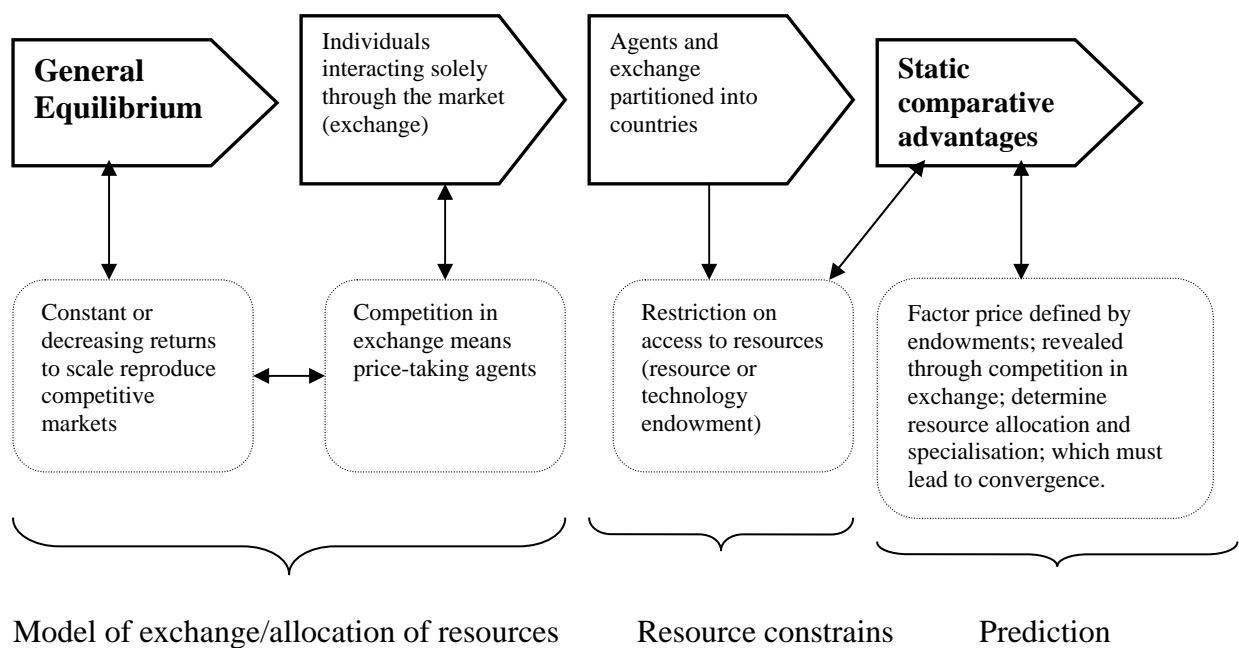


José António Ocampo and Lance Taylor. 1998. *Trade liberalisation in developing countries: modest benefits but problems with productivity growth, macro prices and income distribution*. The Economics Journal no. 108 (September), pp. 1523-46.

Microeconomic analysis

Traditional H-O trade theories: support for liberalisation



Trade policy (exchange distortions) create welfare (and presumably output) losses by driving a competitive allocation away from Pareto optimality, which could otherwise be realised in the presence of all round convexity (decreasing returns or reproduced competitive exchange), provided that suitable lump-sums can be transferred amongst the participants (market/exchange efficiency).

Economies of scale create non-convexities (hence, firms have an incentive to become large and dominant and markets may not be perfectly competitive); they are ubiquitous in manufacturing and present elsewhere.

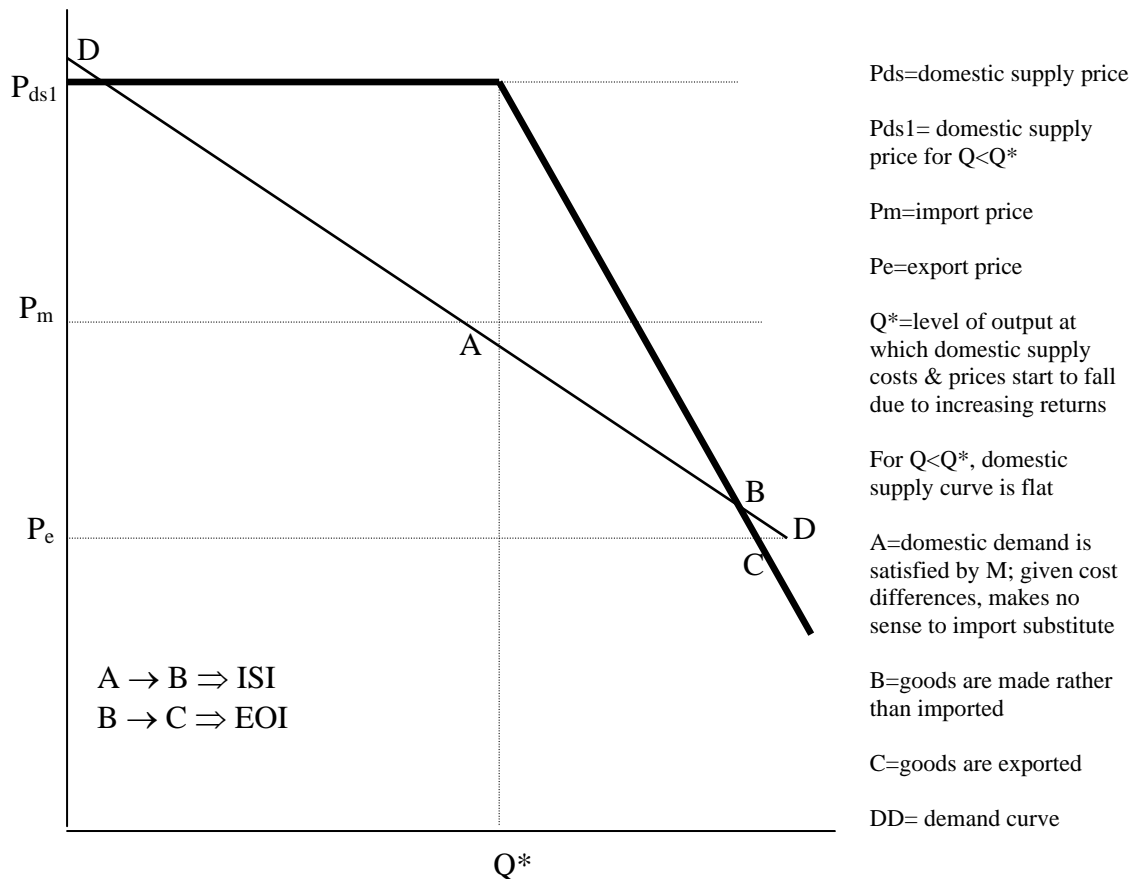
Young and Kaldor – dynamic increasing returns associated with cross firm externalities, network of suppliers and skill accumulation could lead to cumulative growth process and differentiated patterns of specialisation and development.

Dixit and Stiglitz – neo-classical tradition, minimise the impact of economies of scale by adopting convexifying assumptions: consumers' preference for diversity in product markets limits gains from economies of scale.

New technology literature – new technologies lower shifting costs allowing for cheaper product differentiation (economies of scope); but initial capital costs are very high, so that scope economies consolidate, rather than overcome, economies of scale (critique of Dixit and Stiglitz).

Alternative approaches to traditional theories: case for policy

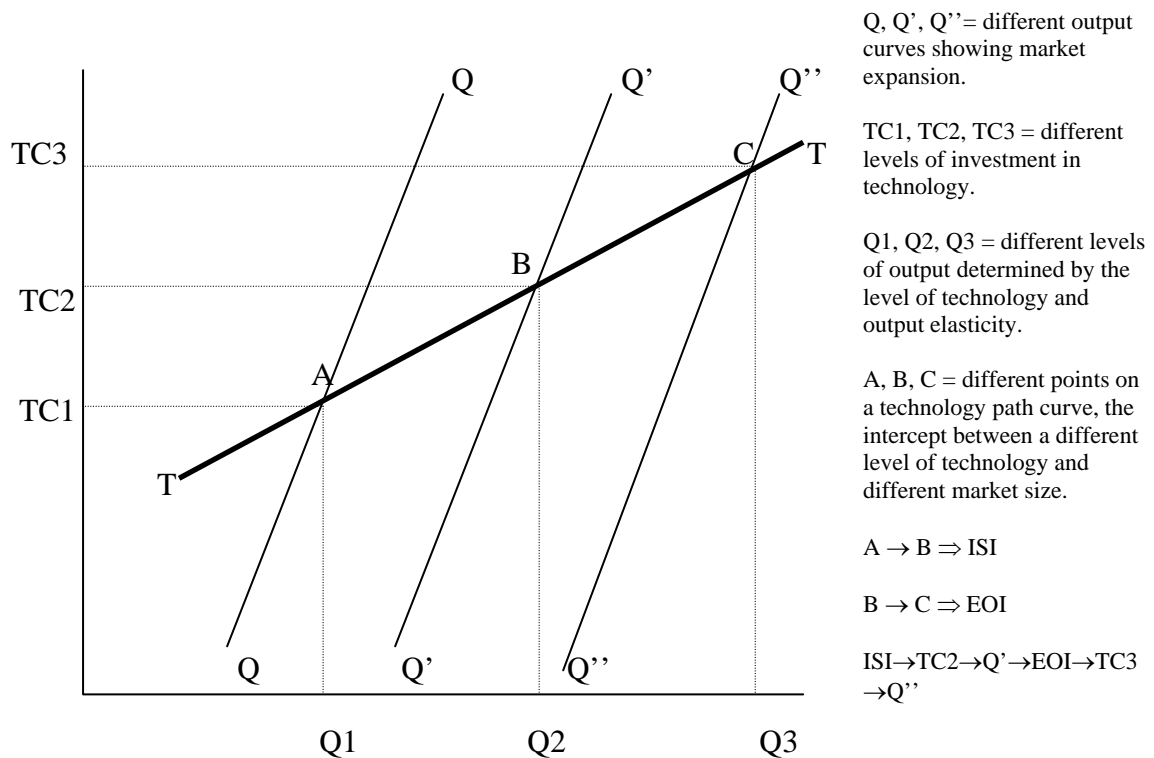
Promoting ISI and EOI



Changes from A to B, and from B to C are non-marginal: they require non-marginal changes in investment, skills, management, institution setting and technology, as well as the ability to penetrate foreign markets. The private sector may not be able to foresee this possibility, or private risk may be high, unless specific industrial and trade policies are followed (for example, protection contingent to performance, export-technology related subsidies, etc.).

Economies of scale are particularly important in capital and intermediate goods industries, because of cross-sectoral externalities and linkages (knowledge accumulation and diffusion, cheap capital and intermediate goods) and their impact on increasing productivity and lowering cost.

The expectation of expanding demand, output and, subsequently, profits encourages firms to invest on better technology (cost reducing, productivity increasing, quality improving and product differentiating), provided that there are decreasing or constant returns to new outlays (Verdoorn's Law)¹. As output expands, so does investment in technology, which result in falling costs and increase in productivity. As costs fall to the level at which domestic firms can compete with imports, goods are produced rather than imported. As costs fall further to the level at which domestic firms can compete in export markets, exports begin, demand expands further and so does technology related investment (or investment in export promoting technology).



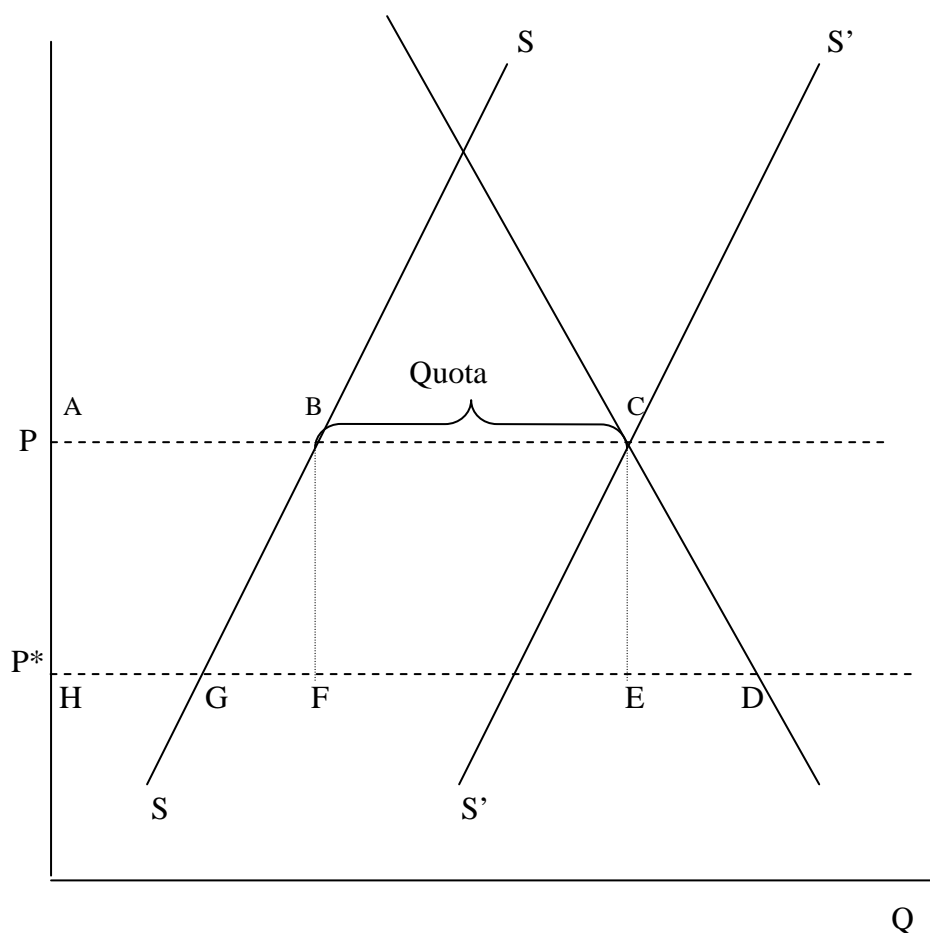
Which way works better? Start with protection to expand Q (ex, from Q to Q') or technology subsidies to introduce better technology (ex, from TC1 to TC2)? Probably, it depends on specific circumstances. But the argument is that there is a dynamic association between the expansion of the market and technology improvements that create competitive assets and firms. Hence, if trade liberalisation contracts the existent market and reduce expectations of expansion into new markets, it may harm the chances for existing firms and opportunities for new firms and industries to develop.

Distributional gains and losses

Welfare gains (from liberalisation) or losses (from protection) are very small and measured by little triangles; while income transfer associated with liberalisation or intervention are measured rectangles and can be large. Consider the effects of an

¹ For an explanation of Verdoorn's Law, please see annex.

import quota that shifts the supply curve faced by domestic consumers from SS to $S'S'$, and correspond to an internal price P above the world price P^* . Removing the quota gives a welfare gain of $BFG+CDE$, the difference between rectangle overall gains of $ACDH$ and losses of $ABGH$ to import-competing producers and $BCEF$ to owners of the rights to the quota.



Inter-sectoral distribution

There is no evidence of factor-price equalisation between sectors and countries, as trade develops and specialisation consolidates. There are several theoretical arguments for why HO model prediction of convergence does not occur:

- initial factor price difference may be so large that equalisation is not possible;
- non-traded goods make convergence impossible since trade does not occur;
- factor endowments may change when supply of factors is not fixed and react to demand (ex, Lewis theory of unlimited supply of labour; technological progress);
- factor rigidity (ex, labour market rigidities, capital rigidities associated with financial systems, skills and infrastructures, etc.);

- differences in technological conditions associated with cumulative technological capabilities and growth, which must generate different development capabilities and paths;
- factor intensity reversal that allows for different factor price ratios to be consistent with one world price ratio;
- the capital controversy:
 - heterogeneous physical capital requires a price of capital for the purpose of aggregation (so that capital intensity can be measured);
 - price of capital depends on its market value, which in turn depends on the interest;
 - interest depends on factor intensity, which cannot be measured without calculating the interest;

Two problems with the capital controversy: capital is heterogeneous and cannot be aggregated (hence, capital intensity at the scale of an economy cannot be measured); and machines are commodities produced by commodities, which command interest;

- distribution of surplus between labour and capital is not natural. Before this distribution is resolved, nothing can be said about the price of goods. Hence, comparative advantages do not appear naturally but can be created. The bargaining over distribution, which is crucial, has to be part of the model.

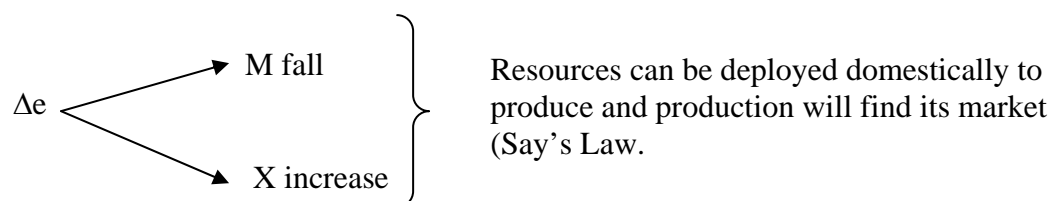
(Sraffa 1960; Edwards 1985:29-40)

Rent-seeking due to selective intervention (protection, subsidies)

- rent-seeking is embodied in all systems of allocation of property rights through contests, whether the contest is organised through the state or the market;
- property rights themselves are rents captured by those to whom rights have been conceded, in comparison to those who failed to acquire rights;
- most rents in society are associated with private activities;
- rents resulting from protection are bound to be small on an economy scale, because protection may only affect a fraction of imports, which in turn are only a fraction of GDP;
- rents that are contingent to performance may accelerate capital accumulation and promote the entrepreneurial dynamism.

Macroeconomics of the critique of trade liberalisation

Exchange rate and capital markets



However, if resources are not automatically full employed (or are not found domestically) and the country can borrow abroad, the most likely results of devaluation are output losses and increased trade deficit. Actually, Adam Smith considers these as cases in which protection can generate welfare gains.

If capital markets are liberalised prior to the establishment of an adequate institutional and regulatory system, the following result may hold:

- massive inflows of short-term foreign assets appreciate domestic currency without the economy benefiting from real investment. As a result, competitiveness may fall, and so will exports, resulting in further deterioration of the trade balance;
- the use of tight monetary policies to control inflation and deterioration of the current account pushes interest rates up. This may lead to another wave of short term speculative inflow of foreign capital;
- if confidence collapses, it is likely to encourage massive outflows of capital, leading to massive devaluation and stagflation;
- in any case, the current account and foreign reserves would have deteriorated and domestic productive capacity would not have developed.

Trade Policy and Productivity

Technical change

- I increases because costs fall;
- Greater capacity utilisation as markets expand;
- Q and X grow faster

Aggregate supply grows faster.

Import constraints are relaxed because:

- X increase;
- Imports are substituted.

Hence...

$\Delta Q \Rightarrow \Delta$ Productivity,
because of technical change
and capacity utilisation
...and...

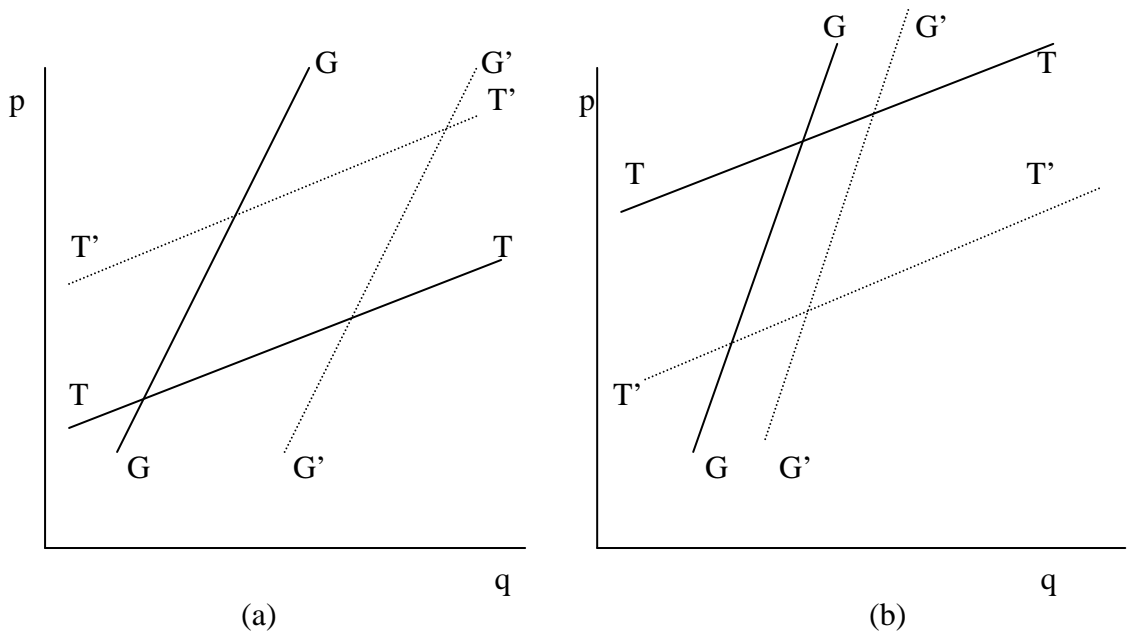
Δ Productivity $\Rightarrow \Delta Q$,
because of falling costs

What are the problems in being able to use trade policy for technical change and productivity growth?

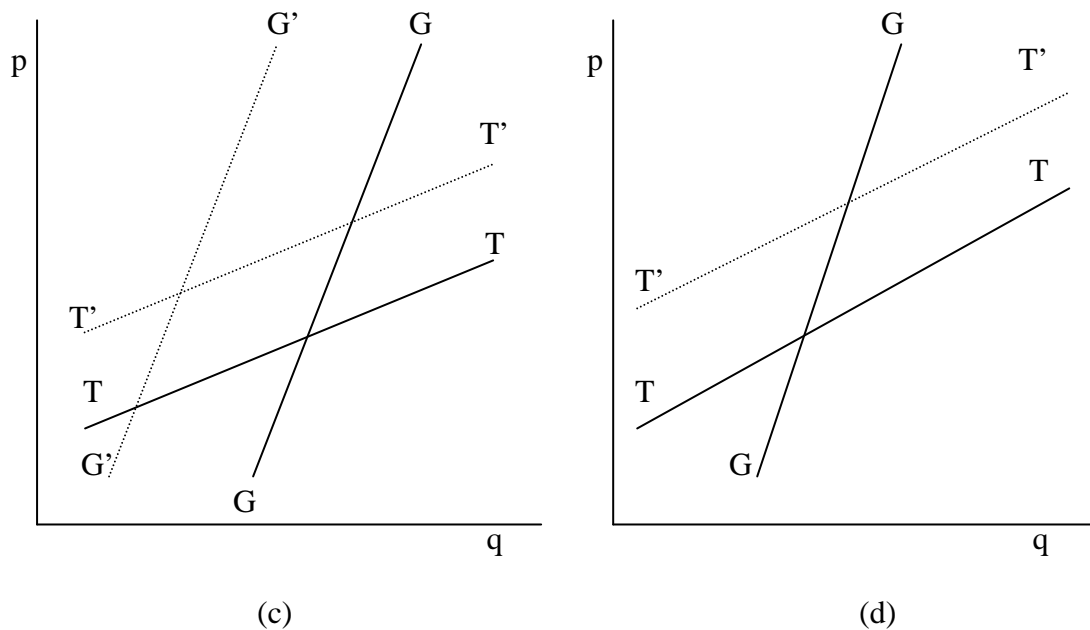
- quality and costs of capital and intermediate goods: domestic firms cannot be put at a disadvantage vis-à-vis the world by being supplied with more expensive and inferior quality capital and intermediate goods;
- the state may not be able to ensure that incentives (rents) are adequately used for capital accumulation.

What are the possible solutions for these problems?

- contingent incentives might be created through support to exporting firms;
- selective liberalisation (ex, import liberalisation to exporting firms) may minimise the political difficulties of implementing contingent incentives;
- selectivity of strategy must ensure building of industrial network and more gradual import substitution of more difficult activities.



where p and q are productivity and output growth rates; GG and $G'G'$, and TT and $T'T'$ lines are growth rate and technological change profiles. In (a) industrial policy may support either shift (from TT to $T'T'$ through subsidies; and/or from GG to $G'G'$ through protection). In (b) policy fails: output increases slightly but productivity collapses. In this case, one possible solution is to adopt incentives to exporting firms.



In (c) productivity increases due to liberalisation but overall output growth rate falls: domestic firms fail to enter external markets, and no new infant industries develop. In (d) the short-term contraction effect due to liberalisation is shown: productivity increases but output does not respond (resulting in increasing unemployment and idle capacity).

Empirical evidence

- so far, convergence between countries with very different factor endowments have not happened. Actually, trade has been much more intensive between economies of similar levels of income and specialisation, at least for high and medium income economies. High-income economies import and export significantly more from and to each other than from and to lower income economies. Low-income economies, unskilled labour and land intensive, have lost their share of the world trade, and have lagged behind in almost every single aspect: productivity, quality, growth rates, diversification, capital accumulation, etc..
- the way technological choices affect income distribution depends more on labour market institutions and power balance between groups than on whether labour or capital intensive technologies are adopted. Even if employment of unskilled labour increases fast, there is no guarantee that wages will increase.
- Productivity: the table below briefly resumes comparative data on South East Asia, Latin America and Sub-Saharan Africa with respect to productivity and employment growth associated with ISI and EOI:

Regions	Productivity	Employment	ISI	EOI	$\Delta \uparrow$ TFP during transition
Indonesia, Malaysia, Korea, Thailand and Singapore	↑	↑	√	√	√
Latin America	→	↑	√	~	x
Sub-Saharan Africa	→	→	√	x	x

Where √, ~ and x means yes, more or less and no; ↑ and → means increased and was flat. This table shows that all regions pursued ISI, but only the first, SEA, was clearly committed to promote exports as well. ISI and EOI do not seem to be mutually exclusive; the problem is how to use ISI to increase productivity in order to promote exports. In SEA, TFP grew all along during each phase of import substitution, hence allowing for firms to become internationally competitive. This may have been the result of contingent incentives put in place. SEA is also the only region where both productivity and employment grew, hence satisfying Kaldor's test for cumulative (dynamic) increasing returns.

Annex 1: Verdoorn's Law

The rate of growth of output determines the rate of growth of productivity. Hence, a dynamic economy is the one that realises dynamic increasing returns to scale: a more or less continuous reduction in costs and increase in productivity owing to continuous increase in output over time.

(Sawyer 1989:401-2)

Mechanism: anticipation of growth in demand and profits leads firms to invest more and hire more labour; new equipment embody new technology that leads to higher productivity.

(Sawyer 1989:402)

$$q = \alpha x$$

$$x = \delta p_d + \gamma p_f + \varepsilon z$$

$$p_d = w - g + t$$

$$g = \beta + \phi q$$

$$l = -\beta + (1 - \phi)q \quad q > l$$

where q , x , z , g , l and t represent rates of growth of output, exports, world income, productivity, employment and of $(1 + \text{markup price})$; p_d and p_f are the rates of growth of domestic and world price indices, and w is the rate of growth of wages.

(Sawyer 1989:430-1)

Kaldor's model requires that:

$$\lambda = \frac{q}{mva}$$

$$\lambda > \frac{MVA}{GDP}$$

where λ is the elasticity of the rate of growth of GDP (q) with respect to the rate of growth of manufacturing (mva). λ is bigger than the share of MVA on GDP, because there are two sets of influences in operation: (i) productivity in manufacturing increases as manufacturing expands because of static and dynamic increasing returns; and (ii) faster growth in manufacturing generates faster growth in productivity outside manufacturing, owing to labour absorption by manufacturing and to technology change embodied in capital and intermediate goods generated by manufacturing. (i) is the adoption of Verdoorn's Law in Kaldor's work.

(Scott 1998:344)

It is harder for an industry to push the technological frontier forward, or even keep up with it, if its own rate of expansion slows down – and still harder if it is contracting. This is unavoidable but tolerable when the growth of old industries is restricted by the

rise of newer, more progressive home industries. But when retardation of older home industries is due to the rise of competing industries abroad, a tendency to generalised slowdown may be present.

(Abramovitz 1986:594)

See Scott (1998:336-43) for a critique of both Verdoorn and Kaldor, which is based on the following central issues: (i) there are many factors affecting growth, such as investment, management, skills of workers, industrial relations, catching up processes, investment opportunities, government policy, etc., and that the introduction of such factors significantly reduces the significance of Verdoorn and Kaldor's equations; (ii) both Verdoorn and Kaldor did not separate skilled and unskilled labour, and when skilled labour is introduced Kaldor's evidence of dynamic increasing returns (elasticity of q with respect to $l < 1$) is significantly weakened; (iii) Verdoorn's econometric test where not stable, with coefficients varying within very large ranges; (iv) Verdoorn misspecification of the equations; and (v) Verdoorn critique of his own work in later years.

Annex 2: Summary

