



TRADE LIBERALIZATION AND ADJUSTMENT COSTS

Santiago Fernandez de Cordoba, Sam Laird and Jose Maria Serena

While the long-run gains from trade liberalization are now widely accepted, there is also a growing body of evidence of the short run adjustments costs. This has prompted a view that liberalization should be accompanied by provisions to facilitate adjustment, including social safety nets. This paper reviews examines the issues and reviews the literature on adjustment costs, with particular emphasis on the effects on developing countries.

DRAFT VERSION NOT FOR CITATION

TABLE OF CONTENTS

1 INTRODUCTION	3
2 DEFINITION OF ADJUSTMENT COSTS	3
3 THE RISE IN IMPORTANCE OF STRUCTURAL ADJUSTMENT COSTS	5
4 IDENTIFYING STRUCTURAL ADJUSTMENT COSTS	8
5 MEASURING STRUCTURAL ADJUSTMENT COSTS	8
5.1 EX POST ANALYSIS	9
5.2 EX-ANTE ANALYSIS	9
6 REVIEW OF THE LITERATURE ON DEVELOPING COUNTRIES:	11
7 POLICIES TO REDUCE STRUCTURAL ADJUSTMENT COSTS	13
8 CONCLUSION	14
REFERENCES	15
APPENDIX: PRELIMINARY TABLE ON ADJUSTMENT COSTS LITERATURE	18

Introduction

Trade-induced adjustment costs experienced by developing countries are a matter of growing concern within multilateral negotiations as well as in with the literature on trade liberalization. While the longer-term benefits of trade liberalization are well accepted, the costs that arise during short-term transition periods are not as well understood. The challenge at hand is to identify policies that help developing countries to achieve a rapid supply response and to minimise social disruption. Through reviewing the literature on structural adjustment costs, we can look for answers to questions such as: What are the lessons of timing and sequencing? What sort of supporting policies and institutions work the best, especially in developing country situations? There is also a set of questions around how to identify positive externalities that are associated with industrialisation, as appears to be the case at some stages in the development of the East Asian countries.

This paper is intended: (i) to identify and estimate adjustment costs that should be taken into account in multilateral trade negotiations; (ii) to provide an overview of different studies and approaches used to assess the costs; and (iii) to identify, where possible, supporting policies that may need to be put in place to facilitate the trade reforms that may result from the current WTO negotiations (or indeed any autonomous reform effort).

2 Definition of Adjustment Costs

Adjustment costs are generally defined as the short-term costs of transition from one state to another. More narrowly, adjustment costs are the costs of transferring resources from one sector to another once there is a change in the economy. It is also be useful to draw the distinction between gross and net adjustment costs. Net adjustment costs arise from the change in level of resources (labour, capital), whereas gross costs include costs arising from the turnover in resources. The gross costs take account of the more amplified positive and negative changes e.g. in the labour market. A comprehensive definition of adjustment costs includes the adjustment costs borne by both the private and the public sector (Figure 1).

Figure 1: Adjustment Costs

Private sector	Labour:	Opportunity costs of unemployed labour
		Obsolescence of skills and skill specificity
		Lower wage levels
		Re-training costs
		Personal costs such as psychological suffering
		Other costs: (e.g. rent seeking)
	Capital	Opportunity costs of underutilized or unemployed capital
		Cost of capital rendered obsolete (Capital write-offs)
		Transition costs of shifting capital from one activity to another
Public sector	Loss in tax revenue	
	Social safety net spending (e.g., unemployment benefits)	
	Erosion of benefits from preferential treatment	
	Efforts to ensure macroeconomic stability	
	Implementation costs of trade reforms	
	Non Trade Concerns: food security, support to rural areas, environmental concerns	

Within the private sector, the category of adjustment costs that are the most widely studied and documented are the costs imposed on labour markets. Labour markets receive the most attention because they bear the highest costs and can also have considerable political influence. They are particularly important in developing countries that are specialized in labour intensive manufacturing sectors. Costs borne by labour markets in the private sector include forgone earnings, retraining expenses, personal costs and displacement costs.

Capital is also an important input into industrial goods. Structural adjustments to the economy can result in under-utilized or obsolete capital, as well as shifts in capital from one sector to another. When considering these costs, it is useful to distinguish between physical and financial capital. Physical capital is defined as the machinery used in the production of goods and services. The costs of adjustment for physical capital are the costs of divesting and reinvesting the capital, that is, of changing the machinery used in the production of the goods and the forgone earnings produced by

changes in production patterns. The adjustment costs of financial capital are the costs of reallocating resources from one sector to another. Given that financial capital is much more mobile, the costs of shifting physical capital are usually higher. However, in many developing countries, capital mobility may be limited by a lack of capital and credit markets, resulting in higher adjustment costs.

The adjustment costs faced by the public sector are mainly losses of revenue. Losses of tax revenue are often regarded as of second order importance by developed countries. But such losses are of major concern to countries in which tariff revenues are a large part of total revenues. Governments must make up for this loss with increases in taxes on income, profits, capital gains, property, labour and consumption, and through non-tax revenue. The debate about adjustment costs within the public sector has diminished in recent years, due to the progressive reduction in tariff revenues (without dismissing the importance they still have in some LDCs and developing countries).

Public sector adjustment costs can also include spending on social safety nets, erosion of benefits from preferential trade agreements, efforts to ensure macroeconomic stability and the implementation costs of trade reforms.

3 The Rise in Importance of Structural Adjustment Costs

Economists in the past placed greater emphasis on the long-run effects of trade liberalisation, such as those resulting from comparative advantage and shifting trade patterns. The short-run effects such as the adjustment process were dismissed as of secondary importance. As noted by Baldwin, Mutti and Richardson (1980) in their pioneer contribution to the trade-induced adjustment cost literature: *“Economists have sometimes dismissed such adjustment costs with the comment that the displaced factors become reemployed in the long-run.”*

Structural adjustment issues facing developing countries did not receive much attention either from governments or policy makers in earlier rounds of trade liberalization due to the smaller magnitude of the agreements reached and the lack of involvement of developing countries in the negotiations.

However, there is now a growing interest in the costs of trade liberalisation faced by developing countries and how to minimize them. Despite the empirical evidence that the costs tend to be small relative to the total benefits, there is still a need to better understand the nature of these costs and how they can be reduced. Some of the reasons behind this growing interest include:

Increased awareness from recent liberalization efforts

In the Uruguay Round developing countries took on a number of ambitious commitments that have since proved more difficult to implement than had been anticipated. In addition, many IMF and World Bank programmes included autonomous liberalization obligations that had significant consequences to the recipient countries. As a result of these experiences, there is a now a growing body of evidence on the short-run effects of these types of reforms and policies that can be put in place to mitigate against them.

The political economy of opposition to trade reforms

Distinguishing between the social and private costs help to understand the sources of opposition to trade liberalization. Social costs are the costs of society as a whole, while private costs are the costs of individual due to liberalization. Private costs include of loss income through unemployment or lower wages and indirect costs such as loss of monopoly power. The more concentrated losses are among groups within the private sector, the more that they will be likely to oppose trade liberalization. Political opposition depends on the concentration of costs within the economy, and on the size of private costs, which might be augmented by rent seeking or corruption. Even if some individuals lose a lot as a consequence of an agreement, it is possible that the economy as a whole can still be better off, if the gains are sufficient enough so as to make everyone better off while at the same time compensating those groups that have been negatively affected. The fact that private costs are high and that compensation is very difficult to implement and in come cases, does not occur at all, helps to explain opposition.

New economic theoretical findings

Recent studies have shown that adjustment costs can reduce, and in some cases actually outweigh gains from liberalisation. Davidson and Matsusz (2000) have simulated the effects of liberalization using models with rigid and flexible labour markets. Their findings are that in rigid labour markets the adjustment costs might offset the gains to a significant extent. That is, although most empirical studies on adjustment costs and the first attempts to predict the costs point out that they are a small fraction of total gains, some recent research with CGE models raises doubts about methodological issues and the about the possible sensitivity of results to assumptions. Much has still to be learned on the assessment of adjustment costs and thus the results of the studies are regarded with care by policymakers and researchers.

Efficiency Concerns

Understanding how to minimize the short run costs will help policy makers to ensure that developing countries realize the maximum gains from further trade liberalization. For example, it has been show that implementing reforms over a gradual period and taking other labour market institutions such unions and unemployment benefits into account can help to reduce the short run costs. Through better understanding these and other policies, developing countries can realize a greater net benefit from trade liberalization.

Need for more information on developing countries

With development at the centre of the current round of WTO negotiations, there is a greater desire than ever before to understand how developing countries can benefit most from trade liberalization. However most studies are focused on industrialized countries. Some authors such as Rodrik (2004) have recently put emphasis on the institutional aspects of the effects of trade liberalization, raising doubts about the possibility of extrapolating the results. If institutions play an important role in explaining the effects of liberalization, then policies should be tailor-made and extrapolating results might lead to inaccurate conclusions. As a result, there is a growing recognition of the need for studies that deal with specific countries or with groups of countries of similar characteristics.

4 Identifying Structural Adjustment Costs

Adjustment costs arise from a wide range of causes, such as technological change, change in demand/tastes, regulatory changes, weather/natural conditions, political (in)stability or change in international agreements, such as trade agreements. As it has been pointed out, there is no agreement on whether it is feasible or desirable to try to separate the causes of adjustment costs. Bacchetta and Jansen (2003) underline the importance of separating adjustment costs produced by trade agreements from other costs of adjustment. Rama (2003) objects that it is neither desirable nor feasible to disentangle adjustment costs, arguing that it is globalisation as a whole and not trade agreements by themselves that cause adjustment. That is, together with trade liberalization there are a myriad of phenomena such as changes in tastes and in demand (cultural homogenisation) or movements in production inputs such as labour and financial capital, and thus it is not easy (nor perhaps interesting) to determine the cause of the process of adjustment. Bhagwati (1978, 1983) has argued as well that it is difficult to predict the impact of trade liberalization because this phenomenon reduces many sectors and various trade barriers at the same time. Any attempt to quantify the effect of past trade liberalization on an economy, or to predict effects in a different way faces these complications. Even so, it would seem desirable to the extent possible to try to measure the adjustment costs arising from trade liberalization

5 Measuring Structural Adjustment Costs

Literature on trade-induced adjustment costs can be divided between those studies trying to measure the effect of a policy that has already been adopted (ex-post), and those studies that try to predict the potential effects of a policy (ex-ante). Ex-Post analysis uses econometric tools intensively, especially time series analysis and regressions, to determine the effects of a past policy. Ex-ante analysis uses predictions based on either partial equilibrium models or Applied General Equilibrium models (AGE models) such as GTAP. However this difference is not as sharp as it might appear at first glance: econometric studies try to explain past facts but they aim as well to *predict* future consequences. Both approaches are important in order to determine the consequences of trade agreements on the welfare of countries.

5.1 Ex Post Analysis

The methods used to predict costs of adjustment have evolved since the pioneer works, with earlier studies focused on more narrow definitions of structural adjustment costs. Magee (1972) restricted himself to labour markets and estimated the number of workers who had lost their jobs due to trade reforms, the duration of unemployment and the total cost of adjustment. His findings estimate that adjustment costs represent 12 per cent of gains from trade during the first years after the liberalization.

Baldwin et al (1980), unlike Magee, take both capital and labor into account, although they use a similar approach to compute labour adjustment costs which are estimated at some 4 per cent in the longer-run. To the degree that these findings can be compared the suggestion seems to be that adjustment costs are front loaded, e.g. 12% in the short term and 4% in the longer term.

There have also been various approaches to measuring the duration of unemployment. Takacs and Winters (1991) in their study on British footwear industry take into account the natural turnover of the sector, and later estimate the duration of unemployment produced by the removal of quantitative restrictions. Bale (1976), in his study on the trade displacement costs for US workers, interviewed the workers and found an unemployment duration of about 31 weeks.

Another cost to consider are the lower wages obtained by workers in their new job, when compared with the previous one. Some studies try to assess the percentage reduction in the earnings of workers, with perhaps the most illustrative study being that by Rama and MacIsaac (1999), who find that the average earnings of workers displaced from their works with the Ecuadorian Central Bank were only 55% of their prior earnings.

5.2 Ex-Ante Analysis

The development of Computable General Equilibrium (CGE) models such as GTAP have enlarged the available tools that economists have to predict the effects of trade policies and to obtain more valuable findings. CGE models are a sophisticated and

fully articulated economy with assumptions on labour and goods markets. The introduction of shocks into the model enables researchers to quantify the changes in welfare produced by trade liberalization, according to the assumptions of theoretical neoclassical economics. These assumptions include rational expectations and that households act to maximize their welfare. The models allow a comparison of the welfare in the economy before and after the change.

Some works on liberalization-induced adjustment costs with CGE models were already done during the early 1990's. Melo and Tarr (1990) use a CGE model to study the effects of the removal of quantitative restrictions in the US, finding adjustment costs of 1.5 per cent of overall gains. Another pioneer work within CGE literature was done by Melo and Roland-Holst (1994) in which they study the effects of trade reform in Uruguay.

However, the measurement of the costs of the process of adjustment remain problematic. CGE models estimate the degree of adjustment costs based on comparisons of the situation before and after. They do not provide an assessment of the time path of the adjustment, and are unable to provide estimates of the intermediate effects on production and employment. Although CGE models allow assessing the reaction of an economy as a whole to shocks such as changes in tariffs, they sometimes lack data or do not model the labour market in a way that would determine shifts within labour force. They do not estimate the duration of unemployment nor do they compare discounted flows of benefits and losses.

There is also an important distinction to be made between inter-sectoral and inter-country comparisons. CGE models are very useful to assess the redistribution effects between countries and therefore may give a good idea of where global adjustment will occur. Countries that are net losers of the liberalisation process will have to undergo significant adjustment. In the context of reallocation of resources within a country, CGE models are more limited, although a variety of techniques may help to elaborate on the effects in some sectors, by changing the model specification (e.g. introducing rigidities). There is no agreement about how sensitive the results are to different assumptions but it seems that results should be viewed with caution.

Table II: Methodologies and object of study

	DEVELOPED COUNTRIES	DEVELOPING COUNTRIES AND LEAST DEVELOPED COUNTRIES
PREDICTION WITH COMPUTABLE GENERAL EQUILIBRIUM MODELS	Most of the pioneer works trying to predict ex ante with CGE models and have focused on developed countries ¹ .	"Supporting Developing countries in Industrial Negotiations" focuses on developing countries and primarily uses ex-ante assessment.
PREDICTION AND EXPLANATION WITH ECONOMETRIC TOOLS	Most works, such as the pioneer ones by Magee (1972), Baldwin, Mutti and Richardson (1980) use econometric tools to study trade liberalization in developed countries.	Most of research on developing countries has used econometric tools to explain the effects of trade liberalization.

6 Review of the literature on developing countries:

While a great deal of work has been done to analyze structural adjustment in developed countries, care must be taken when extrapolating the policy implications to developing countries. For example, many studies have focused on the importance of tools such as unemployment benefits and social safety nets that are less feasible in developing countries. Recent findings on the importance of institutional features and industry specific conditions on the overall adjustment process also urge caution when extrapolating results from one country or region to another (Rodrik, 2004).

There is a growing body of literature on the trade-induced structural adjustment costs borne by developing countries. These studies face challenges such as lack of available data and smaller sample sizes due to relatively lower levels of trade flows (compared to developed countries). Table III provides an indication of the range of work that has been completed in the past:

¹ For a survey, see "Back to Basics: Market Access Issues in the Doha Agenda" UNCTAD-TAB, 2003

Table III: Research on Trade-Induced Adjustment Costs in Developing Countries

Author	Countries	Main Features
Papagiorgiou, Choski, Michaely (1990)	19 countries including Argentina, Brazil, Chile, Korea, Peru, Philippines, Singapore, Sri Lanka, Turkey)	Employment in manufacturing
Thomas & Nash (1991)	Bangladesh, Columbia, Ghana, Jamaica, Madagascar, Mauritius, Pakistan, Chile, Korea, Panama, Philippines, Thailand, Turkey, Cote d'Ivoire, Guyana, Malawi, Senegal, Togo, Yugoslavia, Zambia, Zimbabwe	Import tax revenue Inflation, fiscal and trade balance
Parker, Riopelle, Steel (1995)	Ghana, Malawi, Mali, Senegal, Tanzania	SME employment
Harrison and Revenga (1996)	16 countries (Costa Rica, Czechoslovakia, Peru, Poland, Romania, Uruguay	Employment
Milner and Wright (1998)	Mauritius	Positive effects of trade liberalization on employment.
Ghose (2000)		Manufacturing Employment
Rama (2001)	Developing Countries, in general.	
McMillan Rodrik and Welch (2002)	Mozambique	
Ebrill, Strotsky & Grott (forth.)	Ghana, Kenya, Senegal, Malawi	Tariff revenue

Milner and Wright (1998) studied ex-post what happened to the economy of Mauritius after liberalization. Rama (1999) has studied the experience of employees at the Ecuador Central Bank highlighting the loss of earnings of the displaced workers. Rama (1994) has also explored the effects of trade liberalization on the Uruguayan economy. All of these studies quoted try to assess ex-post the effect of trade liberalization on economies. Others studies on developing countries are those by Harrison and Revenga (1995), which observe increasing unemployment following liberalization in Costa Rica, Peru and Uruguay, or McMillan, Rodrik and Welch, (2002) on the reforms of Mozambique. Although this list does not exhaust the available studies on developing countries², the amount of literature dealing with developing countries is relatively small compared to that dealing with developed countries. In general, the available studies try to assess ex-post effects of implemented policies, and many studies provide only descriptive and informal assessments.

² For a more comprehensive list of studies on developing countries see Matusz and Tarr (1999) "Adjusting to Trade Policy Reform" Working Paper 2142, The World Bank.

7 Policies to Reduce Structural Adjustment Costs

Most empirical studies conclude that benefits are higher than costs and that it is *theoretically possible* to make the economy as a whole better off. However the caveat is that this is only possible if the redistribution of the gains from trade to compensate those who are worse off actually occurs.

A survey of the literature reveals that the most important policies intended to compensate losers (restricting the discussion to the labour market) from trade liberalization are unemployment benefits, information or training courses³. There is a vast literature within labour economics showing the difficulties of implementing policies of that kind, and there is a growing concern about how different labour markets institutions affect adjustment costs. Some authors go so far as to suggest that the best policy governments can implement is to restrict themselves to ensuring macroeconomic stability and promote private initiative. (Matusz and Tarr, 1999)

Both academics and policymakers should not conclude from the fact that adjustment costs are a small fraction of total gains that the problem of redistribution is a minor one. The challenges, and indeed, in some instances, the absence of compensation for those made worse off by trade liberalization are one of the major reasons for political opposition towards trade liberalization.

A review of the literature offers a number of policy recommendations for minimizing structural adjustment costs in developing countries. Phased-in liberalization is strongly recommended. The pace of reform should reflect the particular situation of a country, taking into account key factors such as the demographics of the population, distribution of skills, degree of government support for unemployed workers and other possible rigidities in the labour market. Trade liberalization policies should be accompanied by safety nets and measures that are both appropriate and feasible within a developing county context. Measures to ensure macroeconomic stability are also a critical component of a successful trade reform.

³ On this Baccheta and Jansen (2003) provide a good insight of how governments can facilitate the adjustment process.

8 Conclusion

Irrespective of the approach and the broadness of the definition of the adjustment costs, most studies conclude that trade-induced adjustment costs are relatively small compared to the long run gains from trade liberalization. The difference between social adjustment costs and private adjustment costs helps to understand the puzzle between empirical findings and social concern on adjustment costs. The overview on the literature has intended to show the importance of predicting and quantifying the trade-induced adjustment costs. It has also sought to offer a perspective of the different approaches used to assess adjustment costs, and how these results, although providing useful guidance, should be regarded with caution. There has now been enough trade liberalization among developing countries that evidence is now becoming available about the extent of short run adjustment costs. The current round of WTO negotiations is focused more now on development than ever before which is fuelling an even greater need for understanding the short-term consequences of trade liberalization. This study has provided a preliminary examination of this very important topic, but further research and analysis, especially on the policy implications, is required.

References

- Azhar A.K.M. and R.J.R. Elliott (2003), "On the Measurement of Trade-Induced Adjustment". *University of Manchester, School of Economic Studies Discussion Paper 0309*.
- Bacchetta, Marc and Mario Jansen (2003) "Adjusting to Trade Liberalization, The role of Policy, Institutions and WTO Disciplines" WTO Special Study 7, World Trade Organization
- Baldwin Robert E., John Mutti and J. David Richardson (1980), "Welfare Effects on the United States of a Significant Multilateral Tariff Reduction" *Journal on International Economics*, 10, pp. 405-423
- Bale, Malcolm D. (1976) "Estimates of Trade-Displacement Costs for US Workers" *Journal of International Economics*, 6, pp 245-250
- Bhagwati, J. and T. N. Srinivasan (1983), "Trade Policy and Development" in R. Dornbush and J. A. Frenkel (eds.), *International Economic Policy Theory and Evidence*, Baltimore: John Hopkins University Press.
- Davidson, Carl and Steven J. Matusz (2000): "Globalization and Labor Market Adjustment: How Fast and at What Cost?", *Oxford Review of Economic Policy*, Vol. 16, No. 3, pp. 42- 56
- Davidson, Carl and Steven J. Matusz (2001): "On Adjustment Costs" University of Nottingham GEP Research Paper 2001/24
- Dixon, Parmenter and Powel (1984) "Trade Liberalization and Labour Market Disruption" *Journal of Policy Modeling* Volume 6, Issue 4, Pages 431-596
- Ebrill, Liam, Janet Strotsky, and Reint Gropp (1999), "Revenue Implications of Trade Liberalization, "IMF Occasional Paper. No 180
- Francois, Joseph F. (2004) "Assessing the Impact of Trade Policy on Labor Markets and Production," Tinbergen Institute discussion paper
- Forteza, Alvaro and Martin Rama (2000) "Labour Market Rigidity and the Success of Economic Reforms Across more than Hundred Countries" World Bank Working paper 2521, The World Bank, Washington D.C.
- Ghose, Ajit K. (2000) "Trade liberalization and manufacturing employment", International Labour Organization Employment Paper 2000/3
- Harrison, Ann and Ana Revenga (1995) "Factor Markets and Trade Policy Reform" World Bank manuscript as cited in Matusz and Tarr (1999)
- Jacobsen, Louis S. Robert J. LaLonde and Daniel G. Sullivan (1994) "Earning Losses of Displaced Workers" *American Economic Review*, Vol 83, No. 4, pp 685-709

- Magee, Stephen P. (1972) "The Welfare Effects of Restriction on US Trade" *Brookings Papers on Economy Activity* 3, pp 645-701
- Matusz S.J. and D. Tarr "Adjusting to Trade Policy Reform" (1999) World Bank Working Paper 2142, World Bank, Washington D.C.
- McMillan Margeret, Dani Rodrik and Karen H. Welch,(2002)"When Economic Reform Goes Wrong: Cashes in Mozambique" CEPR Discussion Paper.
- Melo, Jaime de and David Tarr (1990): "Welfare Costs of US Quotas in Textiles, Steel and Autos" *Review of Economics and Statistics* 72, pp 489 - 497
- Melo, Jaime de and David Roland-Holst (1994) "Economy-wide costs of Protection and Labour Market Rigidities" in *The Effects of Protectionism on a Small Country : The Case of Uruguay*, Michael Connolly and Jaime de Melo eds, the World Bank
- Michael, M.S. , S.M. Miller and Hatyipanayotou (1993) "Integrated Reform of Tariffs and Consumption Taxes" *Journal of Public Economics*, Vol 52, pp 417 - 428
- Milner, Chris and Peter Wright (1998): "Modelling labour Market Adjustment to Trade Liberalization in an Industrialising Economy" *The Economic Journal*, 108 (March) pp 509-528
- Mitra, Pradeep (1992) "The Coordinated Reform of Tariffs and Indirect Taxes" Included in "*Tax Policy in Developing Countries*" The World Bank, Washington D.C.
- Papageorgiou, Demetrios, Armeane Choksi and Michael Michaely (1992) "Liberalization Foreign Trade: The Lessons of Experience in the Developing World". The World Bank, Washington DC
- Parker Ronald L., Randalle Riopelle, William F. Steel (1995) "Small Enterprises Adjusting to Liberalization in Five African Countries" The World Bank, Washington D.C.
- Rodrik Dani (2004) "Getting Institutions Right" *CESifo DICE Report*, Harvard University Forthcoming, 02/2004
- Rama (2003) "Globalization and Workers in Developing Countries" World Bank Working Paper 2958, The World Bank, Washington D.C.
- Rama, Martin and Donna MacIssave (1999) "Earnings and Welfare after Downsizing: Central Bank Employees in Ecuador", *The World Bank Economic Review*. Vol. 13, No. 1, pp 1-22
- Rama, Martin (1994) "The Labour Market and Trade Reform in Manufacturing". In M. Connolly and Jaime de Melo (Eds) *Effects of Protectionism on a Small Country: The Case of Uruguay* World Bank, Washington D.C.

Dr. Michael Samson, Ingrid van Niekerk (2004) "Trade liberalization and the Clothing and Textile Industry in South Africa: The Implications of the Poverty Impact" Economic Policy Research Institute, South Africa

Thomas, Vinod John Nash and Associates (1991) *Best Practices in Trade Policy Reform* World Bank, Washington DC

Trefler, Daniel (2001) "The Long and Short of the Canada-US Free Trade Agreements"
NBER Working Paper 8293

Winters, L. Alan and Wendy E. Takacs (1991): "Labour Adjustment Costs and British Footwear Protection" *Oxford Economic Papers*, 43. pp 479-501

APPENDIX: PRELIMINARY TABLE ON ADJUSTMENT COSTS LITERATURE

TITLE	AUTHOR	DATE and JOURNAL	COUNTRY OF STUDY/APPROACH	COMMENTS
“Adjusting to Trade Policy Reform”	Steven J. Matusz and David Tarr	1999 World Bank Working Paper 2142	Overview	Survey of more than 50 empirical papers. Overview of the literature of adjusting costs.
“Adjusting to Trade Liberalization”	Marc Bacchetta and Marion Jansen	2003 Special Studies 7 WTO	Overview	Overview of the findings of the studies assessing those adjusting costs arising from trade liberalization.
“Assessing the Impact of Trade Policy on Labour Markets and Production”	Joseph Francois	2004 Tinbergen Institute discussion paper,	Overview	Survey of previous literature on the measurement of trade policies on employment and production
“Globalization and Workers in developing countries”	Martin Rama	2003 World Bank Working Paper 2958	Overview	Comprehensive review of the effect of globalization on labour markets of developing countries
“The Welfare Effects of restrictions on the US trade”	Stephen Magee	1972 Brooking papers on Economic Activity	USA	Pioneer work on the matter. Study focused on the US. Emphasis in the short-run and transitory nature of the costs and permanent nature of the benefits

TITLE	AUTHOR	DATE and JOURNAL	COUNTRY OF STUDY/APPROACH	COMMENTS
“Welfare Effects on the United States of a Significant Multilateral Tariff Reduction”	Robert Baldwin, John Mutti and J. David Richardson	<i>Journal on International Economics</i> , 10, pp. 405-423	USA	Study of the effect of a 50% cut in US tariff rates. A broader definition of adjustment costs: labour and capital.
“Welfare Costs of the US Quotas in Textiles, Steel and Autos”	Jaime de Melo and David Tarr	1990 <i>Review of Economics and Statistics</i> 72, pp 489 - 497	USA	Use of a CGE model to quantify the effects of the removal of US quantitative restrictions in textiles and clothing, steel and autos.
“Labour Adjustment Costs and British Footwear Protection”	Alan L. Winters and Wendy E. Takacs	1991 <i>Oxford Economic Papers</i> , 43. Pp. 479-501	Great Britain	Measurement of labour adjustment costs arising from the removal of the quotas.
"Estimates of Trade Displacement Costs for US Workers"	Malcolm Bale	1976 <i>Journal of International Economics</i> 6, pp 245- 250	USA	Pioneer work
“Modelling Labour Market Adjustment to Trade Liberalization in an Industrialising Country”	Chris Milner and Peter Wright	1998 <i>The Economic Journal</i> 108 (March) pp 509-528	Mauritius	Responses to trade liberalization in Mauritius.

TITLE	AUTHOR	DATE and JOURNAL	COUNTRY OF STUDY/APPROACH	COMMENTS
"The Labour Market and Trade Reform in Manufacturing"	Martin Rama	1994 In M. Connolly and Jaime de Melo (Eds) <i>Effects of Protectionism on a Small Country: The Case of Uruguay</i> World Bank,	Uruguay	Responses to trade liberalization in Uruguay
" <i>Liberalizing Foreign Trade: The Lessons of Experience in the Developing World</i> "	Demetrios Papageorgiou, Armeane Choksi and Michael Michaely	1992 The World Bank	Several: nineteen countries.	Study of trade reforms in nineteen countries.
"Factor Markets and Trade Policy Reform"	Ann Harrison and Ana Revenga	1995 World Bank Manuscript as cited in Matusz and Tarr (1999)	Many countries, including developing countries and LDCs.	Study of the effect of liberalization on employment of sixteen countries.
"Trade Liberalization and Labour Market Disruption"	Dixon, Parmenter and Powel	1984 Journal of Policy Modeling Volume 6, Issue 4, Pages 431-596	Australia	Effects of a reduction of 25% in Australia's level of protection.

TITLE	AUTHOR	DATE and JOURNAL	COUNTRY OF STUDY/APPROACH	COMMENTS
"Economy wide Costs of Protection and Labour Market Rigidities"	Jaime De Melo and David Roland-Holst	1994 in <i>The Effects of Protectionism on a Small Country : The Case of Uruguay</i> , Michael Connolly and Jaime de Melo eds, The World Bank	Uruguay	Relates trade reforms to potential employment changes in a developing country such as Uruguay.
"On Adjustment costs"	Carl Davidson and Steven Matusz	2001 University of Nottingham GEP Research Paper 2001/24	More focused on theoretical aspects	Emphasis on theoretical aspects : CGE model introduction of labour market imperfections
"The Long and Short of the Canada-US Free Trade Agreements"	Daniel Trefler	2001 NBER Working Paper 8293	Canada	Empirical paper trying to asses the effect of the FTA on labour market
"On the Measurement of Trade-Induced Adjustment"	A.K.M. Azhar and R.J.R. Elliot	<i>University of Manchester, School of Economic Studies Discussion Paper 0309.</i>	UK manufacturing sector	Tests the hypothesis of Smooth Adjustment Process
"When Economic Reform Goes Wrong: Cashes in Mozambique"	Margaret McMillan, Dani Rodrik and Karen Horn Welch	2002 CEPR Discussion Paper	Mozambique	

TITLE	AUTHOR	DATE and JOURNAL	COUNTRY OF STUDY/APPROACH	COMMENTS
"Earnings Losses of Workers from Manufacturing Industries"	Louis S. Jacobsen, Robert J. LaLonde and Daniel G. Sullivan	1993 American Economic Review, Vol 83, No. 4, pp 685-709		
"Globalisation and Labour Market Adjustment: How Fast and at What Cost?"	Carl Davidson and Steven J. Matsutz	2000 Oxford Review of Economic Policy, Vol 16, No. 3, pp 42-56		By using a different model of labour markets with imperfect competition finds out greater adjustment costs.
"Labour Market Rigidity and the Success of Economic Reforms Across more than Hundred Countries"	Forteza, Alvaro and Martin Rama	2000 Working paper 2521 World Bank		Compares the sensitivity of adjustment costs to the differences in labour markets.
"Integrated Reform of Tariffs and Consumption Taxes"	Michael, Miller and Hatyipanayotou	1999 Journal of Public Economics		Theoretical study on the effect of tariff reform on the revenues of countries
"Coordinated tariff reduction and domestic tax reform"	C.L. Keen and G.J. Lighthart	1999 IMF Working Paper WP 99/93 Washington D.C.		Theoretical study on the effect of tariff reform on the revenues of countries

TITLE	AUTHOR	DATE and JOURNAL	COUNTRY OF STUDY/APPROACH	COMMENTS
“The Coordinated Reform of Tariffs and Indirect Taxes”	Pradeep Mitra	1992 Included in “ <i>Tax Policy in Developing Countries</i> ” World Bank		
“Trade Liberalisation and the Clothing and Textile Industry in South Africa: The Implications of the Poverty Impact”	Dr. Michael Samson, Ingrid van Niekerk	Economic Policy Research Institute. October 2004		