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12. Globalisation and the Nature of Unemployment¹

Laurence Lasselle, Serge Svizzero and Clem Tisdell

12.1 INTRODUCTION

Since the mid-1970s, two main features have characterised most OECD countries: their growing international economic integration and high and persistent unemployment (Siebert 1997; Nickell 1997). These facts led economists to wonder about possible links between globalisation and unemployment, and eventually about the responsibility of globalisation for unemployment (Haskel and Slaughter 2001; Wood 1994, 1998).

It is well known that globalisation covers a broad range of economic activities, but especially the globalisation of markets for goods and services and for capital is often stressed. However, the labour market seems to be much less globalised than the others (Tisdell et al. 2004). This mainly results from national limitations on immigration of workers to most countries, especially between the north and the south countries. Even though northern countries are usually strong proponents of free trade as far as goods, services, and capital flows are concerned, they remain highly protectionist with respect to labour movements. This latter situation helps support the claim of Rodrik (2000), that 'Contrary to conventional wisdom and much punditry, international economic integration remains remarkably limited'. (Rodrik 2000, p. 178). He also mentions that direct capital investment (and even portfolio investment) is much less mobile than sometimes imagined. National borders demarcate political and legal jurisdictions, and therefore affect the labour market. Indeed, cross-country comparisons of labour markets show differences in unemployment rates, wage determination systems, wage mobility, wage distribution among workers, transaction costs and institutions.

Therefore, even though it is clear that there is no free world labour market, it does not mean that the labour market is only influenced by domestic factors. On the contrary, the labour market has been deeply transformed as a result of economic globalisation for the past three decades, and there is a

considerable amount of short-term labour migration, for example, to oil rich nations in the Middle East and Brunei.

After World War II and under the influence of Keynes's contribution to economic theory and policy, most OECD countries² were regulated by a Fordist system. Wages were mainly considered as a large part of the total income necessary to support the aggregate demand and then the level of economic activity. Consequently, a significant part of productivity gains was redistributed to wage earners.

Since the mid-1970s and because of a growing economic globalisation, the Fordist system has gradually disappeared. As a result, most economists consider the labour factor to be just like any other commodity. On the one hand, the wage is simply the labour price equalising the demand for labour and the labour supply. Disequilibrium in the labour market – that is, the existence of unemployment – can disappear if the wage is flexible. On the other hand, wages are mainly (sometimes solely) considered as the cost of labour, that is, as a significant part of the total cost incurred by firms. Given this view, wage decrease is the means by which unemployment can be reduced and price competitiveness can be enhanced, thereby leading to economic growth based on export promotion. This is achieved through the deregulation of the labour market and the removal of wage rigidities (Section 12.2).

Such a short-term policy is effective in reducing 'classical' unemployment. However, it appears in the long term that technological change – which is more intense and pervasive as a result of the globalisation process – may lead to capital-labour substitution and then to Ricardian unemployment (Section 12.3). Nevertheless, innovation may compensate, that is, it may also create employment, and then the currently observed unemployment cannot be fully Ricardian. Similarly, existing employment cannot be fully classical since it remains high – especially in Europe – despite the shift towards a more flexible labour market.

With the disappearance of the Fordist system as a result of the globalisation process, a large part of the currently observed unemployment is probably Keynesian in nature, that is, it comes from an insufficient level of aggregate demand (Section 12.4). Indeed, globalisation has reduced the impact of the different components of the demand for goods and services on employment. A general wage cut in developed countries combined with widespread globalisation makes the demand-side policies effective to reduce Keynesian unemployment only if additional conditions to Keynes's original framework – such as an international coordination of economic policies – are met.

12.2 PRICE COMPETITIVENESS, DEREGULATION OF THE LABOUR MARKET AND CLASSICAL UNEMPLOYMENT

Some of the most significant features of economic globalisation in the last three decades have been the rapid expansion of foreign direct investment and the liberalisation of trade through regional and multilateral agreements. More open markets and more globalised economic activities have resulted in the emergence of fierce competition, especially in the market for goods and services.

Emphasis on increased international trade has put pressure on countries to base their economic development on export expansion. The example of newly industrialised East Asian countries is obvious. Their main engine of growth (and therefore, job creation) rests on their exporting industries. Their firms secured market shares in economies of more advanced countries throughout the last decades (Odagiri and Goto 1993; Young 1995; Mathews and Cho 2000). Western countries have tried to develop new activities in the search of new markets. They restructured their exporting sectors by reducing their costs, either by making use of plants abroad, or reducing labour inputs at home. In other words, Western firms' response to the phenomenon of globalisation and strong competition has been to increase their international competitiveness by reducing their cost, either the wage level or the number of workers employed. The use of casual labour has increased in order to reduce the cost of social benefits such as pensions and medical insurance. By creating new plants in southern countries, cheaper labour was employed. At home, firms have put pressure on governments to deregulate the labour market, that is, to remove minimum wage regulation and to shift from centralised wage determination systems to bargaining at the workplace level.

For mainstream economists, the above strategy, that is, increasing wage flexibility in order to improve price competitiveness, is a positive strategy since it is also believed to lead to the reduction of unemployment. This belief is reinforced by the existence of a general positive relation between the growth of exports and the growth of employment.

Table 12.1 shows the rate of change of both variables over the period 1985-1995. The relation is clearly positive, with extreme cases for some Asian countries which have relied on export-led growth.

According to mainstream economists, the labour market behaves as any commodity market. Any market disequilibrium can disappear through an adequate adjustment of the price of labour, that is, the real wage.

In this partial equilibrium analysis, *unemployment is classical* because it comes from real wages that are higher than the equilibrium wages. Unemployment is voluntary and persistent since it depends on wage rigidity

Table 12.1 Changes (%) in employment and exports, 1985-1995

	Change in employment	Change in exports
ASEAN-4	32.2	145.1
South Korea	36.1	140.9
Japan	11.2	46.9
Australia	22.9	32.4
USA	16.6	54.4
Canada	15.0	28.2
EU-15	11.4	65.2
Germany	36.7	66.2
UK	6.8	38.3
France	3.6	69.7

Source: Second European report on S&T indicators, 1997, appendix (European Commission, 1997).

due to the fact that workers and unions do not accept a wage decrease. The policy implications of classical unemployment are straightforward: sticky wages hinder labour market adjustment and rigidities must disappear in order to reduce unemployment.

In the 1980s and the 1990s, this 'old' notion of classical unemployment has been revitalised by two complementary approaches.

On the one hand, many empirical studies have tried to assess the importance of observed labour market rigidities. Among these, unemployment benefits and hiring and firing costs have often been considered as the main distortions. Unemployment benefits discourage job search and induce moral hazard problems. Hiring costs are particularly high for skilled workers when the probationary period is too short. Moreover, firms appear to be very reluctant to hire workers – especially unskilled employees – if they cannot easily get rid of them. Job contracts – that cannot be renewed an indefinite number of times – and restrictions on working time imply that the labour supply is quite rigid while – depending on the level of economic activity – the labour demand is strongly variable over time. Such a mismatch also contributes to higher unemployment rate.

On the other hand, new theoretical approaches – some of them being based on the observations mentioned above – of labour market rigidities have been developed. For some economists, unemployment comes from problems related to the supply-side of the labour market. This includes the cost of job search (Mortensen 1986) and the segmentation of the labour supply between insiders and outsiders (Lindbeck and Snower 1988). For others, the informational asymmetry in the labour market leads to unemployment as a

result of firms' behaviour. This is the so-called efficiency-wage theory (Shapiro and Stiglitz 1984). Finally, both sides of the labour market may explain, through the existence of implicit contracts, the occurrence of unemployment (Azariadis and Stiglitz 1983; Rosen 1985).

In the longer run, the existence of classical unemployment should reduce the bargaining power of the workers or their union, leading to a more flexible labour market and a higher level of employment. However, unemployment is persistent at high rates in some Western European countries, France and Italy for example. This stylised fact can be explained through the hysteresis theory (Blanchard and Summers 1987). The current level of unemployment mainly depends on the past history of unemployment. This is particularly the case when a large number of unemployed workers are long-term unemployed. Table 12.2 shows the effect of the incidence of long-term unemployment on total unemployment.

Table 12.2 Incidence of long-term unemployment (LTU, %) on total unemployment (TU, %), 1983 and 1996*

	1983			1996		
	TU	LTU	LTU/TU	TU	LTU	LTU/TU
France	8.02	2.99	37.28	12.4	4.9	39.5
Italy	9.42	4.84	51.38	12.0	7.9	65.6
Germany	7.90	2.60	32.91	9.0	-	-
UK	11.81	4.91	41.57	8.2	3.3	39.8
Canada	11.93	1.14	9.56	9.7	1.3	13.9
USA	9.61	1.28	13.32	5.4	0.5	9.5
Japan	2.67	0.29	10.86	3.4	0.7	19.9
Australia	9.80	2.45	25.00	8.6	2.4	28.4

Note: * Long-term unemployment rate is the ratio of people being unemployed, at least for one year, over the total labour force.

Source: OECD, *Employment Outlook*, relevant issues.

Countries, such as France and Italy, which have historical and current worst employment performances, show a very high incidence of long-term unemployment.

It is quite obvious that long unemployment duration impairs workers' employability since their human capital is gradually eroded, they are discouraged to search for jobs and are often excluded from the labour market. According to this hysteresis theory, short-term as well as long-term unemployment can then be related to labour market rigidities. In other words,

wage reduction and the deregulation of the labour market are, for mainstream economists, a panacea for reducing unemployment. However, this conclusion is dubious for several reasons.

Firstly, the deregulation of the labour market may have perverse effects on other economic and social issues. Broadly speaking, it may induce an endless rush to the bottom in labour market regulatory standards. For instance, firms may be willing to fill their vacancies through temporary contracts instead of permanent contracts. This results in a form of inefficiency since temporary contracts hardly evolve into permanent jobs while the vacancy would have been filled anyway. Likewise, for a representative worker, a more flexible market implies shorter unemployment spells and shorter job duration. However, it is not certain, from the social welfare point of view, that such a situation is preferable to longer unemployment periods and higher job stability.

Atkinson (1997) showed that a deregulated labour market is often associated with larger inequality. Since the mid-1970s, inequality has emerged in two different forms, depending on the features of the underlying labour market. When the labour market is quite flexible,³ its deregulation implies growing wage inequality between workers, especially between the skilled and unskilled. When the labour market is more institutionalised,⁴ the distribution of wages among workers remains more stable but inequality also emerges between skilled and unskilled workers in terms of job opportunities and of unemployment rates.

Short-term imperatives associated with the deregulation of the labour market have to be carefully balanced with long-term considerations related to basic labour standards, equity and social cohesion. For instance, labour market deregulation can have positive short-term effects in terms of employment but negative long-term counter-effects in terms of labour productivity and human capital accumulation. Indeed, with shorter job duration and larger mobility, employees and employers have weaker incentives for a joint investment in training and human capital than would have been possible given a long-term commitment between them.

Secondly, the labour market cannot be considered in a way similar to any other commodity market. As pointed out by Keynesian and post-Keynesian economists, the assumptions underlying the shape of the labour supply and labour demand curves are quite strong and not completely realistic.

Indeed, for mainstream economists, work is presumed to give rise to disutility. Therefore, the curve of labour supply is upward sloping since firms must pay to workers a wage which compensates the leisure they are giving up. However, aside from any income provided by work, work may also be a source of great satisfaction (Eichner 1985, pp. 91-6). Moreover, as first stressed by Keynes, most workers are, in the short term, influenced more by

nominal wages than by real wages. Due to 'money illusion', Keynes considered the demand for labour to be the basis on which, through the effective demand principle, the level of employment is determined. For that purpose, Keynes admitted that the curve of labour demand was downward sloping. This is consistent with mainstream economists' view that the use of additional workers to increase production leads to diminishing marginal productivity. Such a relationship seems however to hold only in certain cases, particularly in small enterprises using relatively basic technology (Eichner 1985, pp. 88-91). In modern firms, production is carried out as part of a complex social process. The contribution of any worker is necessarily submerged in the overall group effort. Therefore, adding more labour imposes on the organisation the burden of altering its internal structure. Then, there is no way of determining the incremental contribution of a worker to the organisation. Although the negatively sloped demand curve for labour does not hold generally under modern conditions of production, it is on such a relationship that mainstream economists based their critics of wage increases. Indeed, they consider a typical labour market with a decreasing labour demand and an increasing labour supply. In such a market, any increase of nominal wage leads to a disequilibrium. The adjustment toward the equilibrium necessitates a rise of prices. At the overall level, it appears that nominal wage increases involve inflationary effects.

If, as shown above, assuming that the labour demand function is decreasing is quite controversial in a partial equilibrium analysis, it is even more controversial in a macroeconomic framework. As highlighted by Malinvaud (1994, p. 83), '...an increase in real wage leads to an increase in the aggregate demand for goods, hence to an increase also in the demand for labour by enterprises. This phenomenon runs counter to the supposed downward orientation of the curve; one must then account for it when the aggregate relationship is specified'. In such an approach, wage decrease leads to the reduction of firms' total cost but what is more important is the recessionary effect associated with it. Indeed, aggregate demand will be weaker and Keynesian unemployment will occur (see Section 12.4).

Thirdly, the impact of deregulation in terms of employment performance is quite doubtful from an empirical point of view. After more than ten years of reforms in order to deregulate the labour market, unemployment rates remain high in most European countries such as France and Italy. Even if these rates are lower now than before, there is no clear correlation between their reduction and the shift toward a more flexible labour market. Table 12.3 offers a relationship between, on the one hand the rate of unemployment, and on the other hand an indicator of the 'strictness' of the labour market.

Table 12.3 'Strictness' of the labour market (1985-1993) and unemployment rate (1993)

	Indicator of the "strictness" of the labour market*	Unemployment rate
USA	1	6.92
Canada	3	11.24
Australia	4	11
UK	7	10.32
Japan	8	2.54
France	14	11.13
Germany	15	6.20
Italy	21	10.34

Note: * This overall indicator of rigidity is based on different indicators computed on the period 1985-1993. It takes lower values as much as the labour market is considered as flexible.

Source: OECD job study (1994).

From Table 12.3 it is impossible to detect a positive correlation between labour market rigidity and the unemployment level. For mainstream economists, this unpleasant result does not contradict their explanation of unemployment and the remedial policy they recommend. They claim that if unemployment rates remain high it is because the reform implemented by European countries is insufficiently drastic, compared to the US reform, and is also not fully credible. This latter point is particularly important in a dynamic framework. As long as employers consider that governments are not fully committed in the reform, that is, as long as they expect a possible turning point – resulting for instance from electoral considerations – they are not willing to hire more workers despite lower wages and increasing flexibility on the labour market.

Another explanation of high and persistent unemployment may be found by looking at the 'true' nature of unemployment. Indeed, if unemployment is not classical, the deregulation of the labour market is not an appropriate policy to create jobs. Such a possibility is quite likely when policy based on increased price competitiveness is carefully examined. Indeed, we know that most countries – developing as well as developed – have based, in response to economic globalisation, their economic growth on export promotion. For that purpose, the most usual strategy has been to enhance price or cost competitiveness through wage cuts and deregulation of the labour market. However, such a policy may not be appropriate to reduce unemployment and to create jobs. This is more obvious when the impacts of increasing price competitiveness are considered at the macroeconomic level.

For a given country, cutting domestic wages reduces firms' costs and then may increase exports. However, it also reduces the domestic demand since the income of wage earners has decreased. Depending on circumstances, the aggregate demand may decrease if the reduction of the domestic demand is larger than the increase of exports. Such a possibility is more likely to occur in developed countries since tradable activities – which are concerned with the export promotion policy – mainly belong to manufacturing industry, that is, they constitute only a small and decreasing part of the overall economy. Therefore, the reduction of wages has ambiguous total effects. It implies a wage reduction in the services sector where employment is large and where most activities are non-tradable. It reduces costs in manufacturing but leaves industrial productivity nearly unchanged, the latter being largely dependent on technology rather than on labour cost.

When several countries are considered, the increase of price competitiveness may lead all countries to be worse off. Indeed, increasing price competitiveness through wage cuts is a short-term strategy accessible to any country.⁵ If all countries decide to cut their wage by a same amount, this leads to two negative consequences. On the one hand, price competitiveness of each country remains the same. On the other hand, the overall issue is – like in the prisoner's dilemma – Pareto-dominated by the initial situation. Indeed, the wage cut leads to a reduction of the domestic demand in each country and therefore to lower foreign demand from the other countries.

Clearly, economic growth based on export promotion – that is, based on foreign demand – necessitates coordination among countries in order to maintain a sufficiently high level of the demand for goods, and then of employment. Without such coordination, the occurrence of Keynesian unemployment is certain.⁶

3.12 STRUCTURAL COMPETITIVENESS, INNOVATION AND RICARDIAN UNEMPLOYMENT

Schumpeter (1943) first pointed out that price competition is a shortsighted strategy and that competition in the long term only depends on innovation. Nowadays, it is commonly acknowledged that non-price competitiveness depends not only on firms' behaviour, but also on government policy. The former must invest in R&D in order to innovate and thereby try to 'guarantee' its development in the future. The latter gives to firms incentives to invest through policy actions such as the enforcement of intellectual property rights, the development of infrastructures which provide positive externalities, the promotion of human capital accumulation via the educational system and so on.

Innovation may increase efficiency in the production of existing goods, and/or create new products. Consequently, new or vastly altered markets may emerge. It can improve the export capacity of a given country. Indeed, as shown by Vernon (1966), when a firm innovates, its technological superiority puts it in a monopoly situation, at least for a certain time. When a country's exporting industries exhibit high productivity and concentration levels based on continuing innovation (but temporarily protected innovation), they are less exposed to competitive pressures, notably to price competition. Therefore, economic policy must promote structural competitiveness and innovation rather than price competitiveness (Davidson and Segerstrom 1998; Segerstrom 2000). Indeed, innovation is assumed to provide long-term competitive advantages such that the unemployment problem might be solved. This view holds since increasing competitiveness through innovation does not lead to a zero-sum game. Innovation, by creating new products and new markets, can sustain employment growth in the long run. However, innovation can also have qualitative and/or quantitative negative effects on the labour market.

Let us consider first the qualitative effects. Over the last twenty years, the structure of labour demand has deeply altered in OECD countries. On the one hand, there is an increasing demand for skilled labour, and on the other hand, there is a decreasing demand for unskilled labour. This change is, to a large extent (Lawrence and Slaughter 1993; Svizzero and Tisdell 2002a), explained by recent technological change biased against unskilled workers. Innovation is therefore not Pareto improving since it favours only one group of workers, while pushing the others out of their jobs.

Studies on the quantitative effects of innovation on employment often claim that technological change is introduced in the production processes at the expense of employment. Innovation increases capital productivity and then reduces the cost of capital relative to labour cost. Technological change leads to capital substitution to labour and then to what is called *Ricardian unemployment*. This substitution evolves at a pace positively related to the speed of the wage variations and the innovation process. Both were high from the mid-1970s to the mid-1980s, that is, during the period when unemployment rates were particularly high in most developed countries.

Following Wicksell (1961), mainstream economists argue that, even if unemployment is not classical but Ricardian, wage cuts still are the appropriate policy. Indeed, when due to innovation a labour-saving technology is introduced some workers are laid off because the cost of labour becomes too high. If wages are reduced sufficiently, one may expect a technical reversal, that is, a shift back to labour-intensive technology since labour has become cheaper.

Once again, this point of view is valid under the restrictive and partly

unrealistic assumptions underlying microeconomic theory. A technological reversal is possible if, on the one hand, capital and labour are perfect substitutes, and on the other hand, the introduction of a new technology is not associated with sunk costs. Both conditions are unlikely to be met.

First, the substitution of capital to labour is not automatic. It depends on workers' skills and also on the nature of technological change (Acemoglu 2002, pp. 7-9). During the nineteenth century, most technological advances appear to have replaced skilled workers and expanded tasks performed by the unskilled. However, there is now a broad consensus that since the early twentieth century, capital and skills are intrinsically complementary (Griliches 1969). Such complementarity is stronger for the highest skilled and has been enhanced by the introduction of new technologies in the latest decades (Krusell et al. 2000).

Second, the introduction of a new technology at the firm level follows a cumulative and irreversible process. This process is irreversible since the firm which has invested must change its structure and therefore incurs sunk costs which commit it to the new technology for a long period. Furthermore, the adoption by firms of a new technology is not uniquely determined by cost consideration but is much more influenced by market features, that is, by the strategy of competitors and by the expected pattern of demand.

It is widely agreed that technological change has negative qualitative effects on the labour market. Its bias against unskilled workers has increased inequality over the last twenty years (Lawrence and Slaughter 1993). Its negative quantitative effects on employment are less obvious. Of course, at the firm level or at the sectoral level, employment is reduced after the introduction of a labour-saving technology. However, at the global level, there are some compensations which operate through different channels, that is, innovation may also create jobs.

First, even if the technical reversal is not likely to occur, the labour demand may increase after an innovation. Production-side innovation, which is usually labour-saving, initially enhances unemployment and therefore reduces the cost of labour. Since labour is cheaper, demand for it rises, at least in the industries that are not directly concerned by the innovation.

Second, production-side innovation leads to productivity gains, that is, to a lower total cost incurred by firms. If the underlying market is not too oligopolistic, one may expect a decrease in the price of the produced good and consequently an increase of its demand. In response to this increase, the employment level in the innovative industry could be pushed up. Likewise, the aggregate demand, and thus the employment level, can be positively stimulated by innovation. Indeed, the latter implies productivity gains which – depending on the way the added value is shared among employers and employees – can be partly redistributed to wage earners,⁷ leading finally to a

larger demand for goods and services.

Third, innovation often involves the introduction of new products and therefore the creation of new markets. Both have a direct positive impact on employment but also an indirect positive impact through the links between the new industry and the pre-existing industries.

Technological change has therefore destructive as well as creative effects on jobs because it is generally labour saving and also because some compensations exist. The overall effect of innovation on employment is then quite complex. As shown by several empirical studies (for example, Bean and Pissarides 1993), there is no clear correlation between unemployment and growth – the latter being derived from innovation – not over time nor in cross-sections over countries. Table 12.4 shows the existence in the long run of a striking difference between European and other countries.

*Table 12.4 Long-run percentage changes of real GDP (Δ GDP) and total working time (Δ WT)**

	USA 1976- 1996	Canada 1976- 1996	Japan 1976- 1994	Australia 1978- 1996	UK 1976- 1996	Germany 1973- 1990	France 1976- 1996	Italy 1970- 1985
Δ GDP	69.97	66.00	69.92	70.35	51.78	45.10	47.49	53.34
Δ WT	47.70	32.64	9.20	37.02	-2.20	-9.27	-8.63	-5.44
Δ WT/ Δ GDP	68.47	49.45	13.16	52.61	-4.24	-20.55	-18.18	-10.20

Note: * Total working time is defined as the product of average yearly hours of work and total employment.

Source: Based on OECD National Accounts, Data Stream and ILO data.

In non-European countries, there is a correlation between economic growth and the increased need of working time. In European countries, economic growth is associated with employment stagnation and long-run decline in total working time. Therefore, there are in European countries lower technical coefficients, that is, a strong labour-saving bias.

The theoretical literature also concludes that the overall effect on employment is ambiguous. Many models study this question. For that purpose, every model considers a particular way through which innovation is introduced in the economy (for example, Aghion and Howitt 1994; Mortensen and Pissarides 1998). However, all these different models reach the same conclusion: innovation – and then economic growth – has two opposite effects on unemployment. Old jobs are destroyed when new technologies arrive, but these are subsequently replaced by new more

productive employment opportunities. It is remarkable to note that, although new jobs are created when old ones are destroyed, it does not necessarily imply that the economy will settle at a higher or even the same level of employment.

Once again, there is no clear conclusion. Several factors have an influence, such as the nature of innovation, the structure of the economy, industrial relations, and also the moment of time when the study is done. Indeed, as pointed out by several famous authors such as Schumpeter (1943), innovations – or more precisely clusters of innovations – are major reasons for business cycles. In other words, the total effect of innovation on employment is very different during each phase of the cycle.

12.4 FORDIST REGULATION, AGGREGATE DEMAND AND KEYNESIAN UNEMPLOYMENT

Although we have just concluded that because some compensations exist, the observed unemployment cannot be entirely attributed to technological change, we need now to qualify that claim. Indeed, there exist some compensation mechanisms described in Section 12.3 that are no longer at work under the growing economic integration at the international level. We noted that aggregate demand, and then the employment level, increased after the introduction of a new technology when a large part of productivity gains was redistributed to workers via wage increases (through the collective bargaining system). This mechanism was at work before the early 1970s, when OECD economies were little integrated and were regulated by a Fordist system.

With growing globalisation, the Fordist system has gradually disappeared and wage determination is nowadays regulated by a more competitive labour market. Therefore, one of the main compensation channels no longer exists and hence unemployment can be, at least partially, Ricardian. Furthermore, what is mainly suggested by the end of the Fordist regulation system is that the aggregate demand, no more supported by the 'Fordist social contract', is too weak and consequently that unemployment is, to a large extent, Keynesian in nature.

This claim can be demonstrated as follows. First, recall that partial-type market forces do not operate at the macroeconomic level according to Keynes. They do not contribute to the determination of economic and employment levels that are found through the effective demand principle. The current level of employment depends on the expected level of the demand for goods. The latter level is itself dependent on entrepreneurs' expectations and on the current level of the components of the demand.

Second, when the aggregate demand is too low (because expectations are too pessimistic or because some of its components are too weak) a demand deficiency or *Keynesian unemployment* appears. Third, Keynesian unemployment can be reduced by the use of economic policies which support the effective demand. The effectiveness of these policies, either monetary or fiscal, depends on two features. On the one hand, it depends on the multiplier effect associated with the components of the autonomous demand.⁸ As is well known, the multiplier effect is negatively influenced by the level of taxes, the propensity to save and the propensity to import. On the other hand, if unemployment of other types, either classical or Ricardian, coexists with Keynesian unemployment, an extra effective demand alone cannot cure the latter but merely causes inflation. It is for the previous reason – the co-existence of high inflation and structural problems – that most countries have, since the mid-1970s, given up the view that demand-side policy can reduce unemployment.

Our purpose in this section is to show that with growing globalisation since the early 1970s, every component of aggregate demand has been weakened and therefore a large part of unemployment could be Keynesian. Aggregate demand can be separated into four main components, namely exports, private consumption, private investment and government expenditures. Let us consider how each component has evolved with economic globalisation.

First, exports are the element of demand currently occupying centre stage. Indeed, as mentioned above,⁹ many governments, encouraged by international organizations such as the World Bank and the IMF, have based their economic growth on exports. This recommendation was suggested by the faster growth of world trade relative to domestic demand. However, as pointed out previously, such a policy has not been successful except in newly industrialised East Asian countries.

Table 12.5 shows the link between economic growth and the structure of demand, in 1980 and 1995. While private investment and private consumption are essential factors for long-term growth, exports play a different role in particular regions. This lack of success in Western economies can be explained by the fact that exports depend on two key elements, competitiveness and foreign income. Price competitiveness has been sought by wage cuts, leading to a lower income available for domestic demand and imports. Encouraging export promotion was sometimes successful in the past, but it would be misleading to pursue such a policy without international coordination. Indeed, this policy had had positive effects, when several countries¹⁰ decided to engage together into free trade, providing new markets to the other countries and sustaining also their exports. Currently, almost all countries, including China, belong to the WTO,

that is, are committed into free trade agreements and therefore there should be no more markets or countries that would be still closed and that could be suddenly opened.

Table 12.5 Average annual growth rate (%) and the distribution of GDP (%)

	GDP, average annual growth rate		Exports of goods & services		Private consumpt.		Private invest.		Govt expend.	
	1980-90	1990-95	1980	1995	1980	1995	1980	1995	1980	1995
	Low/middle income countries	2.8	2.1	23	22	57	63	26	27	14
East Asia & Pacific	7.6	10.3	16	29	58	51	28	39	12	11
South Asia	5.7	4.6	8	14	75	69	20	23	9	11
Latin Amer. & Caribbean	1.7	3.2	16	17	67	67	25	20	11	12
High income countries	3.2	2.0	22	22	60	63	23	21	17	15
World	3.1	2.0	22	22	59	63	24	23	16	15

Source: World Development Report, 1997.

The second component of aggregate demand is private consumption. With greater competition and lower prices due to globalisation, one may expect that consumption has increased. This is partly true but several factors have impaired consumption.

Restrictive monetary policies implemented in most countries at the beginning of the 1980s have considerably reduced inflation rates and hence increased real interest rates. The cost of credit was then larger and consumers were less willing to borrow (for example, for housing). Since the mid-1990s, real interest rates have been very low (especially in Japan and in the US) but the consumption level has not increased. This shows that consumption also depends on other factors and notably that it has been hindered by the increase of uncertainty linked with growing globalisation. Consumption has also been restrained by, on the one hand, growing income inequalities, and on the other hand, the increasing volatility of income.

It is well known¹¹ that the marginal and average propensity to consume is

a decreasing function of the income level. For instance, poorer people consume, on average, a larger part of their income than the rich. Since the early 1970s, there has been greater income polarisation in most countries. Globalisation and other phenomena¹² have increased between-groups income inequalities (Svizzero and Tisdell 2002a) and also within-group income inequality (Svizzero and Tisdell 2002b). A larger number of workers have now a lower income, the latter remaining constant over time and sometimes being decreased. Likewise, a larger number of highly-skilled workers have now a larger income, the latter following an increasing path over time. Both trends tend to reduce the overall average propensity to consume to which the multiplier effect is positively related.

Higher unemployment rates, part-time jobs, temporary job contracts and other factors leading to casualisation of the labour market have also increased uncertainty and income volatility. Once again, this has led consumers to be more pessimistic, and therefore they have increased their precautionary savings, that is, they have reduced their propensity to consume. As shown in Section 12.2, growing casualisation of the labour market is partly the result of a deregulation policy recommended by mainstream economists in order to adapt the economy to the globalised context. Growing uncertainty in the labour market, and more generally in all economic activities, also comes from globalisation. Greater economic integration has reinforced spillover and contagious effects among countries. Therefore, any crisis – financial or political – in a given country has, through the financial system, direct and immediate effects on the other economies.

The third component of aggregate demand is private investment. As pointed out in Section 12.3, although investment in the initial process of capital creation may at first add to employment, subsequently investment often has direct negative effects on employment. Indeed, it leads to capital substitution for labour, that is, to the introduction of a labour-saving technology and then to the occurrence of Ricardian unemployment. Moreover, even though investment raises labour productivity and thereby economic growth, it does not necessarily entail job creation. Like the other components of aggregate demand, investment has indirect effects on employment via the multiplier.

Two other influences on investment – namely the interest rate and expectations – have had opposite influences during the last two decades.

Interest rates reached very high levels which slowed down investment. Indeed, until the late 1970s, interest rates were often low as monetary policy was used by governments to support aggregate demand, as recommended by Keynesian economists. The controversy about the relevance of the Phillips curve led governments – influenced by monetarists – to adopt a different monetary policy. For monetarists as well as for new classical economists,

there is no trade-off between unemployment and inflation. Money is neutral and any attempt to support aggregate demand by means of monetary policy will only result in increased inflation. Therefore, the only goal of monetary policy is to maintain a low level of inflation, an objective which is reached with restrictive monetary policy, that is, by maintaining interest rates at high levels. Such a policy has also been recommended by international organisations. Indeed, one major feature of economic globalisation has been the growing integration of monetary and financial markets across countries. The latter have been encouraged by deregulation of financial markets and the shift – after the collapse of the Bretton Woods system in 1971 – towards a floating exchange rate regime. In order to prevent deep fluctuations of exchange rates, these organisations recommended governments to adopt monetarist policy, that is, to fight inflation despite the perverse effect on employment resulting from high levels of interest rates.

Entrepreneurs' expectations are the second fundamental determining factor of investment. Of course, they are much more difficult to assess than the level of interest rates. From the mid-1970s until now, these expectations have been influenced by the unemployment rate and trade growth. On the one hand, the weak level of domestic demand in most Western countries made entrepreneurs pessimistic. They then feel that they should invest at a level that just maintains their economic activities. On the other hand, the rapid growth of world trade relative to domestic demand urged entrepreneurs to invest massively abroad. The flows of foreign direct investment (FDI) reached unprecedented records year after year. So, for a given country, investment abroad was much more dynamic than investment at home. This action did not lead to the virtuous dynamic highlighted by Keynesian economics and based on the multiplier effect. Indeed, with the development of FDI and multinational companies, goods – either final or intermediary – are often produced in one country and sold in another. In other words, FDI increases the productive capacity in the host country but it does not necessarily increase the income of this country since the Fordist regulation system has disappeared. Moreover, the produced goods resulting from the FDI are sold to countries where the income has not been affected by this investment and can therefore be insufficient to generate effective demand. The multiplier effect works if the additional demand – resulting for instance from an extra investment – generates an additional income sufficient to buy the additional produced good. When production and consumption take place in different countries without regulated connections, the multiplier effect can be positive or negative, depending on circumstances.

The fourth and last component of aggregate demand is government expenditure. These expenditures take various forms such as spending on goods and services, spending on employment in public firms, spending on

transfer payments, subsidies, and payment of debt interest. All these expenditures gradually grew after World War II and helped to sustain the rapid economic growth of OECD countries until the mid-1970s. Since the late 1970s and under the influence of globalisation and structural adjustment policies, there has been a shift toward a market economy and consequently each type of expenditure mentioned above has been reduced.

Under the influence of monetarists, a new orthodoxy has been introduced. It consists in the limitation of the budget deficit¹³ and it urges governments to balance their budgets and even to reach budget surpluses.¹⁴ The ideas underlying such policy are that government spending is harmful since it tends to favour inflation and higher interest rates and also crowds out private investment, and increases public debt. Moreover, the latter problem puts pressure on interest rates and induces a lack of credibility on monetary policy when the central bank is not completely independent. As a result, several governments' expenditures have been cut, for example, in Australia, New Zealand and the UK, leading to reduced employment because, on the one hand, employment in the public sector has decreased in most western countries, and on the other hand, the multiplier effect has been less effective since the Western countries are more interdependent. In addition, several public firms have been partly or totally privatised. Some others are still publicly owned but now they compete with private firms. Employment in the public sector is now managed by rules similar to those prevailing in the competitive labour market.

As previously stressed, demand-side policies – based for instance on government expenditure – appear to be less effective or even ineffective under globalisation.¹⁵ However, this does not mean that an expansion of the demand supported by public expenditure is necessarily harmful. On the contrary, what is needed now to reduce Keynesian unemployment in the context of globalisation is coordination of aggregate demand expansion – at least at the regional level – in order to prevent imbalances.

The idea of a coordinated action between countries to reduce unemployment and favour growth for everyone is not a new idea. Rosenstein-Rodan (1943)¹⁶ explains why the industrialisation of eastern and south-eastern Europe can be beneficial to Western Europe, and thereby for all Europe. The industrialisation of international depressed areas is vital for everyone. 'It is *the* way of achieving a more equal distribution of income between different areas of the world by raising incomes in depressed areas at a higher rate than in the rich areas' (Rosenstein-Rodan 1943, p. 202). Unemployment is not confined to rich areas, it does exist everywhere and it is an even more problematic issue in some depressed areas. This high unemployment is going to make people move towards richer areas. 'If the principles of international division of labour are to be applied, labour must

either be transported towards capital (emigration), or capital must be transported towards labour (industrialisation)' (Rosenstein-Rodan 1943, p. 202).

Emigration was already a sensitive problem at that time and was not a popular policy. Industrialisation was the best solution for everyone, but it had to be monitored. Rosenstein-Rodan strongly rejected a process of industrialisation made by the depressed countries by themselves. He believed it was an 'unnecessary sacrifice'. It will just shift important resources from consumption to industries and thereby increase the economic deprivation for these countries. He advocated an alternative solution to expand investment and to facilitate the emergence of industries in these countries: namely loans from abroad, or foreign direct investment. In both cases, the involuntary unemployed remain in the depressed areas, do not emigrate and participate in the development of their country. In a certain sense, this policy seems to have been applied in the following years, not because of Rosenstein-Rodan's arguments, but because of cheap labour costs in those depressed areas.

A few decades later, the fast growing East Asian economies made some Europeans or North Americans think that work was stolen from them and their standards of living were decreasing. These arguments were partly developed here in Sections 12.2 and 12.3 and qualified. Nevertheless, this view is at variance with that of Krugman (1996) who pointed out that the standard of living of Western countries cannot be decreased by the rise of that of southern countries.

The migration of labour is an important issue. Its overall economic impact is quite complex since it depends on many factors such as the skills of migrants, the structure of the economy, and the level of economic development. When labour movements across countries are allowed, they mainly consist in migration of southern workers toward northern countries where standards of living are better. When these workers are highly skilled, one speaks about the brain drain and the fact that it endangers the development of southern countries. However, such a brain drain can be imposed rather than chosen since skilled workers may have little prospect of contributing in their home country. Indeed, their skills may be in little demand because there is a lack of complementary factors (Tisdell 1990, Chapters 10 and 11).

Moreover, migrant workers from the South – be they skilled or not – can contribute to the economic development of their native country through international remittance.

In the host country, southern highly-skilled workers are going to compete with local workers and may deprive local unskilled workers of the chance to improve their position in the labour market (by training or better education). However, immigration may also have positive effects in the host country. It

stimulates aggregate demand because it often requires extra investment, for example, in housing, schools and so on. This could even help unskilled workers native to the host country. When the domestic population is too low, immigration may also be a means of reaching the critical market size consistent with substantial economies of scale.

12.5 CONCLUDING COMMENTS

We have shown that three different mechanisms can explain unemployment, which can be either classical, Ricardian or Keynesian. We have demonstrated that the economic forces underlying the globalisation process have reinforced all these mechanisms. In other words, each type of unemployment is more likely to occur in a globalised world. We have also argued that the largest part of the currently observed unemployment is probably Keynesian in nature. This is mainly explained by two factors: the disappearance of the Fordist regulation system since the mid-1970s and the policies implemented in OECD countries. Up to the mid-1970s, the Fordist regulation system used to support aggregate demand. The policies implemented in OECD countries under the influence of dominant mainstream economists led to wage cuts and deregulation of the labour market.

However, it should be noted that the other types of unemployment – classical and Ricardian – are not excluded. As pointed out in the mid-1970s by economists such as Malinvaud (1977) or Benassy (1982), supporters of the ‘fix-price’ or ‘disequilibrium’ theory, different theoretical explanations of unemployment are often complementary rather than substitutes. In a given country, and even in a given sector or industry, unemployment can be partly classical and partly Keynesian. Such a possibility has been observed for EU countries (Lubrano et al. 1996). One major consequence is that it is less easy to find, at the country level, an appropriate policy leading to reduced unemployment. On the contrary, this situation necessitates the implementation of economic policy at the sectoral level.

Finally, there is an additional element which can influence the level of employment: immigration. As first pointed out in Section 12.1 (and also in Tisdell et al. 2004), labour markets are among the least globalised markets since countries have strengthened their immigration policy. However, the flows of migrants are important. Some policies with respect to migration have been implemented (through international agreements), but these are usually restrictive for low-skilled people.

Even if data are not available or very incomplete, illegal immigration has probably risen over the past decades (immigration into EU countries and the United States) and has sometimes led to international agreements (NAFTA

for example). According to the Stolper-Samuelson theorem, international movements of products have similar consequences to international labour movements. The countries of the European Union have also agreed by the Schengen agreement to free labour movements within the Union.

Immigration laws could imply a new era of partnership between northern and southern countries. Indeed, the decline of the birth rate associated with the growing demand for skilled labour in Western countries make the future growth of Western economies more uncertain. To offset the forecast lack of highly-skilled labour, the European Community has enhanced education and training of the labour force and teenagers in recent years.¹⁷ Some countries already believe that these actions will be effective only in the longer term and need at the present time to be associated with new immigration laws. They are in favour of selective immigration. Recently, Germany passed a law facilitating the immigration of highly-skilled workers. The United Kingdom employs doctors and teachers from the Commonwealth countries. Other European countries will follow soon. Indeed, some politicians forecast a race between countries to attract the best workers. Unfortunately, this policy of selective immigration can be seen as a pillaging of southern highly-skilled workers who are needed for the development of their own countries.

International labour movements have probably partly contributed to the rise and the persistence of high unemployment rates in rich countries, even though the overall impact of immigration on unemployment is quite ambiguous since it depends on several independent factors. They have partly weakened the position of unskilled northern workers. Any attempt to reduce unemployment should take into account the impact of immigration on unemployment in northern countries and on economic development in southern countries. Once again, as we have already pointed out for economic policy, the effectiveness of immigration policy necessitates coordination across countries, including northern as well as southern countries. However, immigration policy does not only need coordination among countries, it also needs not to be treated separately from economic policy. As is illustrated by the NAFTA, immigration can be monitored at a low cost if there is some economic counterpart for the country which the migrants were coming from. In other words, it is through its direct investment that the United States provides work and economic activity in Mexico and therefore limits the incentive to migrate inward.

In addition, it seems appropriate that economists should give more attention to the economic impacts of international labour migration to correct the current imbalance of their concentration in other commodity markets, including capital markets in the globalisation process.

NOTES

1. Collaboration of Serge Svizzero and Clem Tisdell in contributing to this chapter was assisted by their 2002-2003 award from FEAST-France. They are grateful for this award. The usual caveat applies.
2. See for instance the Australian income policy implemented since the earliest days of Federation (1901) and called 'The price and income Accord' between 1983 to 1996.
3. Like, for instance, in the UK and in the USA.
4. Like in most European countries.
5. Such a policy is currently accessible exactly as currency devaluation was used in order to improve competitiveness under a fixed exchange rate regime.
6. See Section 12.4.
7. Such a redistribution is effective in a Fordist system through the collective bargaining between unions, employers and the government.
8. That is, components that are independent from current income levels.
9. See Sections 12.2 and 12.3.
10. We can distinguish three groups of countries. First, the former communist countries (including China) which have been, since the early 1990s, more or less open to world trade. Second, some countries (for example, India and South Africa) that were highly protectionist or closed and that are now more open to international trade. Third, there are countries (South America, East Asia) that had based their economic development on import substitution and that, after a while, have adopted a policy based on export promotion.
11. As is stressed by Engel's curve.
12. Such as technological change and the deinstitutionalisation of the labour market.
13. The Maastricht Treaty imposes on countries wishing to enter into the EMU an obligation to maintain the budget deficit at under 3 per cent of GDP.
14. The Amsterdam Pact of Stability introduces such incentives for European countries belonging to the EMU.
15. See for instance the negative result experimented in Germany (1978) and in France (1982).
16. Although the paper was written in 1943, it can still give some interesting insights into today's world economy and it finds an advocate in Krugman (1996).
17. See the policy guidelines accepted by European heads of governments at the different summits since 1997.

REFERENCES

- Acemoglu, D. (2002), 'Technical change, inequality and the labour market', *Journal of Economic Literature*, **XL**, March 2002, 7-72.
- Aghion, P. and P. Howitt (1994), 'Growth and unemployment', *Review of Economic Studies*, **61**, 477-94.
- Atkinson, A. (1997), 'Bringing income distribution in from the cold', *Economic Journal*, **107**, 291-321.
- Azariadis, C. and J.E. Stiglitz (1983), 'Implicit contracts and fixed-price equilibria', *Quarterly Journal of Economics*, **98** (supplement), 1-22.
- Bean, C. and C. Pissarides (1993), 'Unemployment, consumption and growth', *European Economic Review*, **37**, 837-54.
- Benassy, J.-P. (1982), *The Economics of Market Disequilibrium*, New York: Oxford Academic Press.
- Blanchard, O. and L.H. Summers (1987), 'Hysteresis in unemployment', *European Economic Review*, **31**, 288-95.

- Davidson, C. and P. Segerstrom (1998), 'R&D subsidies and economic growth', *Rand Journal of Economics*, **29**, 548-77.
- Eichner, A.S. (1985), *Toward a New Economics. Essays in Post-Keynesian and Institutional Theory*, London: Macmillan Press.
- Griliches, Z. (1969), 'Capital-skill complementarity', *Review of Economic Statistics*, **51**, 465-68.
- Haskel, J. and M.J. Slaughter (2001), 'Trade, technology and the UK wage inequality', *Economic Journal*, **111**, 163-87.
- Krugman, P. (1996), *Pop Internationalism*, Cambridge, MA: MIT Press.
- Krusell, P., L. Ohanian, V. Rios-Rull and G. Violante (2000), 'Capital skill complementary and inequality: a macroeconomic analysis', *Econometrica*, **68**, 1024-53.
- Lawrence, R.Z. and M.J. Slaughter (1993), 'International trade and American wages in the 1980s: giant sucking sound or small hiccup?', *Brookings Papers on Economic Activity, Microeconomics*, **2**, 161-210.
- Lindbeck, A. and D.J. Snower (1988), *The Insider-Outsider Theory of Employment and Unemployment*, Cambridge, MA: MIT Press.
- Lubrano, M., F. Shadman-Mehta and H.R. Sneessens (1996), 'Real wages, quantity constraints and equilibrium unemployment: Belgium 1955-1988', *Empirical Economics*, **21**, 427-57.
- Malinvaud, E. (1977), *The Theory of Unemployment Reconsidered*, Oxford: Blackwell.
- Malinvaud, E. (1994), *Diagnosis Unemployment*, Cambridge: Cambridge University Press.
- Mathews, J.A. and D.-S. Cho (2000), *Tiger Technology: The Creation of a Semiconductor Industry in East Asia*, Cambridge: Cambridge University Press.
- Mortensen, D. (1986), 'Job search and the labour market analysis', in O. Ashenfelter and R. Layard (eds), *Handbook of Labour Economics*, New York: Elsevier Science Publisher, Vol. 3B, Chapter 39.
- Mortensen, D.T. and C.A. Pissarides (1998), 'Technological progress, job creation, and job destruction', *Review of Economic Dynamics*, **1**, 733-53.
- Nickell, S. (1997), 'Unemployment and labour market rigidities: Europe versus North America', *Journal of Economic Perspectives*, **11** (3), 55-74.
- Odagiri, H. and A. Goto (1993), 'The Japanese system of innovation: past, present and future', in R. Nelson (ed.), *National Innovation Systems*, New York: Oxford University Press.
- Rodrik, D. (2000), 'How far will international economic integration go?', *Journal of Economic Perspectives*, **14** (1), 177-86.
- Rosen, S. (1985), 'Implicit contracts: a survey', *Journal of Economic Literature*, **23**, 1144-75.
- Rosenstein-Rodan, P.N. (1943), 'Problems of industrialisation of Eastern and South-Eastern Europe', *Economic Journal*, **53** (210/211), 202-11.
- Schumpeter, J. (1943), *Capitalism, Socialism and Democracy*, New York: Harper.
- Segerstrom, P. (2000), 'The long-run effects of R&D subsidies', *Journal of Economic Growth*, **5**, 277-305. Shapiro, C. and J.E. Stiglitz (1984), 'Equilibrium unemployment as a discipline device', *American Economic Review*, **74**, 433-44.
- Shapiro, C. and J.E. Stiglitz (1984), 'Equilibrium unemployment as a discipline device', *American Economic Review*, **74**, 433-44.
- Siebert, H. (1997), 'Labour market rigidities: at the root of unemployment in Europe', *Journal of Economic Perspectives*, **11** (3), 37-54.

- Svizzero, S. and C. Tisdell (2002a), 'Reconciling globalisation and technological change: growing income inequalities and remedial policies', *Intereconomics: Review of European Economic Policy*, **3**, 162-71.
- Svizzero S. and C. Tisdell (2002b), 'Income inequality between skilled individuals', *CERESUR Working Paper*, La Réunion, France: Université de La Réunion.
- Tisdell, C. (1990), *Natural Resources, Growth and Development*, New York: Praeger.
- Tisdell, C., S. Svizzero and L. Lasselle (2004), 'Unequal economic gains of nations from globalisation', in C. Tisdell and R. K. Sen (eds), *Economic Globalisation: Social Conflicts, Labour and Environmental Issues*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Vernon, R. (1966), 'International investment and international trade in the product cycle', *Quarterly Journal of Economics*, **80**, 190-207.
- Wicksell, K. (1961), *Lectures on Political Economy*, London: Routledge & Kegan.
- Wood, A. (1994), *North-South Trade, Employment and Inequality. Changing Fortunes in a Skill-Driven World*, Clarendon Press: Oxford.
- Wood, A. (1998), 'Globalization and the rise in labour market inequalities', *Economic Journal*, **108**, 1463-82.
- Young, A. (1995), 'The tyranny of numbers: confronting the statistical realities of the East Asia growth experience', *Quarterly Journal of Economics*, **110**, 641-80.