2006; Blanchard et al., 2013; Lawrence and Litan, 1986; Andersen et al., 2007).

### (i) *General or specific adjustment programmes*

It is sometimes useful to distinguish between general adjustment and specific adjustment programmes. By a general adjustment programme, what is meant is designing labour market, education and social policies so that they help workers to adjust to economic change, no matter what its initial cause may have been. A specific adjustment programme is one meant to assist those workers displaced by a specific type of economic change, such as greater import



competition. Box E.2 gives examples of general and specific adjustment programmes.

## (ii) *Active or passive labour market policies*

Another way to distinguish between adjustment programmes is to determine whether they involve active or passive labour market policies. Active labour market policies aim to increase the likelihood of unemployed workers finding new jobs. Typically, they involve measures such as training or job-search assistance, but they can also include employment incentives, supported employment, and direct job creation (Nie and Struby, 2011). Passive labour market policies do not directly help workers to find jobs, but they do help displaced workers by providing them with financial support. They typically consist of income replacements such as unemployment insurance or early retirement benefits for older workers who are deemed unlikely to find new employment. Passive labour market policies include unemployment insurance, employment protection,

minimum wage and other forms of income support. They can complement active labour market policies by providing compensation to those who lose out from economic change.

Active labour market policies increase the efficiency of the labour market by improving its ability to match jobs and vacancies and enhancing the skills of unemployed individuals. Activation strategies provide incentives for workers to increase job search intensity through benefit sanctions or mandatory participation in training or subsidized employment (Boeri and Van Ours, 2008; OECD, 2015a). These strategies have been shown to increase re-employment rates, especially in the cases of those who are hard to place and the long-term unemployed (OECD, 2015a). Additionally, benefit sanctions can help to speed up reemployment (Van Der Klaauw and Van Ours, 2013).

Evidence from Canada (Riddell, 1995) and Sweden (Carling and Richardson, 2004; Forslund and Krueger, 2010) shows that on-the-job training is more effective than classroom training in raising the

### Box E.2: European Social Fund and European Globalisation Adjustment Fund

A key component of the Lisbon Strategy, the European Social Fund (ESF) is the European Union's main *ex ante* (in the context of adjustment costs) instrument to promote employment, growth and social cohesion. The main objectives of the programme include promoting sustainable and quality employment and supporting labour mobility; promoting social inclusion and combatting poverty and any discrimination; investing in education, training, and vocational training for skills and life-long learning; and enhancing the institutional capacity of public authorities and stakeholders (Dickinson and Lloyd, 2010).

It tries to create inclusive labour markets by improving access to employment for jobseekers and the unemployed, focusing on the sustainable integration of young people and helping those who face greater challenges in integrating into the labour market and undertaking sustained work. The ESF programs are run by a wide range of "beneficiaries" (public administrations, workers' and employers' organizations, non-governmental organizations, charities, etc.) and the individuals who take part in the programme are known as participants.

The European Globalisation Adjustment Fund (EGF) is the European Union's main *ex post* instrument to assist workers who are affected by changing trade patterns. Its main objectives have been to keep workers in employment or help them regain employment after redundancy by improving their skills and employability using a heterogeneous set of interventions. A non-exhaustive list of the interventions includes providing information to dismissed workers, offering advice and guidance through individual case management, training, recruitment and employment incentives, and promoting entrepreneurship, financial and subsistence allowances.

The EGF is designed to provide workers with support for a limited time period in cases where there have been at least 500 redundancies over a period of four months (nine months in the case of small and medium-sized enterprises, or SMEs) in an enterprise (or its suppliers or downstream producers) in a member state and in small labour markets or under exceptional circumstances. Application to the programme must be made by member states, and the EGF can pay up to 60 per cent of the total cost of any active labour market policies that the member state proposes. The rest of the cost of the programme must be paid for by the state at the local or national level or through private funds. The implementation period for the programme starts from 24 months after the application. Studies evaluating the EGF are discussed in Section E.1(c).

probability of employment. Workers acquire far more skill-enhancing knowledge on the job than in the classroom (Jacobson, 1998). Job search assistance can help the matching process, although recent research suggests that those who for whom jobs are found may do so at the expense of other unemployed workers who do not receive assistance (Crepon et al., 2013).

Studies of the United States show that re-employment bonuses can improve job-finding rates and are more effective when they are targeted towards workers instead of employers (Woodbury and Spiegelman, 1987). Additionally, they are cost-effective when targeted at the potentially long-term unemployed (O'Leary et al., 2005). In the case of wage subsidies, payments made to workers are shown to be more effective than those paid to employers (Dickert-Conlin and Holtz-Eakin, 2000).

### (iii) *Ex post and ex ante adjustment policies*

Another important distinction between adjustment programmes relates to the time dimension. Adjustment programmes may be *ex ante*, that is, they can be activated even in advance of the economic dislocation, or they can be *ex post*, which means the assistance will only be made available after the economic damage has occurred. Box E.2 compares

the European Globalisation Adjustment Fund (EGF), an *ex post* programme, with the European Social Fund (ESF), an *ex ante* programme.

### (iv) *The wider context*

Finally, there is research to suggest that it would be a mistake to examine adjustment programmes in isolation from the wider political, social, economic and perhaps international context of the country. This interaction between the adjustment programme and the wider context means that successful outcomes are not explained solely by the nature of the adjustment programme but also depend on the degree of trust and confidence that the various sectors of society have in one another (Blanchard et al., 2013). For instance, Andersen et al. (2007) discuss how the Nordic model for adjustment programmes relies on a feeling of trust and a sense of fairness among the citizens of a country. Box E.3 discusses the Danish flexicurity model.

To take the notion further, that the wider context matters in facilitating adjustment, one can look at the trend for the private sector to adopt socially responsible behaviour. Corporate social responsibility (CSR) encompasses economic, legal, ethical and discretionary expectations that society has of particular organizations at a given point in time

#### Box E.3: The Danish flexicurity model

The Danish flexicurity model involves three main pillars (Andersen et al., 2007): (i) a comprehensive welfare state with an emphasis on transfers to households and publicly provided social services financed by high taxes; (ii) a lot of public and/or private spending on investment in human capital, including child care and education as well as research and development (R&D); and (iii) a set of labour market institutions that include strong labour unions and employer associations, significant elements of wage coordination, relatively generous unemployment benefits and a prominent role for active labour market policies.

These three elements are expected to work together to create:

- a flexible labour market (the “flex” part of flexicurity) with employers able to hire and fire workers quickly depending on economic circumstances;
- unemployment security (the “security” part of flexicurity) in the form of a guarantee for a specified level of unemployment benefits to workers who lose their jobs; and
- a system of active labour market policies to help unemployed workers get guidance, education and ultimately a new job.

While the Danish model, and more broadly the Nordic model, is held up as a success story in dealing with the effects of trade opening, its effectiveness is often attributed to societal idiosyncrasies, i.e. a feeling of trust and sense of fairness prevalent in society (Andersen et al., 2007). The combination of flexibility and security together with collective risk-sharing by citizens and institutions might be a unique product of contemporary Nordic societal norms and values.

(Carroll, 1979). There are international standards and initiatives related to CSR, such as the SA8000 (1998) certification, issued by the International Organization for Standardization (Kitzmüller and Shimshack, 2012) and based on human and labour rights. Another prominent standard is the OECD's Guidelines for Multinational Enterprises. The SA8000 certification represents a new form of private governance of working conditions made jointly by companies, labour unions and non-governmental organizations (Hiscox et al., 2008). Currently, over 2 million employees in about 4,000 facilities are certified under the standard.

CSR-labour market relations are often analyzed in a theoretical framework of information asymmetry involving adverse selection and moral hazard (Kitzmüller and Shimshack, 2012). There may be different types of workers, those who work hard and those who shirk, between whom hiring firms may not readily be able to distinguish. Hence, firms have to expend resources to screen potential employees, while job applicants also need to use resources to signal their type to the firms. Greening and Turban (2000) show that CSR can act as a positive signal to attract a quality workforce. Additionally, a firm perceived as high in social responsibility may face relatively few labour problems, and public-private cooperation (as discussed earlier) has been shown to be very effective for the design and implementation of training programmes. Brekke and Nyborg (2004) argue that CSR can reduce moral hazard in the labour market and can act as a screening device for firms that want to attract motivated agents. These results are consistent with Stigler's (1962) classic insight that non-monetary

conditions of employment can enable firms to pay lower wages and still attract good workers.

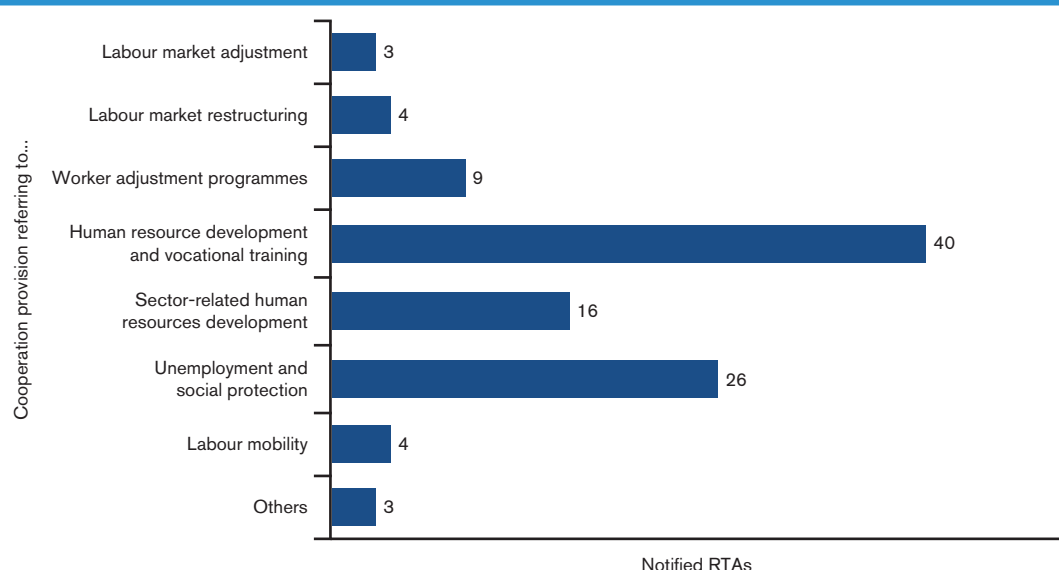
### ***International context: labour-market adjustment provisions in regional trade agreements***

There is also an international context to consider. Since the use of adjustment measures can have an impact on other countries through trade, trade agreements sometimes include provisions on adjustment measures.

Regional trade agreements (RTAs) are sometimes considered as a laboratory in which countries establish new provisions and address new trade-related issues and challenges. A review of the 280 RTAs currently in force and notified to the WTO as of June 2017 suggests that only a limited number of agreements incorporate explicit provisions referring to labour market adjustment, as shown in Figure E.2. Although the language differs between agreements, all of these provisions identify labour market adjustment as an area of cooperation. Most of these provisions are found in the RTA's chapter on labour.<sup>6</sup> Some relevant provisions are, in certain cases, also included in the RTA's chapter on cooperation or in a side agreement on labour cooperation.

The RTAs to which the European Union is a party with the Caribbean Forum (CARIFORUM), Georgia and the Republic of Moldova are the only notified agreements explicitly to mention "labour market adjustment". In particular, both agreements negotiated with Georgia and the Republic of Moldova identify labour

**Figure E.2: Cooperation provisions related to labour market adjustment in RTAs**



Source: WTO Secretariat based on WTO RTA database



market adjustment, human resources development and lifelong learning, and social protection as potential areas of cooperation in the context of the trade-related aspects of the International Labour Organization's (ILO) Decent Work Agenda.<sup>7</sup>

The RTA between the European Union and CARIFORUM also refers to labour market adjustment in two provisions. First, the parties agree to seek advice from the ILO on, among other things, the use of effective policy tools for addressing trade-related social challenges, such as labour market adjustment. Second, the parties agree to cooperate, including by facilitating support, in educational and awareness-raising programmes, including skills training and policies for labour market adjustment. In a Joint Declaration on Development Cooperation, the parties further recognize the important adjustment challenges that the implementation of the agreement will pose, in particular to smaller economies among the CARIFORUM states.

Instead of referring to labour market adjustment, the RTAs negotiated by the European Union with the former Yugoslav Republic of Macedonia, Montenegro and Serbia specify that social cooperation shall focus on upgrading job-finding and careers advice services, providing back-up measures and promoting local development to assist industrial and labour market restructuring. The RTA between the European Union and Algeria also explains that alleviating the adverse impact of the adjustment of economic and social structures is one of the priority measures for social cooperation. Similarly, the RTAs to which the European Union is a party with Jordan, Morocco and Tunisia state that economic cooperation shall focus primarily on sectors suffering from internal difficulties or affected by the overall process of liberalization of the developing party's economy, in particular trade liberalization.

Another approach adopted by the RTAs to which the United States is a party with the Kingdom of Bahrain, Chile, Colombia, the Republic of Korea, Morocco, Panama and Peru is to list worker adjustment programmes, along with unemployment assistance programmes and human resource development and life-long learning programmes as potential cooperative activities. The RTA between Chile and Colombia and the memoranda of understanding on labour cooperation negotiated by China with Peru and New Zealand incorporate a relatively similar provision. A related provision found in both US RTAs negotiated with North America (Canada and Mexico) and Chile stipulates that the institution established under the agreement shall or may prepare background reports setting out publicly available information supplied by the parties on various topics, including human

resource development issues, such as training and adjustment programmes.

The identification of provisions related to labour market adjustments is, however, not always straightforward. In fact, several other agreements identify human resource development programmes as an area of cooperation, without explicitly mentioning the terms "labour market adjustment" or "worker adjustment programmes". This is the case of the US RTAs negotiated with Singapore, Central America and the Dominican Republic, and Panama. The two latter agreements also mention the development of programmes to promote new employment opportunities and workforce modernization, including employment services, as another potential area of cooperation.

A relatively similar provision mentioning labour market policies, including measures promoting employability, vocational training, skills development and the unemployment insurance system, is found in several agreements, including the RTA between Switzerland and China, and that between Singapore and Costa Rica, as well as in the memorandum of understanding on labour cooperation associated with the Trans-Pacific Strategic Economic Partnership. More recently, the RTA between the European Union and Ukraine defines a number of objectives for cooperation on employment, such as promoting labour market conditions combining flexibility with security, supporting active labour market measures and improving the efficiency of employment services to match the needs of the labour market.

While provisions on human resource development are found within an article in most RTAs, a few agreements, such as the RTA between Australia and Singapore and the RTAs to which Japan is a party with Malaysia, the Philippines, Thailand and Viet Nam, incorporate a cooperation chapter or section dedicated to education and human resource development with detailed provisions specifying the areas and forms of cooperation. Some of the agreements negotiated by Japan also establish a subcommittee or working programme on education and human resource development in charge of various specific tasks, including exchanging views and information and making recommendations.

In other agreements, some of the cooperation provisions promoting human resource development are specific to certain sectors. For instance, the RTAs to which Japan is a party with Mongolia and Singapore, and the RTA between the European Union and South Africa, identify the development of human resources with advanced knowledge and skills in information and communication technologies as an

area of cooperation. Other similar provisions found mostly in agreements signed by Japan, the European Union and the Common Market for Eastern and Southern Africa (COMESA), focus cooperation on the development of human resources in agriculture, forestry and fisheries, energy, the manufacturing industry, textiles, transportation, financial services, health care and tourism. For instance, the RTA between the European Union and Jordan gives special attention to cooperation on vocational training for industrial restructuring. A few agreements, such as the RTAs negotiated by China with Chile and Costa Rica, include another cooperation provision referring to the development of human resources and management skills in small and medium-sized firms in order to increase the knowledge of their respective markets.

Other cooperation provisions potentially relevant to labour market adjustments are specific to one or a couple of agreements. For instance, the labour cooperation agreement negotiated by China and Chile in parallel to their RTA stipulates that the parties shall carry out mutually agreed cooperation, including on globalization and its impact on employment. Another provision found in the agreements on labour cooperation to which Canada is a party with Colombia and Peru refers explicitly to labour mobility.<sup>8</sup> In particular, the parties recognize the mutual benefits to be gained by enhancing labour mobility, and they commit to exploring avenues for reaching this objective by (i) exchanging labour market information to enhance worker and employer awareness of labour needs and labour force availability, (ii) facilitating public-private sector partnership initiatives regarding labour market intermediation, and (iii) facilitating initiatives allowing training institutions to develop tailored curricula.

Similarly, the RTA between the European Union and Central America commits the parties to promoting actions and programmes aimed at, for example, creating well-functioning labour markets, extending social protection coverage, exchanging best practices in the field of workers' mobility, and addressing issues relating to the informal economy.

#### (v) *Regional development policies*

Section D discusses how in some industrial countries, the labour impacts of trade tend to be concentrated in particular regions and can be quite acute. While enhancing labour mobility is often held up as a good solution to this problem, many workers are often not willing to move for a wide range of reasons. One solution to this could be well-designed regional development policies which would focus on reintegrating displaced workers into the labour force

by creating more jobs on-site (see Suedekum, 2017). Such programmes could involve direct subsidies to firms as well as infrastructure investment. Suedekum (2017) has suggested there is evidence that some types of place-based policies deliver quite well, including the relocation of large public agencies to depressed areas, which in turn triggers local multiplier effects. Among other benefits, such policies can increase social solidarity and reduce disparities in important indicators of well-being between regions.

There are many existing regional development programmes but they generally have broader objectives beyond supporting job creation. In the case of the European Union's regional policy for example, other goals include "business competitiveness, economic growth and sustainable development" (European Commission, 2015). However, the labour market and training and education feature prominently as areas of intervention. Hence, it may be possible to redesign existing regional development programmes so they have a narrower focus on finding employment for displaced workers at their region of residence.

#### (c) How well have adjustment policies worked?

This section reviews the literature that has examined the labour market outcomes from adjustment policies and attempts to identify what makes for effective adjustment programmes. Although studies of programmes in developing countries are included in this section, most of the evidence is drawn from the experience of advanced economies.

Since adjustment programmes are meant principally, but not exclusively, to reduce the costs of reallocating resources in the aftermath of trade or technological change, they have been evaluated based on the re-employment rates of workers, how much wages have been recovered upon re-employment, the financial costs of running the programme, and whether the programmes meet social cost benefit criteria. However, since there may be equity and political economy rationales behind these programmes, the programmes' success may also be judged by how much they cushion workers from economic losses or blunt calls for restrictions on trade or technological progress.

General programmes tend to show marginally better results in terms of re-employment rates, wage change on re-employment, net financial costs and social benefits. The size and coverage of specific programmes are often very small. For instance, the Trade Adjustment Assistance (TAA) and EGF had budgets of US\$ 800 million in 2015 and US\$ 153 million in 2014 respectively.<sup>9</sup> Workers are often unaware of the

existence of these programmes (Cernat and Mustilli, 2016; European Commission, 2011a). However, there may be some advantages from a political economy perspective for specific programmes. Finally, it must be noted that the delineation between the specific and the general is often difficult, and that many of the general programmes analysed are highly “specific” along a range of other parameters, such as the sectors targeted, the intended intervention or the geographical region.

### *(i) General adjustment programmes*

Studies of general adjustment programmes suggest that they increase employment prospects for workers, including young or unskilled workers. For instance, the Canadian Earnings Supplement Program was found to increase the number of people who found full-time jobs by 4.4 per cent (Bloom et al., 1999). The sector-specific Austrian Steel Foundation was found to have significantly improved employment prospects and wages for younger participants and low-wage workers (Winter-Ebmer, 2001).

Some general adjustment programmes place a lot of emphasis on training and there is evidence that they have been effective. Sweden's Trainee Replacement Scheme (1991-1997) subsidized employers by 50 per cent for sending employees into training. Workers participating in the programme improved their employment opportunities by 6 per cent compared to workers who did not participate (Sianesi, 2008). Self-employment training was found to be particularly helpful for certain categories of workers. The Growing America through Entrepreneurship (GATE) programme was shown to be effective for promoting the rapid reemployment of unemployed individuals interested in self-employment (Michaelides and Benus, 2012).

These programmes also tend to reduce the duration of unemployment. The Massachusetts Self-Employment Assistance Experiment increased the rate at which project participants started a business, reduced the length of their unemployment and increased their total time in employment, which includes self-employment (O'Leary et al., 2012; Benus, 1994). Mexico's training programme for unemployed workers (PROBECAT) was shown to reduce the mean duration of unemployment for both men and women (Revenga et al., 1994).

The involvement of labour unions and businesses in the adjustment programmes was found to be valuable in some cases. Japan's Employees in Structurally Depressed Industries Law involved getting the government, labour unions and private companies to

work closely together to maintain levels of employment and undertake restructuring programmes. Rajan and Takeda (2006) suggest that the joint effort by Japanese managers and bureaucrats to retain older workers was important in the face of the rapid aging of the Japanese population and, consequently, a shrinking labour force.

Finally, one argument that could be made for general adjustment programmes over specific ones can be found in the analysis of the effects of trade shocks in Section D.2(c). It shows that the adverse effects can be felt in sectors or industries that were not directly exposed to trade shocks. Workers who were displaced in those sectors may not be eligible for trade adjustment assistance but would be helped if general adjustment programmes were in place.

### *(ii) Specific*

#### **Trade Adjustment Assistance (TAA) – United States**

Since its inception in 1962, the TAA, has gone through many important changes (see for example Rosen (2006) and Alden (2017)). A study of the TAA's effectiveness under the Trade Act of 2002 by the US Department of Labour found: (i) the participants significantly increased their receipt of re-employment services, education and training services; (ii) the participants were engaged in some form of productive activity at about the same rate as the comparison group; (iii) there was heterogeneity in outcomes depending on the characteristics of the participants (younger workers who received training fared better than older workers and workers who did not receive training); and (iv) participants experienced a decline in total income during the four-year follow-up period (D'Amico and Schochet, 2012).

While judged to have provided crucial income replacement, the TAA was found inadequate in increasing employment or wages of participants (D'Amico and Schochet, 2012). This overall finding is reflected in studies that examined how the US TAA worked in the case of the North American Free Trade Agreement (NAFTA). A study by the OECD found that the TAA provided substantial income replacement to workers displaced by NAFTA. However, it failed to appreciably increase employment among trade-impacted NAFTA workers (O'Leary et al., 2012).

The study by D'Amico and Schochet (2012) found that the TAA's net economic benefit to society was negative, a loss of US\$ 26,965 per person, but once the possibility of its promoting free trade was considered, the benefits outweighed the losses. This

is consistent with earlier work that finds that unless the political economy rationale is taken into account, there is little reason to prefer a trade-specific programme over a general programme that responds to all sources of displacement (Baicker and Rehavi, 2004). Another dimension that might need to be taken into account is that the TAA has been very important in enhancing social cohesion amongst communities negatively affected by trade and alleviating some of the negative effects of prolonged unemployment in manufacturing areas. This is particularly important since prolonged episodes of unemployment have been linked to poor health outcomes, higher mortality, lower achievements by children of affected workers, and other social ills (Pierce and Schott, 2016b; Davis and Von Watcher, 2011; Autor et al., 2015).

### ***European Globalisation Adjustment Fund (EGF) – European Union***

Due to its design, the European Globalisation Adjustment Fund provided benefits significantly later than the actual redundancy periods, so that by the time the benefits kicked in, many of the more mobile workers had already re-entered the labour market. Those who received assistance were therefore predominantly the harder-to-help workers — older workers, workers with fewer skills, and women with household-caring responsibilities. Therefore, given that it mainly targeted harder-to-help participants, the EGF's performance on re-employment and wage change metrics was better than it initially appeared (GHK, 2011).

The EGF was also found to be most effective when it complemented existing national programmes and provided a personalized package of assistance. Success also depended on local economic conditions and supply-side factors. Some of the drawbacks to the EGF identified by the review study included an excessively high original threshold for redundancies, an overly long approval process and non-coverage of temporary and agency workers (GHK, 2011).

### ***Trade Adjustment Assistance (TAA) – Republic of Korea***

The Korean TAA program was introduced in 2006 to help businesses and workers that were likely to be adversely affected by the Republic of Korea's negotiation of free trade agreements (FTAs) (Insoo et al., 2016). The programme attempts to improve the international competitiveness of affected firms by providing financing (e.g. loans) and consultancy services on business management and technology. However, in its first four years of operation, only a total of five firms became eligible to receive assistance,

probably because of the strictness of the eligibility criteria (Cheong and Cho, 2011). To be eligible for assistance, a firm had to experience a fall of 25 per cent in sale or production due to an increase of imports from an FTA partner over a six-month period. In 2012, the eligibility criteria were lowered to a 10 per cent fall in sales or production.

### **(d) Some issues to consider based on experiences implementing adjustment programmes**

While research into the effectiveness of adjustment programmes is rather limited, a number of substantive issues have been raised based on experiences of implementing these programmes in developed as well as developing and least-developed countries, which may be important to discuss.

#### ***(i) Developed country experience***

General and specific programmes have their advantages and disadvantages. General adjustment programmes can deal with a wider range of economic shocks but trade-targeted programmes can be cheaper than those that cover all types of shocks (OECD, 2005; Kletzer, 2001). In any case, whether they are general or specific adjustment programmes, the economic literature surveyed above suggests that certain features of these programmes can help improve outcomes.

A significant part of today's anti-trade sentiment is fed by the perception that those who lose out due to economic change are not getting the assistance and support they need. This suggests that not only are more effective adjustment programmes required, but also much better financed ones. The recent joint International Monetary Fund (IMF)-World Bank and WTO report calls for well targeted and adequately financed trade adjustment assistance (IMF et al., 2017). In the European context, calls for more funding for such programmes have been made by the European Commission (2011b) and by Cernat and Mustilli (2016). Nie and Struby (2011) recommend more US investment in active labour market policies. Lawrence (2014) calls for a TAA programme with a more generous wage loss insurance programme. Hufbauer and Lu (2017) suggest sharply improved adjustment programmes to compensate those who lose both from deeper integration and from newer technology.

Another point identified in the literature is that programmes tailored to worker and country specifications appear to perform better. One evaluation of the EGF suggests that it works best



when it is synchronized with national policies and institutions (GHK, 2011). Studies on the Nordic and Japanese approaches to adjustment policy have highlighted the importance of factors such as the “feeling of trust and sense of fairness” within Nordic communities (2007) and the specific community dynamics in Japan (Rajan and Takeda, 2006). In addition, theoretical (Coşar, 2010) and empirical work (Schochet et al., 2012) suggests that consideration of differential worker characteristics is extremely important when designing adjustment schemes to increase efficiency and equity. This may partly be due to the way the programmes affect the incentives of workers to accumulate human capital through education.

A third point raised is the importance of striking a balance among employment protection, levels of compensation and active labour market policies. The specific balance to be struck varies according to the country and the circumstances. As noted above, if political economy reasons or compensating those who lose out from economic change are important considerations, passive labour market policies can be important tools of adjustment as well.

There is some divergence in views about the effectiveness of active labour market policies. A recent survey of studies of active labour market policies in developed countries concludes that, in general, they have not been particularly effective (Crépon and van den Berg, 2016). However, the review also acknowledges that certain active labour market instruments work better than others. For instance, the rate of return from job search assistance services is positive. The authors judge employment subsidies, i.e., subsidies given to employers to entice them to hire more workers, to be only moderately effective. Finally, there are few cost-benefit studies that demonstrate whether these programmes provide a net benefit to society.

On the positive side, if judged on the rate of re-employment of displaced workers, the change in their wages on re-employment, active labour market policies produce better results than passive labour market policies (GHK, 2011; Schochet et al., 2012; Baicker and Rehavi, 2004). Retraining subsidies are successful in reducing inequality (Mileva et al., 2013) and public-private partnerships offer a practical institutional arrangement to implement them. Perhaps not surprisingly, training subsidies are particularly helpful for unskilled and low-skilled workers (Mileva et al., 2013). Some studies find wage insurance programmes effective in increasing incentives for workers to find a new job (Kletzer, 2004).

## *(ii) Developing and least-developed country experience*

A recent survey of evaluations done on developing countries claim that many of their active labour market policies are much less effective than hoped for, as it finds no significant impacts on either employment or earnings (McKenzie, 2017). One reason given is that urban labour markets in developing countries work reasonably well in many cases, with fewer market failures than is often assumed. There are also a number of features in developing economies that differ from those of developed economies. Resources to fund adjustment programmes are limited. There is a greater role for the state, whether in the use it makes of public employment or the presence of state-owned enterprises (SOEs) in the economy. Both the agricultural and informal sectors tend to constitute a large share of total employment. These could lead to important differences in adjustment costs and strategies, including a greater emphasis on agricultural, state-owned enterprises and the informal sector.

### **Informality**

As discussed in Section B, labour markets may be segmented so that wages and conditions of employment can differ in different parts of the market. In many developing countries, this segmentation often manifests itself in a dual labour market — a formal and an informal one. Figure E.3 shows informal sector employment as a share of total employment in a select group of developing countries.<sup>10</sup> The informal sector can provide a crucial adjustment channel in developing countries. It is not necessarily an inferior employment option since it may be sought by those who prefer flexible hours (Goldberg and Pavcnik, 2003).

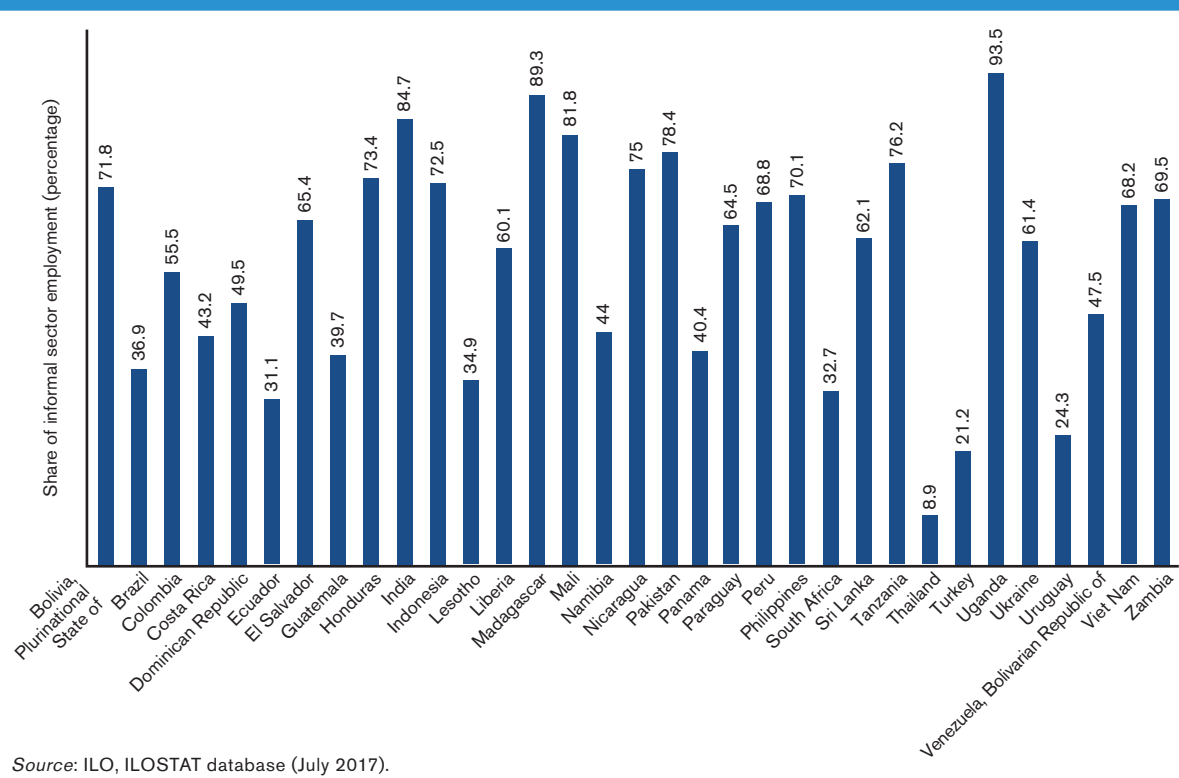
### **Public employment and state-owned enterprises (SOEs)**

In many developing countries, the public sector (including SOEs) is often significantly larger than the private sector. Thus, policymakers have to be sensitive about the role it plays in the labour market and the consequence it has on adjustment after trade reform and/or liberalization. In the aftermath of trade reforms, countries with large public sectors often have to design compensation programmes for workers who are retrenched due to privatization or the restructuring of SOEs.

Haltiwanger and Singh (1999) have carried out a comprehensive study in a wide range of countries with



Figure E.3: Informal sector employment as share of total employment (2009 to 2015)



public sector retrenchment adjustment programmes. While the results show great heterogeneity, the authors are able to draw some lessons from them. Programmes that design compensation packages that take into account workers' skills and ages were the most successful. While a multi-dimensional approach is costly, it has a potentially large payoff in productivity gains and lower adjustment costs. Additionally, even though one must be cautious about over-emphasizing financial indicators, since they often do not cover many relevant private and social costs and benefits, such programmes can generate financial savings in the long run from retrenchment even though there is an immediate financial hit from pay-outs made to those workers that are let go (Haltiwanger and Singh, 1999).

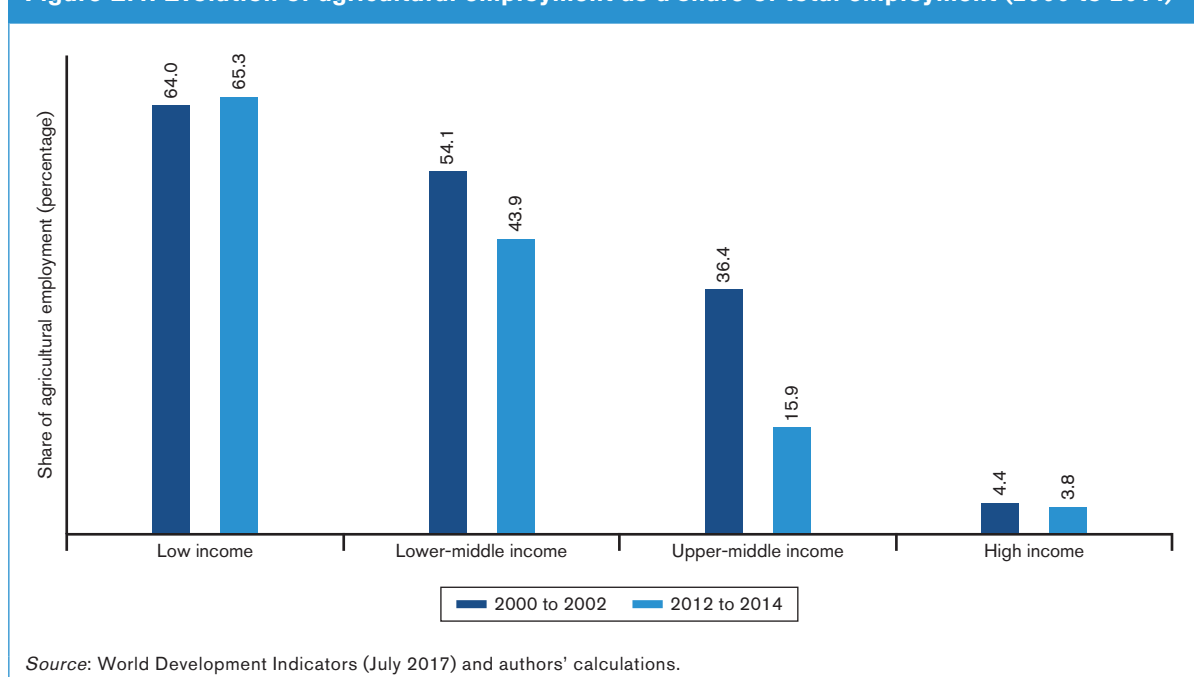
### Agriculture

In many developing countries, the agricultural sector still employs a large share of the labour force. Figure E.4 shows agricultural employment as a percentage of total employment by level of income. Since trade reform can lead to serious adjustment costs for the agricultural sector, many developing countries have agriculture-focused adjustment programmes in order to help affected farmers.

An example of a successful agricultural adjustment programme is PROCAMPO in Mexico, which provided a cash transfer per hectare of cultivated land. An independent evaluation of the programme showed that it reduced poverty (Cord and Wodon, 2001). The authors offer a number of possible explanations for the performance of PROCAMPO. By lifting the liquidity constraint faced by farmers or by reducing the risk aversion of the beneficiaries, the programme may have increased household investments and facilitated the choice of riskier investments which have higher rates of return. Alternatively, the programme's income transfers may have stimulated the local economy, raising the demand for local goods and services.

### Least-developed country experience

Information on adjustment programmes in least-developed countries is hard to come by, although there are some studies on active labour market policy interventions. The available evidence about the effectiveness of these programmes is mixed. Cho et al. (2013) show that a vocational training programme in Malawi led to enhanced (self-reported) skills of the type the training was supposed to impart, but it did not have any significant effect on labour market outcomes. On the other hand, Abebe et al. (2016)

**Figure E.4: Evolution of agricultural employment as a share of total employment (2000 to 2014)**

show that reducing search frictions by lowering the spatial and informational barriers to job searches significantly helped young job-seekers in Ethiopia. Interventions in the form of transport subsidies and formal skill certification for young people largely excluded from the formal labour market helped young job-seekers obtain employment. Bassi and Nansamba (2017), using a field experiment focusing on matching and signalling in the labour market in Uganda, also show benefits from reducing information frictions.

## 2. Competitiveness-related policies

Measures not targeting the labour market directly can still be extremely helpful in reducing the impact of technology and trade shocks on the labour market as well as preparing the economy to take better advantage of the opportunities offered by technological change and openness. In this section, they will be categorized as “competitiveness-related policies” although the distinction between them and adjustment policies may sometimes be blurred. In fact, some studies can actually classify them together with adjustment policies (see for example Bacchetta and Jansen (2003) and IMF et al. (2017)). Although it is true that, as Krugman (1994) argues, firms and not countries compete, competitiveness can nevertheless be a concern in those sectors of the economy where producers face international competition (Alden, (2017). Policies that increase competitiveness can make the economy more responsive and facilitate

labour reassignments from contracting to growing industries, particularly in the tradeables sector. Some of these competitiveness-related policies lead to an outward shift in the demand for labour while others help expand the supply of certain types of workers or skills that are in demand in the market. Examples of these policies include more investments to increase levels of education and skills, more infrastructure spending, improvements in the functioning of financial markets, and trade policies.

### (a) Education policies

The rationale for investing in more education is based on the observation that the higher an individual's education level, the better appears her/his performance in the labour market. The basic explanation behind this is that additional education and experience enable workers to adjust more rapidly to changes in economic circumstances (Schultz, 1975). Better educated workers have a comparative advantage with respect to adjustment to and adoption and use of new technology. As a result, some have proposed providing education subsidies on the grounds they can thereby improve the ability of workers to adjust to changing labour markets (Blanchard and Willman, 2016).

Better educated workers also appear to suffer from lower incidences and durations of unemployment (Nickell, 1979; Mincer, 1991; Farber, 2004). Riddell and Song (2011) find that higher levels of education

significantly increase the re-employment rates of the unemployed in the United States. Their baseline result is that the probability of re-employment, conditional on being unemployed one year earlier, is about 40 percentage points higher for high school graduates than for those who did not complete high school, with each additional year of schooling leading to a 4.7 percentage point increase in the probability of re-employment.

As was shown in sections C and D, both technological change and trade tend to increase the skill premium. Exporting firms in particular tend to be more productive than non-exporters and are likely to need a lot of skilled workers. While an increase in the skill premium ought to provide the market signal to workers that they should upgrade their level of education and skills, the labour supply response also depends on how easy it is to access educational institutions, educators and trainers, the right mix of academic and vocational programmes, and relevant and up-to-date curricula, given the speed at which technology changes. The public sector can play a pivotal role here to improve or enhance these crucial elements of the educational system.

While the focus of the present discussion is on education policies, skills development or training programmes can be considered, if not part of, at least complementary to them. They have been discussed in Section D.1 in the context of adjustment policies but they could also fall under competitiveness-related programmes (ILO and WTO, 2017). While national governments have a prominent role to play in designing, funding and implementing skills development, there are also examples of local government programmes. There are also notable business-led training programmes that have been demonstrated to help low-skilled young workers acquire the skills to enable them to obtain full-time jobs, such as the “Year Up” training programme (see Box E.4).

## (b) Infrastructure policies

The quality, cost and reliability of infrastructure have a far-reaching impact on competitiveness. Among the key sectors in this regard are transport, power and telecommunications, and even housing. These are crucial not only to production but for moving goods, services and peoples within and across national borders and also for acquiring information. The ability of workers and companies to respond to available vacancies and export opportunities and to compete with imports depends on the quality, cost and reliability of the services these sectors provide. Lack of or poor-quality infrastructure can lead to congestion and delays (which can be fatal for firms relying on just-in-time inventory management), intermittent or unreliable power supply, and slow internet connections — all of which add to firms' costs.

Increasing investment to expand the supply and quality of infrastructure is likely to pay dividends for countries. Declining transport costs are estimated to account for 8 per cent of average world trade growth in the post-World War II era (Baier and Bergstrand, 2001). It is estimated that each day of delay incurred by goods in transit is equivalent to an *ad valorem* tariff of 0.6 to 2.1 per cent (Hummels and Schaur, 2013). In the developing world in particular, economies could reduce the unit cost of production by as much as 20 per cent by reducing inventory holdings by half (Guasch and Kogan, 2001).

Making infrastructural services more efficient may also require regulatory reforms. These infrastructure sectors may give rise to one or a few dominant enterprises because these markets are characterized by increasing returns to scale or strong network effects. However, the lack of competition can also increase the cost of infrastructural services, thus making it difficult for domestic producers to be competitive. The regulatory changes to correct

### Box E.4: Year Up training programme

Year Up is a private-sector funded training programme that serves more than 3,000 students in the United States every year and aims to get people without university degrees into good jobs. The participants are given six months of training in a classroom and counselling from mentors before the programme connects them with six-month internships in private companies. Year Up also pays students a stipend while they go through the programme. Year Up receives much of its funding from employers.

There is evidence that the programme is effective. An evaluation of Year Up compared participants who were accepted into the programme to a control group who were not. It was found that one year after their training, Year Up participants were earning 30 per cent more than members of the control group. Year Up participants were also more likely to be working full-time than members of the control group.

Source: Adapted from Semuels (2017)

this problem could include privatization of state-owned infrastructure enterprises, curbing anti-competitive practices, and encouraging more new entrants, including foreign enterprises, into these markets. Opening up the infrastructure market to new enterprises also encourages more private investment to augment public-sector investments.

### (c) Financial market policies

Credit market imperfections can hamper the competitiveness of domestic firms by raising the cost of borrowing or making it difficult for enterprises to borrow in the first place to finance their expansion or their requirements for working capital. If there are credit constraints, these are likely to be more binding for productive firms than for unproductive firms which are not likely to be looking for financing in any case (Sepahsalari, 2016). As a consequence of the binding constraint, productive firms will find it more difficult to expand. On the other hand, unproductive firms which face a lower cost of keeping their workers because they have less competition for them from more productive firms are less willing to shrink or downsize. Consequently, credit market constraints generate a delay in the reallocation of capital and labour from less productive to more productive firms and make the overall economy less productive.

In addition, a lack of access to trade finance, particularly for SMEs, can severely affect the ability of firms to compete in the international market. Comparing the ability of SMEs and large firms to draw on trade financing, Di Caprio et al. (2016) find that in emerging economies over half of trade finance applications by SMEs are rejected, against just 10 per cent for multinational companies.

Badly functioning credit markets can also hamper the labour adjustment process. Displaced workers who opt for self-employment or workers who decide to advance themselves by going back to school can find it nearly impossible to finance their decision. Problems in the credit market are also likely to be closely associated with difficulties in arranging or refinancing mortgages, thus hampering the geographical mobility of workers.

### (d) Trade policies

Trade measures can be used to increase the competitiveness of a country's producers as well as facilitate adjustment.

Negotiating greater market access in foreign markets reduces the trade barriers faced by a country's

producers and allow them to sell more to foreign consumers. All things being equal, an expanding export sector is also better able to absorb workers displaced in import-challenged sectors.

If a country is integrated into global value chains (GVCs), reducing one's own import barriers particularly those affecting intermediate inputs, is another way to increase a country's competitiveness in global markets. Imports of intermediate goods are essential to exports in GVCs. Further, if these barriers are reduced in sectors where there is not much domestic production, this need not result in a sizeable displacement of domestic workers.

Trade facilitation reform, through implementation of the WTO Trade Facilitation Agreement (TFA), offers another way to increase a country's competitiveness. Estimates by the OECD indicate that full implementation of the TFA could reduce trade costs globally by between 12.5 and 17.5 per cent.<sup>11</sup> Previous work by the WTO has shown that such a reduction in trade costs could boost global exports by as much as one trillion dollars annually (WTO, 2015).

As noted above, trade measures can also be used to prepare for or facilitate adjustment in labour markets. For countries embarking on greater trade opening, tariffs can be reduced gradually rather than cut immediately, giving workers more time to prepare for the change in policy and to find alternative employment.

If a rise in productivity abroad makes foreign producers more competitive, a temporary increase in protection can buy domestic producers time to adjust. Countries often use trade-contingent measures (anti-dumping, safeguards or countervailing duties) to provide temporary relief to industries suffering from import competition. As Blonigen and Prusa (2015) observe, anti-dumping measures involve a relatively short administrative process and can thus respond fairly quickly to changing economic circumstances. They also find that the frequency of anti-dumping actions is positively correlated with sizeable and increased import competition, as well as poor economic performance by enterprises in the domestic industry. This pattern holds more broadly if one looks beyond anti-dumping to other trade remedies like safeguard and countervailing duty measures (Bown and McCulloch, 2005).

However, the drawback to using temporary trade restrictions is that the country using them foregoes the benefits that more imports can bring. Furthermore, the idea that temporary trade restrictions can help

the adjustment process has found little empirical support. Examining the case of US trade remedies, Bown and McCulloch (2005) discover that in many instances they become sources of market distortions. For instance, they can temporarily increase profitability in the protected industry and draw in new resources. However, since these industries face a long-term decline relative to foreign competition, temporary protection will simply prolong the process of adjustment and increase total adjustment costs.

### 3. Compensation for permanent income losses

As discussed in the previous sections, the adjustment process through which an economy realizes the efficiency gains of increased trade and technological change may result in permanent income losses incurred by particular individuals. Two questions that arise in connection with this are whether, in addition to the types of measures discussed in the previous sections aimed at mitigating adjustment costs, there is a rationale for governments to take redistributive measures to compensate for any such permanent adverse distributional consequences; and whether the process of globalization of economic activity through trade and capital mobility has affected the ability of governments to apply such compensatory measures.

#### (a) Possible rationales for compensatory measures

Specifically with respect to trade, one possible argument in favour of redistributive measures to compensate for permanent income losses involves the notion of compensation as it is used in the welfare economic analysis of trade. A basic principle in this context is that since a move toward trade liberalization will typically have distributional consequences, those who are adversely affected must be compensated in order for that move to be considered to result in a gain in overall social welfare. This compensation principle reflects the Pareto criterion, according to which a change enhances the overall welfare of a society if it makes at least someone better off and does not harm anyone.<sup>12</sup>

The question of how compensation measures should be designed in order for trade liberalization to be Pareto efficient has been analysed in the economic literature (Dixit and Norman, 1980; Dixit and Norman, 1986; Davidson and Matusz, 2006). It has been noted that compensation, whether in the form of lump sum transfers or non-lump sum transfers, poses informational requirements that are hard to

resolve in practice (Stein, 2016; Kapstein, 2000). Some authors have identified problems that arise in terms of the credibility and political feasibility of such compensation measures (Boix, 2011), and scepticism has sometimes been expressed as to whether existing compensation schemes are adequate to compensate adversely affected individuals for the full extent of the income losses suffered (Scheve and Slaughter, 2007; Alden, 2017). Several recent studies of the optimal design of compensation measures highlight the efficiency benefits of active labour market policies, particularly measures involving the subsidization of employment and of worker retraining (Coşar, 2010; Asatryan et al., 2014; Lechthaler and Mileva, 2014).

Another possible justification often advanced in favour of redistributive measures to address adverse domestic distributional consequences of trade liberalization is based on considerations of equity. Thus, the argument has been made that when society as a whole benefits from a policy change, it is unfair that the costs of that change be borne disproportionately by a subset of its members (Trebilcock, 2014).<sup>13</sup> Magee (2001) provides empirical evidence showing that equity considerations have played a role in decisions regarding the administration of the US trade adjustment assistance programme. Whether this kind of equity argument can justify compensation specific to trade has sometimes been questioned on the grounds that there appears to be little empirical evidence that trade-displaced workers differ systematically from workers adversely affected by other, non-trade-related changes (Aho and Bayard, 1984; Kapstein, 2000; OECD, 2005a; 2005b).<sup>14</sup>

It is sometimes argued that such trade-specific measures to compensate trade-displaced workers can be justified on grounds of equity considerations because they have been harmed by a specific historical government policy of promoting expanded trade (Aho and Bayard, 1984). This raises the question of why compensation should be made available only in relation to policy changes in the area of trade and not in other areas.

#### (b) The debate on the impact of globalization on the demand and supply of compensation

A question that has attracted much debate, particularly in the literature on the relationship between economic globalization and the welfare state, is whether growing international economic openness increases the public demand for governments to adopt social protection and redistribution measures to address labour market risks, and whether it affects governments' ability to adopt such measures.



The research in this area has produced mixed results. Positions differ as to whether increased openness to the international economy (1) has resulted in an expansion of the welfare state, (2) has led to a retrenchment of the welfare state; (3) has resulted in a convergence of welfare state development across different countries; or (4) has not had any significant effect on welfare state development (Brady et al., 2005; Gemmel et al., 2008; Hays, 2009). To some extent, the inconsistencies can be attributed to differences in methodology, data used and the periods and economies covered. For example, an important methodological difference is that some studies focus narrowly on the impact of *trade* (often operationalized as imports plus exports) on the welfare state, whereas other studies analyze the impact of various dimensions of *globalization*, with trade being considered as one of several indices of economic globalization.<sup>15</sup>

The view that international economic openness causes an expansion of the welfare state is commonly referred to as the compensation hypothesis. According to this view, governments increase social spending to meet voters' demands for social protection against the risks and uncertainty in labour markets caused by increased exposure to the international economy. The idea that there exists a compensatory relationship between growing international economic openness and the growth of domestic social protection is often viewed as a reflection of the compromise of "embedded liberalism" (Ruggie, 1982; Hays, 2009; Burgoon, 2013). The concept of "embedded liberalism" denotes "the idea that there is a more or less universal expectation held by citizens in the developed democracies that their governments will limit the costs and distribute the benefits of open markets through some kind of government spending, and that public support for liberalism depends on the willingness and ability of governments to do this successfully" (Hays et al., 2005). As noted by Hays et al. (2005), the specific form of the embedded liberalism compromise "is both geographically and historically contingent".

Initially, studies purporting to support the compensation hypothesis typically focused on the macro level and attempted to establish a relationship between a measure of an economy's openness and vulnerability to external risk, on the one hand, and a measure of aggregate government spending or social spending, or the composition of government expenditures, on the other.

Thus, based on data covering a large number of developed and developing countries, Rodrik (1998) finds a robust, positive association between an

economy's openness, as measured by its share of trade in gross domestic product (GDP), and the scope of its government, as measured by its share of government expenditures in GDP. He explains this result by hypothesizing that more open economies are more exposed to risks emanating from turbulence in world markets and that larger government spending in such economies performs an insulation function in that the government sector is the "safe" sector relative to other activities and especially compared to tradeables. To substantiate this hypothesis, Rodrik provides evidence showing that the relationship between openness and government spending is stronger in economies exposed to greater external risk, as measured by the volatility of an economy's terms of trade and the concentration of its exports.

Several other studies also find support for the compensation hypothesis through an analysis of the relationship between economic openness and the size of government spending, although in those studies the relationship is often qualified by factors such as the nature of the political regime, the quality and effectiveness of domestic institutions, the type of welfare state regime<sup>16</sup> and the type of electoral system.

For example, Adserà and Boix (2002) conclude that the positivity of the relationship between trade openness and government spending in countries depends, among other factors, upon whether a country has an inclusive political regime. Mares (2005) finds that the impact of external openness on the nature of social protection is conditioned by the effectiveness of state institutions, to the extent that, where states are weak, an increase in the level of external risk will not necessarily result in an expansion of social insurance coverage. Hays (2009) argues that a meaningful test of the compensation hypothesis should focus on imports, as opposed to imports plus exports, and finds that there is a positive relationship between imports and government spending. However, this relationship is conditioned by the change in employment structure from agriculture and manufacturing to services and by the overall level of employment in an economy. Accordingly, whether politicians need to respond to surges in imports by increased spending to maintain support for free trade depends upon whether there is a large number of workers employed in tradeable sectors of the economy and on whether the overall economic performance is poor. This implies that in post-industrial, high-employment economies, the effects of imports on spending are smaller in magnitude.

Leibrecht et al. (2011) study the effect of globalization, measured by an index that combines trade and

foreign direct investment with several other variables, on social protection expenditures as shares of GDP in Western and Eastern European countries and find that the compensation thesis is supported only in the case of certain countries in Western Europe with a conservative welfare regime. Menendez (2016) concludes from an analysis of aggregate data on the generosity of active labour market measures in a number of European countries over the period 1980-2010 that the interplay between economic geography and electoral institutions fundamentally influences whether or not increased trade leads to compensation. Specifically, she submits that increasing trade will most likely produce greater compensation when adversely affected workers are concentrated geographically and politicians have electoral incentives to target specific constituencies, as tends to be the case in electoral systems with lower district magnitude, i.e. where electoral districts are small and geographically based. On the other hand, trade dampens compensation in political economies where adversely affected workers are dispersed, and decreases it where electoral districts are larger and losers are concentrated.

Several recent studies have focused on the micro foundations of the compensation argument and purport to provide support for the compensation hypothesis by demonstrating how individuals' perceptions of economic insecurity caused by trade lead to demands for increased social protection (Walter, 2010; 2017) and how compensation has a positive impact on voter's support for open trade (Hays et al., 2005; Hays, 2009; Ehrlich and Hearn, 2014). Rickard (2014) finds support for the compensation hypothesis through a study of US legislators' votes on trade adjustment assistance funding.

The compensation hypothesis has been challenged on various theoretical and empirical grounds. For example, Iversen and Cusack (2000) reject the idea that government spending can be explained as a form of insurance against risks associated with external economic openness. They argue that there is no support for the view that price volatility in international markets is greater than in domestic markets, nor is there evidence that trade concentrates risk. In their view, the growth of government spending and variance in the growth of government spending between different countries can largely be explained by demands for state compensation in modern industrialized societies caused by labour market risks generated by the transition of the employment structure from agriculture and industry to services. Similarly, Kittel and Winner (2002) conclude from their empirical analysis that globalization does not

play a decisive role in explaining cross-country differences in government expenditures and that most parts of the dynamics in government expenditures are explained by the domestic environment.

Other studies that have questioned the compensation hypothesis on the basis of a lack of causal relationship between economic globalization and public spending include Dreher et al. (2008), Busemayer (2009) and Meinhard and Potrafke (2012). Moreover, while the compensation thesis assumes that individuals' support for or opposition to increased trade is determined by the distributional effects of trade, there is recent research that highlights the role of non-material cultural factors in determining individuals' trade preferences. Margalit (2012) argues that individuals assess the impact of international economic integration partly in light of the social and cultural changes that they associate with growing economic openness and that measures aimed at compensation and redistribution may therefore be of limited effectiveness.

The view that increased internationalization will result in a retrenchment of welfare states is commonly referred to as the efficiency hypothesis (Scharpf, 2000). It posits that as a result of capital mobility and tax competition, the ability of states to finance social welfare expenditures has been eroded. However, while advanced economies have witnessed important changes in the last two decades in the nature of welfare policies, notably as a result of the shift from social consumption to social investment policies,<sup>17</sup> most recent research rejects the idea that globalization has uniformly resulted in a retrenchment of the welfare state and in convergence along a liberal model (Swank, 2005; 2010; Boix, 2011; Hemereijck, 2013; Beramendi et al., 2015).

Many authors who find that their empirical analysis does not support the compensation hypothesis also explicitly reject the efficiency hypothesis (Dreher et al., 2008; Kittel and Winner, 2002; Meinhard and Potrafke, 2012). Swank (2002) argues that globalization will lead to welfare state retrenchment depending upon a country's political institutions, electoral system and welfare state model. Brady et al. (2005) analyse the relationship between different indicators of globalization and various measures of the welfare state for 17 advanced economies from 1975 to 2001 and conclude that "globalization does not have one overall effect on the welfare state, and what effects it has are most certainly relatively small" and that "[g]iven that it has such small effects, globalization does not necessarily force a welfare state to expand, retrench, or converge."<sup>18</sup>

Overall, it would seem that any effects of economic globalization through trade and capital mobility on welfare state development in advanced economies are outweighed by the importance of domestic factors. This suggests that the extent to which governments act to compensate and redistribute to mitigate any adverse distributional consequences of trade is determined in the first place by countries' internal conditions. There is an extensive literature aiming to explain the trends in, and differences between, the redistribution policies of different welfare state types in advanced economies (Bradley et al., 2003; Kenworthy and Pontusson, 2005; Iversen and Soskice, 2006; 2009; 2015; Huber and Stephens, 2014; Rueda, 2015). This literature indicates that the extent of redistribution has increased in recent decades in all welfare state regimes, albeit to significantly varying degrees, but has not compensated for the increase in market income inequality. As a result, inequality in disposable income has risen.

For example, Huber and Stephens (2014) examine trends in household income inequality and redistribution since 1985, based on Luxembourg Income Study data for 18 post-industrial countries. They find that inequality has increased in all welfare state regime types and that, while the rise in pre-tax and transfer inequality has been accompanied by increasing efforts at redistribution in all welfare state regimes, these efforts have not neutralized the trends towards greater inequality. The inequality in pre-tax and transfer income is largely a function of labour market variables, including overall levels of employment, industrial employment, wage dispersion and union density, the percentage of children living in single-parent households, and education spending. Variations between countries with respect to pre-tax and transfer income inequality are strongly related to welfare state regime type. Regarding redistribution, Huber and Stephens find that unemployment, the percentage of children living in single-parent households, and the generosity of unemployment compensation increase redistribution, and that the total level of employment decreases redistribution.<sup>19</sup> Huber and Stephens also find that the extent of redistribution varies by type of governing party. Regarding the increase of redistribution through time, the authors note that this has been driven by changing needs rather than by a change in redistributive policy profile. The authors find significant differences between economies both in respect of the factors explaining the rise in income inequality and in their efforts at redistribution and investment in human capital (Huber and Stephens, 2014).

Much of the research discussed above on the question of the relationship between international economic openness and welfare state development

has focused on developed economies. While findings from several recent studies on this relationship in the case of developing countries would seem to provide more support for the efficiency hypothesis than in the case of developed economies, other research reports findings are consistent with the compensation hypothesis.

Kaufman and Segura-Ubiergo (2001) find, based on an analysis of changes in social transfers and of health and education expenditures in 14 Latin American countries from 1973 to 1997, that trade openness has a negative effect on key components of social security spending and thus that the weight of evidence favours the efficiency over the compensation hypothesis (Kaufman and Segura-Ubiergo, 2001).<sup>20</sup> Haggard and Kaufman (2004) conclude from a review of social spending in Latin America, East Asia and the former socialist countries over the period 1980 to 2000 that there is no support for the contention that trade openness leads to increases in the overall size of the public economy. Wibbels and Ahlquist (2011) argue that in developing countries social insurance arose in a context of protectionist, import-substitution policies.

At the same time, there are also studies that report a positive relationship between openness and social spending in developing countries. Thus, for example, in a study of social spending in 19 Latin American countries based on data for the period 1980 to 1999, Avelino et al. (2005) find that trade openness has "a strong positive and significant association with spending on social security and education" (Avelino et al., 2005). These apparently inconsistent results from empirical analysis may be attributable to the role of factors such as type of welfare regime and political regime, which mediate the effect of openness. Thus, Swank (2010) suggests that the effect trade openness has on social protection in a developing country depends upon the country's political regime. Moreover, an important theme emerging from the literature on the effect of globalization on the ability of governments of developing countries to provide compensation for adverse distributional effects of international trade is that such effects are often addressed through forms of compensation other than social welfare transfers, such as public employment and public work programmes (Mitra and Ranjan, 2011; Rodrik, 2011; Nooruddin and Rudra, 2014; Lim and Burgoon, 2016).

## 4. Conclusions

Technological progress and more open trade make enormous contributions to economic well-being, but they can also confront firms, and especially workers,

with important adjustment challenges. Governments have a broad array of possible measures to help displaced workers, while at the same time making sure that the overall economy captures as many of the benefits from technology and trade as possible. In this section, these policies have been categorized as adjustment, competitiveness and redistribution policies.

Given the complex nature of policy objectives – a mixture of efficiency, equity and political economy motives – and the wider social and political situations within economies, there is unlikely to be a one-size-fits-all “optimal” package of adjustment measures. At the same time, a number of notable issues have been raised based on the experiences countries have had in responding to economic change. In the case of industrialized countries, these issues include better funding of adjustment programmes, developing programmes that strike a balance between employment protection, levels of compensation and active labour market policies. In the case of developing countries, a number of structural features of those economies – larger share of agriculture, state-owned enterprises and the informal sector in

employment and more limited resources available to finance adjustment programmes – also have to be taken into account.

Policies that increase competitiveness – such as more investments in education and physical infrastructure, improving the functioning of financial markets, and trade policies – can make an economy more responsive and facilitate labour reassignments from contracting to growing industries, particularly in the export sector. These measures enhance the capacity of an economy to benefit from technological progress and trade.

Various considerations suggest that, in addition to policies that facilitate adjustment and enhance competitiveness, policymakers also consider measures designed to compensate for possible adverse effects of income loss due to trade or technological changes. Ensuring that such measures are effective is especially important at a time of mounting public concerns in many countries regarding the distribution of the benefits of these changes.

## Endnotes

- 1 Francois et al. (2011) also provide an alternative definition of adjustment cost which is equal to the present value of the foregone output represented by the shaded area below the original output level  $Y_0$ .
- 2 Moral hazard in insurance markets refers to the increased risk-taking by the insured party as a result of knowing that another party, i.e. the insurance company, now bears the cost of the insured party's risky behaviour. Thus a worker who obtains unemployment insurance may theoretically become less diligent when working, in the knowledge that if she or he is fired, she or he would be able to obtain unemployment benefits.
- 3 Adverse selection in an insurance market occurs when buyers of insurance consist primarily of those individuals who face the highest risk. Insurance companies often find it difficult to avoid the problem of adverse selection because of information asymmetry. The buyer of insurance knows more about her or his own intrinsic risk than does the insurance company.
- 4 To the extent that information on job opportunities is characterized by non-rivalry in consumption and high costs of exclusion, it is a public good. This makes it very likely that the market is not supplying this “good” in sufficient quantity, i.e. there is a market failure.
- 5 The median voter theorem is a model of the political process which predicts that if voters rank policies along just one dimension and they all have single-peaked preferences, the policy that will be chosen by a majority vote is that which the median voter would most prefer (Black, 1948; Downs, 1957). Preferences are single-peaked if the choices under consideration can be represented as points on a line, and there is a unique maximum at some point on the line, with preferences sloping away from this maximum on either side.
- 6 See ILO (2013b; 2016a) for a review of labour provisions in trade and investment agreements.
- 7 The RTA of the European Union, Colombia and Peru includes a similar cooperation provision but without the references to labour market adjustment, human resources development and lifelong learning.
- 8 Several RTAs also include provisions related to international labour mobility in the context of the temporary movement of natural persons or free movement of workers. These provisions, however, go beyond the notion of labour market adjustment. For instance, the East African Community Common Market establishes a number of provisions related to the access to employment opportunities, including the collection and dissemination of information on job vacancies. In addition, one of the tasks of the EAC Secretariat is to undertake, in collaboration with the partner states, manpower surveys to determine available skills and gaps in the labour market within the EAC.
- 9 The original figure for the EGF was in euros. To convert this into US dollars, the conversion rate used was €1: US\$ 1.33. This statistic displays the annual exchange rate (average or standardized measure) of the euro to the US dollar according to the data from the European Central Bank, which cover the period from the introduction of the euro in 1999 up until 2016. The average (standardized)

- measure is based on the calculation of many observations throughout the period in question. It is therefore different to an annual measure at a point in time, which reflects specific values as of end of the year.
- 10 In the figure, we use the ILO's definition of the informal sector as "where employment relationship is, in law or in practice, not subject to labour legislation, income taxation, social protection or entitlement to certain employment benefits" (ILO, 2013a).
  - 11 See [http://www.oecd.org/trade/tradedev/WTO-TF-Implementation-Policy-Brief\\_EN\\_2015\\_06.pdf](http://www.oecd.org/trade/tradedev/WTO-TF-Implementation-Policy-Brief_EN_2015_06.pdf)
  - 12 A slightly different principle states that a change enhances the overall welfare of a society if the aggregate gains are large enough to enable those who gain from the change to compensate those who are adversely affected and still be better off themselves. According to this principle, trade produces overall gains, in the sense that those who gain can in principle compensate those who are adversely affected, while still remaining better off than before (see, e.g., Krugman et al., (2014). This reliance on hypothetical compensation is known as Hicks-Kaldor efficiency. The application of this principle to international trade has been questioned by a number of scholars, e.g. (Kapstein, 1998; Kapstein, 2000; Driskill, 2012; James, 2012; and Antràs et al., 2016).
  - 13 According to John Rawls' "difference principle", "social and economic inequalities, for example inequalities of wealth and authority, are just only if they result in compensating benefits for everyone, and in particular for the least advantaged members of society" (Rawls, 1999). This principle has not frequently been invoked as possible grounds to justify compensatory measures in the context of trade. It may call for compensation to those adversely affected by trade liberalization but only if they are among the most disadvantaged members of the community (Trebilcock, 2014).
  - 14 Some authors argue that in cases in which, prior to a move towards trade liberalization, workers enjoyed a rent as a result of artificially high prices caused by trade barriers, there may not be an equity-based argument for compensation of any losses incurred by such workers as a result of trade liberalization (Kapstein, 2000; OECD, 2005b).
  - 15 An index of globalization that is very frequently used in research on the relationship between globalization and the welfare state is the KOF Swiss Economic Institute index of globalization. This index covers variables relating to three dimensions of globalization: economic, social and political. The economic globalization indices cover (i) actual flows: trade, foreign and portfolio investment, and income payments to foreign nationals and (ii) restrictions: hidden import barriers, the mean tariff rate, taxes on international trade and capital account restrictions. The KOF index of economic globalization does not include immigration.
  - 16 Studies that examine the role of the type of welfare state regime as a factor mediating the effects of exposure to the international economy commonly use the classification of welfare state regimes originally suggested by Esping-Andersen (1990) or a variation thereon. In *The Three Worlds of Welfare Capitalism*, Esping-Andersen distinguishes between three clusters of welfare state regimes: a "liberal" model, a "conservative", "corporatist" model, and a "social-democratic" model.
  - 17 As defined in Beramendi et al. (2015), "social consumption" refers to expenditures aimed at immediate income restoration, such as unemployment and disability benefits, whereas "social investment" refers to social expenditures aimed at increasing people's capacity for future earnings, including education, child care and labour market activation.
  - 18 See also Brady et al. (2007).
  - 19 Huber and Stephens (2014) find that measures of globalization are not significantly related to either pre- and post-tax and transfer inequality.
  - 20 See also Rudra (2002) and Segura-Ubiergo (2007).