Problems of measuring liberalisation and its impact on growth

Alternative concepts

- removal of trade barriers and achievement of trade neutrality;
- reduction of anti-export bias;
- replacing a more distorting instrument of intervention (quantitative restrictions) by a less distorting one (tariffs).

Problems: (i) which concept should be used; (ii) comparability of studies and methodologies (how a country can be compared with another if the methodologies followed in each case differ so substantially).

Measures

- *policy accounts:* what is the official policy with respect to trade liberalisation (which tasks and targets have been set, time frame to implement them, etc). But policy accounts may give a false picture of reality if policy has not been implemented as stated. Additionally, new instruments of trade restriction, for example, licensing or specific incentives, may have been introduced to replace the old ones, for example quotas or high tariffs;
- *relative price changes:* there are several different methodologies:

$$P_d = P_m \left[e \left(1 + t_m \right) \right]$$ domestic/world price comparison.

where P_d and P_m refer to domestic and import (cif) prices, e is the exchange rate and t_m is a tax on imports. Therefore, the domestic price is higher than the cif price by the amount of the t_m.

This method attempts to measure: (i) the level of protection faced by domestic producers; (ii) the level of welfare loss for domestic consumers as domestic prices rise above cif prices by the amount of t_m.

However, this method is also subject to crucial errors: (i) the actual domestic price may be higher or lower than P_d, depending on the level of tariff redundancy; (ii) cif prices vary and protection may be associated, for example, with transport costs; (iii) exchange rate movements may make a significant difference and exchange rate overvaluation of overshooting may affect the level of protection; (iv) other factors, such as quotas, standards, etc., may also affect the level of protection without being captured by the equation; (v) market distortions not directly captured by the protection system (smuggling, different forms of market power) will certainly affect the relative impact of

protection on both producers and consumers; (vi) effective protection differs from nominal protection that the equation tries to capture; and (vii) this method fails to disaggregate price distortions by focusing on average distortions, which prevents the understanding of discriminating selective industrial policy.

$$P_x = P_w \left[e \left(1 + s_x \right) \right]$$ export prices faced by domestic exporters.

where Px and Pw are the price faced by domestic exporters and the world (fob) price they would face with no trade distortions; e is the exchange rate and sx is the net subsidy on exports (the difference between export subsidies and export taxes).

This method attempts to measure the export incentive (which size is given by sx), but has the same potential for error as described for the previous equation.

$$B = \frac{\sum_{i=1}^{k} w_i \frac{P_{di}}{P_{mi}}}{\sum_{j=1}^{n} w_j \frac{P_{xj}}{P_{wj}}}$$ Krueger's bias index.

where w is a weight for all goods covered. This is, in fact, the ratio between import protection and export incentives, or, using the symbols of the previous two equations, $B = (1+t_m)/(1+s_x)$. The index gives the following standard results:

   B = 1, price neutrality.
   B > 1, import substitution bias, or bias against exports.
   B < 1, export bias.

The method is affected by the problems of the previous ones. Additionally, the interpretation of the results of this index is not straightforward, because it requires the assumption that ISI and EOI are mutually exclusive; in other words, it excludes the possibility that import substitution may operate as export promotion and vice-versa. Apart from the assumptions underlying Krueger's economics, this problem of interpretation also results from the failure to disaggregate the analysis of price distortion.

A variation on Krueger's index is Balassa and Bhagwati's relative effective exchange rate, which is a ratio of the exchange rate for imports and exports:

$$e_r = \frac{e_m(1 + t + n)}{e_x(1 + s + r)}$$ relative effective exchange rate for tradeables.

where er, em and ex are the relative, import and export exchange rates, t, s, n, and r are import tariffs, export subsidies, other import restrictions and other export incentives, respectively. The standard results of this index, as well as its problems, are similar to those of Krueger's index bias.

- *output based measures:* trade intensity measures, import counterfactuals and macroeconomic indicators.

Any one measure is inadequate. In some studies, authors have attempted a combination of different measures in a single index. These attempts, however, do not overcome the limitations of each individual measure. In particular, they do not solve the problems of aggregation and do not relax the assumption about the mutual exclusivity of ISI and EOI. Furthermore, they add problems on their own namely associated with the subjectivity of construction and relative weights. Finally, it should be clear that the measures presented above are not additive.

Assessing impact of liberalisation

- *what is the counterfactual:* what is the state o the world going to be evaluated against;
- *how to disentangle* the effects of other policies: trade liberalisation has often been implemented as a central component of a more wide and general package of economic reform, usually supported by a sharp increase in foreign capital inflows, and which also incorporates macroeconomic stabilisation, privatisation and other policy reforms. How can the impact of each policy be disentangled from the overall impact of the package?
- *How long should one wait* before conducting the evaluation, since the full impact of trade liberalisation (particularly the long term effect on resource reallocation) will only be felt after a period of time? How long should that period be? Should the lag between decision, implementation and effect be part of the evaluation?

Variety of studies with different methodologies

- *cross country studies:*
  - with and without trade liberalisation: two groups, one that has implemented trade liberalisation measures, against the control group of countries that have not;
  - before and after: the comparison of the state of the world before and after trade liberalisation; this method could be combined with the previous one;
- *time series:* complex econometric analysis with very significant technical and data requirements:
  - data: size, period, accuracy;
  - specification problems
    - meaning of variables
    - relationship between variables
    - modelling
      - of the links
      - of the dynamics
      - causality
      - for short and long-term impact

o   violation of assumptions

The study: what does it show?

Evidence and patterns

- liberalisation seems to be associated with current account improvement and export growth;
- current account improvements are significantly larger than export growth; hence some of current account improvement must be associated with import contraction (in other words, liberalisation may contract imports);
- there is ambiguous impact on growth with no evidence that growth is improved with liberalisation;
- there is ambiguous impact on investment, with no evidence that investment increases with liberalisation.

Critique of the model

- the model uses instrumental variables, but does not discuss them: what they are, what they represent, why they are used, problems with IV used, etc;
- the model does solve the aggregation problem – this is particularly important for the definition of trade liberalisation and analysis of growth. For example, SEA countries have not only distorted prices by introducing incentives, but they have experimented with double distortion and selective, discriminatory distortion. Aggregate data cannot capture such effects, and they may be much more important than average levels of price bias;
- in all equations attempted, lagged GDP per capita and population growth are by far the most significant explanatory variables of growth, followed by investment, human capital (whatever it is) and terms of trade. However, rather than drawing conclusions about what seems to be important for growth in their model, the authors only focus on the discussion of the relevance of liberalisation (measured by using not explained IV);
- finally, the model specification does not challenge the concept that ISI and EOI are mutually exclusive.