The Welfare Effects of Reduced US Tariff Restrictions on Imported Textile Products
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JOSEPH PELZMAN and CHARLES E. BRADBERRY
University of South Carolina and United Way of America, U.S.A.

I. INTRODUCTION

It is an accepted principal in international trade that trade liberalization will lead to positive welfare gains by shifting resources into more productive sectors and by expanding the country's consumption possibilities. Despite these real gains, many U.S. industries continue to favour protectionism. One such industry is the textile industry. For a long time this industry has insisted that foreign competition, primarily from Asia, has led to an erosion in its market position. Consequently, any suggested tariff reduction on imported textiles is evaluated by the industry as welfare reducing.

Attempts to measure this welfare gain or loss for other industries by Cline et al. (1978), The Council on Wage and Price Stability (1978) and Szenberg et al. (1977), using the traditional partial equilibrium approach, have to a large extent, biased the estimated costs associated with the redistribution of resources from the import competing sector. In part, this is due to a highly restrictive assumption imposed by this approach. Namely, that the total expenditure on the composite goods (imported and the domestic substitute) is fixed. It is the intent of this paper, therefore, to measure the welfare effects that may be experienced as a result of a tariff reduction on imported textile products (SIC-22) using both the traditional approach and an alternative model where this restrictive assumption is relaxed. Given the present debate concerning trade liberalization, the numerical estimates of the welfare effects would not only demonstrate the bias resulting from this restrictive assumption but will also be an important consideration in commercial policy.

The traditional partial equilibrium model used to determine the welfare effects of a tariff reduction is presented in Section II. The alternative model is briefly outlined in Section III. In Section IV the empirical results based on both approaches is presented. Finally a discussion of the results is presented in Section V.

II. THE TRADITIONAL APPROACH

The traditional partial equilibrium analysis of the welfare effects associated with a
reduction in the ad valorem tariff\textsuperscript{1} are portrayed in Fig. 1 (where $D_d = \text{domestic demand}$, $S_d = \text{domestic supply}$, $S_i = \text{foreign supply assumed to be perfectly elastic}$ and $T_i = \text{ad valorem tariff, } i = 1, 2$). A reduction in the tariff from $T_i$ to $T_2$ would result in an increase in imports from $Q_1Q_2$ to $Q_3Q_4$. This increase in imports would be accompanied by a reduction of domestic supply from $OO_1$ to $OO_3$ and an increase in consumption from $OO_2$ to $OO_4$. The consumer surplus gained from this price decline (from $P_1$ to $P_2$) equals the area $GFP_2P_1$. On the other hand, producers' surplus declines by $\text{AEP}_2P_1$. Furthermore, the government loses tax revenue on the original level of imports in the amount of AGCH. Thus, the first portion of welfare gains equals the two shaded triangles $\text{AHE}$ and $\text{GCF}$ denoted as 'deadweight gain' areas $\text{S and U}$ respectively. The remaining portion of welfare gain is attributed to government tax revenue on the additional imports. This revenue is denoted by the areas $\text{M and N}$.

Formally, an estimate of the total welfare gain of a reduction in the ad valorem tariff rate can be obtained by summing the areas $\text{S + U + M + N}$. If we assume that the imported commodity and the competing domestic good are imperfect substitutes the flow of annual welfare gains can be measured by\textsuperscript{2}

$$WG = \left[\frac{1}{2}(T_1 + T_2)\right] \eta_m V_m(\Delta T/[1 + T_i])$$

(1)

where

$\eta_m = \text{price elasticity of import demand}$

$V_m = \text{dollar value of imports}$.

\textsuperscript{1}The economic literature on this subject is very extensive. The work done by Magee (1972), MacPhee (1974), Basevi (1968), Baldwin and Mutti (1973) is only a sample.

\textsuperscript{2}The derivation of Equation 1 can be obtained from the author.
The present discounted value of this stream can be computed by using an appropriate social rate of discount \((i)\) with the added assumption that the domestic industry is growing at some rate \((r)\) where \(r \geq 0\). Formally, for a given year \(j\)
\[WG = \left[\frac{1}{i} (T_1 + T_2) \right] \eta_m V_m \Delta T / (1 + T_2) [(1 + r) / (1 + i)].\] (2)

The cost of resource reallocation must be subtracted from this 'deadweight gain' in order to provide a measure of the net welfare gain or loss to society. Traditionally the cost to society of a tariff reduction is based on the quantity of domestic output displaced and the resulting labour unemployed. Given trade liberalization, conventional wisdom argues that the expenditure on additional imports reduces the expenditure on the domestic substitute by the full amount.\(^3\) The amount of labour released as a result of this trade liberalization becomes
\[dL = l \ dV_s\] (3)
where
\[l = L/V_s.\]

The bias created by this traditional approach arises from its estimate of \(dV_s\) and \(dL\). For \(dV_s\) it is assumed that the total expenditure on the composite of domestic competing and imported goods will be held constant.\(^4\) By concentrating the full impact of trade liberalization on the side of production, this approach may overstate the impact of increased imports.\(^5\)

The estimated direct impact on employment (\(dL\)) suffers from a similar caveat. Simply multiplying the estimated output changes by a set of labour requirements per unit of output ignores all consideration of labour as a quasi fixed factor. Thebulk of research on labour adjustment clearly demonstrates that adjustment of labour in response to output changes is not instantaneous nor at a uniform rate.\(^6\)

Clearly an alternative approach to estimate these resource reallocation costs is warranted. Such an approach developed by Pelzman (1979) and Pelzman and Martin (1980) is outlined in the next section.

III. AN ALTERNATIVE APPROACH

In order to identify the direct resource costs resulting from trade liberalization, one must estimate two key factors. First, by how much would domestic production decline given the change in imports and secondly what will be the resulting impact on that sectors' employment. In effect this requires the estimation of the import elasticity of output and the output elasticity of employment. The first parameter, the import elasticity of output

\(^3\)See Baldwin and Lewis (1978, pp. 243–44).

\(^4\)To justify such a conclusion these models are forced to assume that, domestic competing and foreign goods are imperfect substitutes, that domestic and foreign supply curves are perfectly elastic, that the marginal propensity to save is zero and that the cross price elasticity between the domestic and foreign good and some third good is zero.

\(^5\)This point has been raised by Pelzman (1979) and Pelzman and Martin (1980).

\(^6\)An excellent source on labour adjustment to output changes is Nadiri and Rosen (1973).
is estimated using a disequilibrium model of domestic supply with both price and
non-price rationing mechanisms.\textsuperscript{7}

Assuming that the total expenditure on the composite of commodity \(i\) and \(j\) is not held
constant, this model specifies that the possible responses to an increase in imports may
consist of inventory changes and output changes as well as changes in the product price.
More specifically, it is argued that if the increase in imports resulting from trade
liberalization occurs when domestic demand is growing then inventories may be initially
depleted thus resulting in no noticeable impact on domestic production. In fact
responding to this depletion in inventories, domestic suppliers may expand output.

On the other hand if imports increase when domestic demand is not growing, the first
response would involve an accumulation of inventories. Domestic producers, assumed to
be imperfect competitors, would react to this inventory expansion by changing the
product price. Only after these adjustments have taken place can one expect domestic
production to fall.

Formally the relationship estimated in Pelzman (1979) and Pelzman and Martin
(1980) is

\[
\log Q_{i,t} = \log \alpha_0 + \alpha_1 \log w_i + \alpha_2 \log r_i + \alpha_3 \log (P_j^t / P_h^t) + \\
\alpha_4 \log Y_t^h + \alpha_5 \log (P_l^t / P_{l,t-1}^h) + \alpha_6 \log (I_{i,t} / I_{i,t-1}) + \\
\alpha_7 \log Q_{j,t-n}^m + \mu_{i,t}
\]

where

- \(Q_{i,t}\) = quantity of goods \(i\) produced domestically
- \(w_i\) = average hourly earnings of production workers
- \(r_i\) = rental price of capital
- \(P_j^t\) = weighted average unit value of the competing foreign product \(j\)
- \(Y_t^h\) = disposable income
- \(I_{i,t}\) = inventory of goods \(i\)
- \(P_h^t\) = domestic price of goods \(i\)
- \(Q_{j,t-n}^m\) = quantity of goods \(j\) imported in period \(t - n\)
- \(h\) = home country
- \(f\) = foreign country
- \(t\) = subscript denoting time period
- \(\mu_{i,t}\) = error term

and the expected sign pattern of the coefficients are

\(\alpha_1, \alpha_2, \alpha_6 < 0; \quad \alpha_3, \alpha_4, \alpha_5 > 0; \quad \alpha_7 \geq 0.\)

If imports serve to displace domestic production then the import elasticity of output,
\(\alpha_7 < 0\), \textit{ceteris paribus}. However, if both imports and domestic production are growing in
response to a general increase in demand for the given commodity then \(\alpha_7 > 0\).

\textsuperscript{7}This model is developed in Pelzman (1979) and Pelzman and Martin (1980).
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The procedure for estimating the output elasticity of employment follows that presented by Nadiri and Rosen (1973) where output is assumed to be exogenous, and input adjustments take into account 'the stock and flow dimensions' of labour and capital. Estimates for the textile industry reported here were presented by Pelzman and Martin (1980).

Long run optimal factor demand functions based on the Nadiri and Rosen model are determined by minimizing total cost subject to the production function. These factor demand equations are expressed as functions of relative factor prices \((w/r)\) and the long run equilibrium level of output \(Q_t^*\).

\[
Y^* = f[(w/r), Q_t^*].
\]  
(5)

The adjustment of the factor inputs towards their long run equilibrium levels is estimated by the following set of partial adjustment equations

\[
Y_{h,t} - Y_{h,t-1} = \sum_{k=1}^{6} \theta_{hk}(Y_{k,t} - Y_{k,t-1}) + \varepsilon_{h,t}
\]  
(6)

where the \(\theta_{hk}\)'s are adjustment coefficients.

Substituting Equation 5 into Equation 6 and replacing \(Q_t^*\) with current output \(Q_{t,t}\) yields, in matrix form and basic equations to be estimated

\[
Y_t = A Q_t + B (w/r) + CY_{t-1} + \varepsilon_t
\]  
(7)

where \(A\) is a \(6 \times 1\) vector of output coefficients, \(B\) is a \(6 \times 1\) vector of relative factor price coefficients and \(C\) is a \(6 \times 6\) matrix of own and cross adjustment coefficients equal to \((1 - \theta)\), where \(\theta\) is the matrix of partial adjustment coefficients in Equation 6.

Specifying Equation 7 in log-linear form yields

\[
\log Y_{h,t} = \log d_{h0} + d_{h1} \log Q_{t,t} + d_{h2} \log (w/r)_{t,t} \\
+ d_{h3} \log Y_{1,t-1} + \ldots + d_{h8} \log Y_{6,t-1} + \varepsilon_{h,t}
\]  
(8)

\(h = 1 \ldots 6\)

This formulation permits the estimation of a consistent set of response patterns of all inputs. The own adjustment coefficients \(\theta_{hh}\), are calculated as \((1 - d_{hh})\) and the cross-adjustment coefficients, \(\theta_{hh}\), are calculated as \(-d_{hh}\). These partial adjustment coefficients can then be used to derive the long run output elasticity of employment.\(^8\)

IV. EMPIRICAL RESULTS

In this section we present the empirical estimates of the welfare effects associated with a 30% reduction in the \textit{ad valorem} tariff rate on imported textiles.\(^9\) These estimates are

\(^8\)The implied long-run output elasticities of the particular factors of production are determined from \([I - (I - d)]^{-1} d A = \tilde{A}\) where \(A\) is a \(6 \times 1\) vector of output coefficients and \(I - d\) and \(d A\) are taken from the solutions of the six equations represented by Equation 8. The six factors of production considered are: the stock of production workers, the average weekly hours per worker, the capital stock, capital utilization, inventory, and the stock of non-production labour.

\(^9\)Present trade negotiations have placed the true tariff cutting option for textile products (SIC 22) at approximately 30%.
presented for both the traditional approach as well as for the alternative approach using the import elasticity of output and the output elasticity of employment.

The increase in welfare gains is computed using Equation 1. The percentage change in price is equal to 0.0446. The relative long run price elasticity of import demand, estimated by Pelzman and Martin (1980) is −0.33. The value of textile imports for 1977 in current dollars is $1764.8 million. The resulting gain to society attributable to a 30% reduction in the \textit{ad valorem} tariff rate on imported textile products would equal $3.863 million annually.\footnote{10}

In addition to the assumption of no growth in import demand the above measure of welfare gains also assumes that the tariff reduction would be instituted immediately. However, if the tariff reduction were instituted over a ten year period, as is generally believed, then the resulting welfare gain on an annual basis would be far smaller. Furthermore, we have assumed that the decline in price reflects the full tariff reduction. If the tariff reductions are not passed through to the retailers the decline in prices may not equal the full tariff cut suggesting that the estimated welfare gains may be overestimates.

The estimated welfare gain can now be modified to include some expected rate of growth of imports and some discount rate. In the case of the former, the value of imported textile products has in the period 1967–71 increased by an annual average rate of 12%. In the period 1972–77 this growth of imports had declined to an annual average growth rate of approximately 4%. In projecting the future rate of growth of textile imports we make the arbitrary assumption that it will grow at the same 4% rate. The discount rate chosen to reflect the future stream of consumer gains is 8%.\footnote{11}

The present value of the perpetual stream of consumer surplus gains associated with a 30% reduction in the \textit{ad valorem} tariff rate for a given year \(j\) is computed using Equation 2. This stream of welfare gains is presented in column one of Table 1. For the entire 21 year period the present total value of welfare gains is $54.968 million. The net effect can now be determined by subtracting the cost to society of labour reallocation.

In the traditional model the estimates of consumer losses due to reallocation of labour is dependent on the assumption that 'increased imports' represent \ldots 'a decrease in domestic production by an amount equal to the increase in imports [Cline et al. (1978), p. 33]. Thus an increase in the quantity of imports of 75.94 million equivalent square yards translates into a decrease in domestically produced textiles of 40.5 million

\footnote{10}{The trade weighted \textit{ad valorem} tariff rate for textile products (SIC 22) is 17.5%. A 30% reduction in that tariff rate translates into a price change equaling: \(dP/P = (\Delta T/[1 + T]) = (0.30)(0.175)/1.175 = 0.0446\). The resulting welfare gain equals: \(WG = [(T_1 + T_2)]\eta_mV_m(\Delta T/[1 + T_1]) = [(0.175 + 0.1225)](0.33)(1764.8)(0.0446) = 3.863 million\) dollars. The long run relative price elasticity of import demand calculated in Pelzman and Martin (1980) uses a disequilibrium model outlined by Yadav (1975). The period covered is 1964–1977IV. Such a low long run relative price elasticity is not unreasonable for textile products, given the distorting effects of the quantitative restrictions imposed on textile imports. A similar finding was demonstrated by Richardson (1972). (A data appendix is available from the authors.)}

\footnote{11}{This reflects the long term U.S. Treasury note rate.}
Table 1. The present value stream of consumer surplus gains and losses, from 1977 base, reflecting a 30% reduction in the ad valorem tariff on imported textile products (million dollars)\textsuperscript{a}

<table>
<thead>
<tr>
<th>$j$</th>
<th>(1) Present value of consumer gains</th>
<th>(2) Present value of consumer losses</th>
<th>(3)</th>
<th>(4) Net benefit (+) or net loss (−)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Traditional approach</td>
<td>Alternative approach</td>
<td>Traditional approach</td>
</tr>
<tr>
<td>1</td>
<td>3.720</td>
<td>2.522</td>
<td>12.297</td>
<td>1.198(+)</td>
</tr>
<tr>
<td>2</td>
<td>3.583</td>
<td>0.309</td>
<td>1.510</td>
<td>3.274(+)</td>
</tr>
<tr>
<td>3</td>
<td>3.449</td>
<td>0.286</td>
<td>1.398</td>
<td>3.163(+)</td>
</tr>
<tr>
<td>4</td>
<td>3.322</td>
<td>0.265</td>
<td>1.294</td>
<td>3.057(+)</td>
</tr>
<tr>
<td>5</td>
<td>3.199</td>
<td>0.245</td>
<td>1.199</td>
<td>2.954(+)</td>
</tr>
<tr>
<td>1–5</td>
<td>17.274</td>
<td>3.630</td>
<td>17.700</td>
<td>13.644(+)</td>
</tr>
<tr>
<td>1–10</td>
<td>31.573</td>
<td>4.612</td>
<td>22.487</td>
<td>26.961(+)</td>
</tr>
<tr>
<td>1–15</td>
<td>43.414</td>
<td>5.280</td>
<td>25.745</td>
<td>38.134(+)</td>
</tr>
<tr>
<td>1–21</td>
<td>54.968</td>
<td>5.807</td>
<td>28.313</td>
<td>49.161(+)</td>
</tr>
</tbody>
</table>

\textsuperscript{a}The results above have been rounded off. In calculating the present value stream, however, the data was not rounded off.
equivalent square yards which yields a decline in the value of domestic textile sales of approximately $24.3 million.\textsuperscript{12}

Given the total value of domestic textile production (excluding output for export) for 1977 of $39.433 billion and the total number of textile workers (excluding export-related) for 1977 of 950 576 the labour/output coefficient in terms of value is calculated to be $41 483 per worker per year. This corresponds to about 24 workers displaced for each $1 million cutback in domestic production. Using this labour output coefficient, the number of workers displaced by a cutback in domestic production of $24.3 million equals 585 workers per year.

Using the alternative approach suggested in Section III, the impact on domestic production and employment can be determined by means of the calculated long run import elasticity of output and long run output elasticity of employment. These elasticities [estimated in Pelzman and Martin (1980)] demonstrate that the predicted employment and output changes would be much larger than those predicted by the traditional approach. Since a long run relative price elasticity of imports is used to estimate the 'deadweight gains' it is only appropriate that long run elasticities be used to calculate the costs of displaced labour. The calculated long run import elasticity of output is estimated to be $0.26 and the output elasticity of employment is estimated to be $0.7961.\textsuperscript{13}

With a 30% reduction in the \textit{ad valorem} tariff rate the resulting decline in domestic output equals 0.38%. This reduction in domestic output implies a dislocation of 0.3% of

\textsuperscript{12}The derivation of these increased imports and the resulting decrease in domestic output proceeds along the following lines. A decrease in the \textit{ad valorem} tariff rate by 30% translates to a percentage change in price equal to 0.0446%. Given the relative price elasticity of import demand of $-0.33$ the percentage increase of imported textiles equals: $0.0446 \times -0.33 = 0.0147$. In terms of the 1977 quantity of textile imports this increase in quantity demanded is: $0.0147 \times 5160.1 = 75.94$ million equivalent square yards. Furthermore, since the average domestic textile price is $0.60$ per equivalent square yard as compared to the import textile price of $0.32$ per equivalent square yard, 100 equivalent square yards of imported textiles are assumed to be equivalent to 53 square yards of domestic textile products. Thus, in terms of efficiency units, 1 equivalent square yard of domestic textiles is roughly equivalent to 2 equivalent square yards of imported textiles. Consequently the increase in textile imports of 75.94 million equivalent square yards translates to a reduction in domestic output of 40.5 million equivalent square yards. Using the average price of $0.60$ per equivalent square yard of domestic textiles this decrease in domestic output would amount to a decline in sales of $24.3$ million. (A data appendix is available from the authors.)

\textsuperscript{13}These elasticities were estimated using seasonally adjusted quarterly data for textile products (SIC 22) for the period 1964I to 1977IV. The estimating procedure used to estimate the domestic supply equation was the two-stage least squares estimator which is an instrumental variables estimator, where the instrument chosen was $\hat{Q}_{it-1}$. This two-stage least squares estimator, is considered to be a more general and often the best instrumental variables estimator because it takes into account the influence on the dependent variable of all the predetermined variables of the system, and that it results in the minimum asymptotic covariance matrix (Maddala 1977, pp. 475–97). The estimating procedure used to determine the output elasticity of employment was the search procedure outlined by Cochrane and Orcutt (1949). This was necessitated by the existence of first-order serially correlated residuals.
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the total textile workers or at the 1977 level of non-export related textile employment, 2852 workers.\textsuperscript{14}

The losses in terms of dislocated labour (under both variations) must be subtracted from the estimated ‘deadweight gains’. Specifically, the net welfare impact of a tariff reduction must consider the present value of the ‘deadweight gain’ minus the present value of the loss to society of dislocated labour during the transition period.\textsuperscript{15} This total cost due to job losses can be estimated using the sample results presented in Bale (1976).

Bale’s results revealed a number of interesting facts about semi-skilled workers displaced by foreign competition. On the average these workers were 44 years old, worked 36 hours a week and were displaced for a transition period lasting 31 weeks. Bale further demonstrated that the loss to these workers differed substantially from that facing society. In general, the loss to the workers equalled the product of their wages, hours worked and duration of unemployment, plus the permanent hourly wage loss associated with the displacement, minus unemployment insurance and trade adjustment assistance. The loss to society however, was the product of the hours worked, the duration of unemployment and the lower wages. If we assume that workers are paid their value of marginal product then trade liberalization has reduced this productivity. As far as society is concerned transfer payments need not be subtracted because they do not represent any real addition or loss to society. However, the wage differential over the workers lifetime must be calculated as part of society’s welfare loss.

In the case of the textile industry the average hourly wage in 1977 was $3.97, far below the average wage in manufacturing of $5.63. From society’s point of view the total wage loss for the transition period was ($3.64 \times 36 \times 31), $4062.24 per employee. For the balance of that year society also lost the differential wage of (0.33 \times 21 \times 36), $249.48 per employee.\textsuperscript{16} Thereafter the loss to society represents the permanent wage differential over the workers life time.\textsuperscript{17} This later figure is equal to $617.76 per year.

These costs to society are applied to the estimated number of workers displaced under both approaches. The present discounted value\textsuperscript{18} of this welfare loss is presented in columns 2 and 3 of Table 1. The net gains and losses to society are presented in

\textsuperscript{14}The derivation of the production and employment effects resulting from a 30\% reduction in the \textit{ad valorem} tariff rate proceeds along the following lines. (i) A 30\% reduction in the tariff translates to a reduction in price of 0.0446\%. Given the relative price elasticity of import demand the percentage increase of imported textiles equals 0.0147\%. (ii) The resulting changes in output due to this increase in imports is: 0.0147 \times -0.26 = -0.0038. (iii) Translated into employment change we have: -0.0038 \times 0.7961 = -0.003 annual reduction in employment. When this elasticity is applied to the 1977 level of employment in the textile industry the resulting number of displaced workers equals 2852.

\textsuperscript{15}We specifically ignore in this calculation any terms of trade effects that may occur as a result of the tariff reduction as well as employment by the export sector.

\textsuperscript{16}Bales’ sample results demonstrate that the hourly wage of re-employed displaced workers dropped on the average by 33 cents.

\textsuperscript{17}This assumption that individuals do not make up this differential in wages is consistent with the recent findings by Lazear (1976).

\textsuperscript{18}These labour differential losses are discounted at 8\%. 

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columns 4 and 5. For the traditional approach the 30% reduction in the ad valorem tariff on imported textiles results in a net welfare gain to society. Over the 21 year period the net gain to society equals $49,161 million. For the alternative approach the impact on society in terms of dislocation costs are considerably different. Despite the net gain to society equalling $26,655 million the dislocation costs resulting from a 30% reduction in the ad valorem tariff on imported textiles over the 21 year period equals $28,313 million.

This disparity between the traditional and alternative approach arises for a number of reasons. In addition to the points discussed above, it is clear that the traditional approach relies on an average output–labour coefficient which is, in this case, a poor approximation to the marginal output–labour coefficient derived from the alternative approach. Furthermore, by relying on long-run elasticities the alternative approach estimates the maximum labour displacement.

V. CONCLUSIONS

This paper presents empirical estimates of the net welfare effects of a 30% tariff reduction on imported textiles. Two considerably different partial equilibrium models are developed and used to determine these welfare effects. Using the traditional approach it is determined that a 30% reduction in the tariff would result in a net welfare gain equal to $49,161 million in 1977 dollars. The alternative approach finds that the same tariff reduction would result in a far smaller net welfare gain. In terms of 1977 dollars the net welfare gain to society equals $26,655 million.

While the numerical results differ substantially, on theoretical grounds the alternative model appears to be far more plausible than the traditional approach. In part this is due to the highly restrictive assumption made by the traditional approach, that the total expenditure on the composite good (imported and the domestic substitute) is fixed. This restrictive assumption along with the use of a set of labour requirements per unit of output results in an underestimate of the dislocation costs to society resulting from trade liberalization.

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REFERENCES

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