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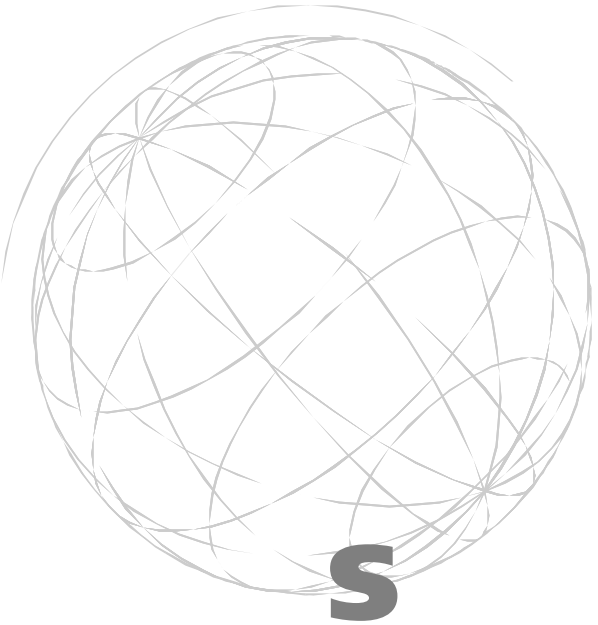

SPECIAL STUDIES 5

TRADE, INCOME DISPARITY AND POVERTY

DanBen-David
HåkanNordström
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Trade, Income Disparity and Poverty: An Overview

Håkan Nordström

A. Introduction

The eradication of poverty is a shared responsibility for the international community—indeed, a moral imperative. This task has become no less urgent in the last decade, in spite of rapid economic growth in many parts of the world. While the percentage of the world's population living on less than $1 per day has fallen from 28.3 to 24.0% between 1987 and 1998, population growth (815 million) has kept the absolute number of poor steady at some 1.2 billion (Table 1.a)[1]. If we take a higher cutoff point of $2 per day, the poor have increased by 250 million over the same time period, encompassing 2.8 billion people, or almost half of the world's population (Table 1.b). Nor do World Bank projections lend undivided hope for the future. Under the "business as usual" scenario (scenario A), the number of poor on the $1 per day scale will not change during the projection period up to 2008. However, should policy measures be taken to boost economic growth and make the growth process more inclusive to the poor (scenario B), the World Bank reckons that 500 million people could be brought out of extreme poverty by 2008. Even under this more optimistic scenario, Latin America and the Caribbean, and especially Sub-Saharan Africa would see little if any progress. The same pattern emerges under the higher cutoff point of $2 per day.

In the light of these dire statistics and projections, it is easy to appreciate the growing public concern that not enough is being done to address poverty and poverty-related social illnesses, such as poor work conditions, a lack of respect for human rights, and natural resource degradation. Indeed, such concerns have been vented with increasing frustration, including at the Ministerial Conference of the WTO in Seattle last year, and more recently at the joint spring meeting of the IMF and the World Bank.

One problem facing governments in poverty-stricken countries, the donor community, civil society, and international organizations is that poverty is a multi-dimensional problem with no simple solution—not least because of its sheer scale. The causes and expressions of poverty are not the same everywhere, although some common denominators can often be found, including a lack of access to education (especially for females), basic health care (including reproductive health care), and unequal distribution of productive assets (land, livestock, credits, etc). Moreover, rural communities, which are often the hardest hit by poverty, face their own development problems related to poor infrastructure (roads, electricity, telecommunication, etc.), which either prevent or make it more costly to participate in the national and global economy. Another factor that perpetuates poverty is that the poor often lack political leverage to influence the polices and priorities of governments.[2]

The multi-dimensional complexity of poverty is analyzed in detail in the forthcoming issue of the *World Development Report* (Attacking Poverty) of the World Bank. The report also sets out a new framework for action to halve extreme poverty by 2015 (Box 1). The aim of the present WTO study is not to duplicate the comprehensive analysis of the World Bank, but to focus on one particular part of the issue—trade.

Let us begin by noting that the linkages between trade and poverty are not as direct and immediate as the linkages between poverty and national policies on education, health, land reforms, micro-credits, infrastructure, governance, and so on. Nor does trade compare to other international polices, such as debt relief, vaccination programs, or research on tropical (malaria) and other diseases (AIDS) that set back developing countries. Trade can nevertheless affect the income opportunities of the poor in a number ways—some positive and some negative. The aim of this study, which is based on two expert reports commissioned by the WTO Secretariat, is to clarify the interface between trade, global income disparity, and poverty.

The study is organized as follows: Chapter 2, by Professor Dan Ben-David of Tel Aviv University, takes an in-depth look at the linkages between trade, economic growth, and income disparity among nations. The main finding is that in a world economy marked by increasing income gaps between poor and rich countries trade can be a factor in bringing about convergence in incomes between countries. A parallel finding is that trade-related income convergence is accompanied by faster growth in the liberalizing countries. Many of the primary measures and institutions that facilitate the capturing of knowledge spillovers emanating from trade—such as widespread and improved education, a sound infrastructure, protection of property rights, and so on—are inherently the same measures that facilitate a move to faster growth and an alleviation of widespread poverty.

Chapter 3, by Professor L Alan Winters of University of Sussex, discusses the various channels by which trade may affect the income opportunities of poor people. The essay concludes that trade liberalization is generally a positive contributor to poverty alleviation—it allows people to exploit their productive potential, assists economic growth, curtails arbitrary policy interventions and helps to insulate against shocks. The author recognizes, however, that most reforms will create some losers (some even in the long run), and trade reforms could exacerbate poverty temporarily. The author argues that the appropriate policy response in those cases is to alleviate the hardships and facilitate adjustments rather than abandon the reform process. The essay also provides a checklist to help policy makers assess the poverty impact of trade reforms.

The remainder of this chapter offers a non-technical overview of the aforementioned expert reports.

1 World Bank (2000).

2 For an account of how the poor themselves—the true experts—perceive poverty, see World Bank (1999).

Table 1a: Population living on less than $1 per day in developing and transition economies

Region	Number of people (millions)				Share of population (%)			
	1987	1998	2008		1987	1998	2008	
			A	B			A	B
East Asia and Pacific	418	278	183	72	26.6	15.3	9.2	3.6
Excluding China	114	65	58	18	23.9	11.3	9.2	2.9
South Asia	474	522	465	206	44.9	40.0	31.0	13.7
Eastern Europe and Central Asia	1	24	46	7	0.2	5.1	9.6	1.6
Latin America and the Caribbean	64	78	131	75	15.3	15.6	22.9	13.1
Middle East and North Africa	9	6	11	5	4.3	1.9	3.3	1.4
Sub-Saharan Africa	217	291	406	330	46.6	46.3	51.5	41.8
Total	**1183**	**1199**	**1242**	**695**	**28.3**	**24.0**	**21.9**	**12.3**
Excluding China	880	986	1117	641	28.5	26.2	25.9	14.9

Source: World Bank (2000), table 1.8a and 1.10a.

Table 1b: Population living on less than $2 per day in developing and transition economies

Region	Number of people (millions)				Share of population (%)			
	1987	1998	2008		1987	1998	2008	
			A	B			A	B
East Asia and Pacific	1052	892	632	483	67.0	49.1	31.8	24.3
Excluding China	300	260	218	170	62.9	45.0	34.5	26.8
South Asia	911	1096	1083	945	86.3	84.0	72.2	63.0
Eastern Europe and Central Asia	16	93	101	46	3.6	19.9	21.2	9.7
Latin America and the Caribbean	148	183	227	184	35.5	36.4	39.8	32.2
Middle East and North Africa	65	62	75	48	30.0	21.9	21.7	13.9
Sub-Saharan Africa	357	475	604	568	76.5	75.6	76.6	72.0
Total	**2549**	**2801**	**2722**	**2274**	**61.0**	**56.0**	**48.0**	**40.1**
Excluding China	1797	2169	2308	1961	58.2	57.6	53.5	45.5

Source: World Bank (2000), table 1.8b and 1.10b.

Box 1: Development goals for 2015

Economic well-being

- Reduce extreme poverty by half.

Social development

- Ensure universal primary education.
- Eliminate gender disparity in education (2005).
- Reduce infant and child mortality by two thirds.
- Reduce maternal mortality by three fourths.

Environmental sustainability and regeneration

- Implement a national strategy for sustainable development in every country by 2005, so as to:
- Reverse trends in the loss of environmental resources by 2015.

Source: The joint Development Committee of the World Bank and the IMF (Joint Ministerial Committee of the Boards of Governors of the Bank and the Fund on Transfer of Real resources to Developing Countries): "Trade, Development and Poverty Reduction", DC/2000-05, March 31, 2000

B. Trade, growth and disparity among nations

It is an empirical fact that the income gap between poor and rich countries has increased in recent decades. Only a handful of developing countries—primarily in East Asia—have been able to grow out of poverty so far, although a second tier of developing, least-developed and transition economies have made rapid progress in more recent years, including countries as diverse as China, India, and Uganda. The uneven growth performance is illustrated in Figure 1, which plots average annual per capita growth between 1960 and 1990 for 104 countries against per capita GDP in 1960.[3]

Had per capita incomes been on converging paths, the countries would have lined up nicely from left to right along a downward-sloping curve with the poorest country growing the fastest, the next-poorest growing a bit slower, and so on. This is clearly not the case. On the contrary, the estimated relationship between the initial level of income (1960) and subsequent growth (1960-1990)—marked by the line in the figure—is slightly positive, although not significantly different from zero from a statistical point of view. That is, if anything, richer countries have been growing faster on average than poorer countries, thereby increasing global income disparity. Another noteworthy fact is the huge differences in performance among developing countries in the left-most quarter of the figure. A handful of developing countries, mainly in East Asia, have done extremely well (and continued to do so until the financial jitters in 1997-98) with annual average per capita growth rates of 6% or more, or about three times the world average. At such growth rates, per capita incomes double in roughly a decade. In contrast, some of the poorest countries have become poorer still, with negative per capita growth.

In a world marked by huge—and increasing—income disparity among countries, Chapter 2 asks whether trade has been a source of income divergence or convergence? In other words, has trade added to, or subtracted from the diverging forces of the world economy?[4] A second issue is whether trade reforms spur economic growth for all parties concerned?

Is trade a source of income divergence or convergence?

In addressing the first issue, the paper begins by quantifying the growing income disparity in the world, which the author estimates will double in a century-and-a-half at the current trend. What is more, income divergence does not just characterize the world as a whole, but also different income segments. That is, if we look at a group of countries that start out at roughly the same income level—say, countries belonging to the third decile of the global income distribution—there is no tendency of catch-up convergence whereby the initially worse-off grow faster than the better-off. On the contrary, incomes tend to be diverging within each segment of the global income distribution, except at the lower end. And the convergence at the lower end is not very encouraging since incomes are converging *downward* and not upward. That is, the relatively better-off among the extreme poor have slipped backward as a result of negative growth.[5]

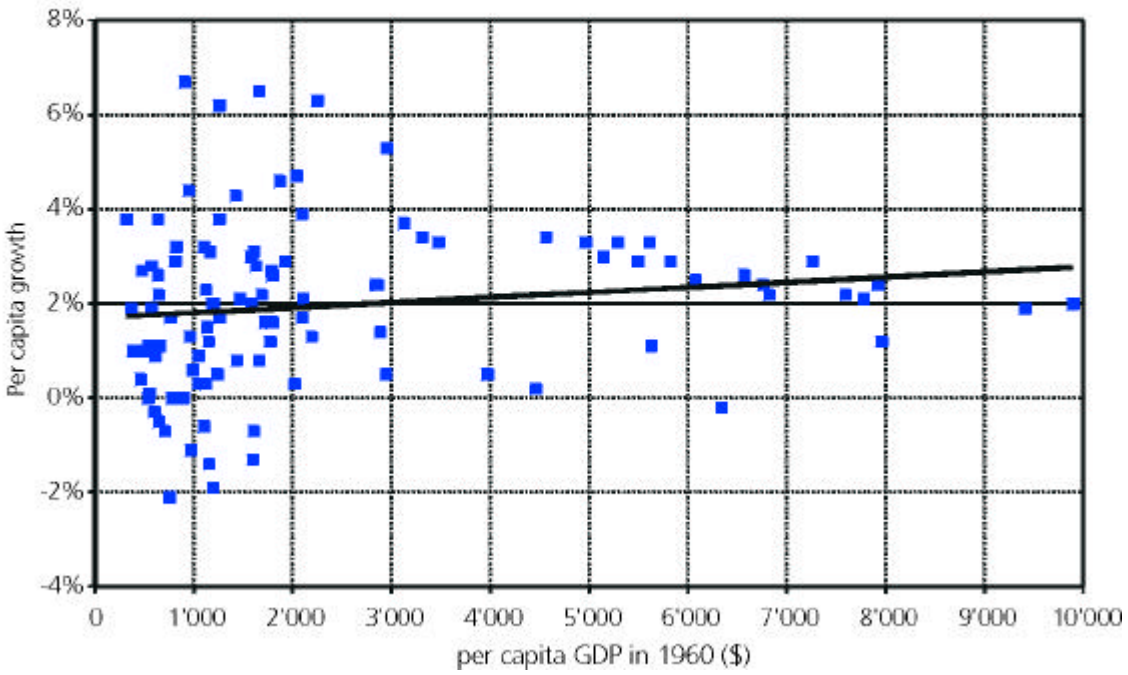
Has trade been a source of income divergence or convergence? In tackling this issue, the author begins with some historical examples of regional integration. The

3 The data are expressed in purchasing poverty parities terms, that is, in internationally comparable prices. While it would be desirable to present data up to 2000, the PENN World Tables (5.6)—which is the main source of internationally comparable GDPs—ends at 1992. We have chosen 1990 as the end point for this figure, since 1992 data is lacking for some countries.

4 The diverging forces include differences in investment rates, human capital, macroeconomic policies, governance, and other factors that set countries on different growth paths.

5 Many countries in this group have been plagued by civil wars and ethnical conflicts, and as a result, falling living standards. The negative growth rates will presumably turn around when peace and social order is restored. A case in point is Mozambique, which has progressed since the end of the civil war, although the recent flood may now set the country back again.

Figure 1: The link between per capita income and growth across 104 countries (1960-90)



first case study concerns the creation of the European Economic Community in 1957 and subsequent enlargements. It turns out that the gradual removal of trade barriers among EEC members was followed by significant income convergence—a tendency that did not exist prior to liberalization. The same pattern was found between the United States and Canada in conjunction with the trade liberalization that they implemented within the Kennedy Round. In contrast, the creation of the European Free Trade Association (EFTA) in 1961 did not result in any income convergence at the outset, nor did trade increase very much. What set the convergence process in motion for the EFTA countries was instead the reduction of tariffs that resulted from the Kennedy Round Agreement, which allowed trade with the EEC—the EFTA countries' main trade partners—to expand.

Has trade been a converging factor more generally? To investigate this issue, the author uses bilateral trade data to associate countries with their major trading partners.[6] The question asked is whether a country is more likely to converge in income with its trading partners than with a random group of countries. The answer is affirmative. Both export and import relations seem to facilitate income convergence at roughly equal rates. What is more, the rate of income convergence increases with the bilateral trade volume. That is, countries that expand bilateral trade are likely to find their incomes converging more rapidly than otherwise.

Does trade lead to upward or downward convergence of incomes?

While income convergence may be an objective in itself, because it reduces income disparity in the world, the preferred kind of convergence is clearly upward and not downward. The direction of convergence is important to establish since richer countries may be reluctant to reduce trade barriers with poorer countries if they suspect that this would lead to a downward convergence in income, or if nothing else, lead to slower growth. Is there anything in the data that suggests this may be the case? Or do all categories of countries gain from trade liberalization through more rapid economic growth?

As shown in Section F and G of Chapter 2, growth rates have declined in developed countries following the growth spurts in the reconstruction era after World War II.[7] As trade has increased at the same time, both in absolute volumes and as a share of GDP, the untrained eye may conclude that the reductions in trade barriers has resulted in falling growth rates. However, this is just a statistical fallacy, as shown by the author.

The first part of the argument is theoretical. Standard growth theory tells us that falling growth rates are a

6 On the export side, country *j* is defined to be a major trading partner of country *i* if *j* absorbs at least 4% of *i*'s exports. On the import side, country *j* is a major trading partner of country *i* if *j* comprise at least 4% of *i*'s imports.

7 Although it is too early to tell affirmatively, it seems like there has been a structural upward shift in the growth rates since the early 1990s, often attributed to the "new economy" (Internet, biotechnology, telecommunications, etc.).

normal consequence of falling returns on investment. Specifically, when a country is poor in productive capital, for example after a destructive war or a prolonged spell of bad economic policies, the returns on investment are high because of the capital shortage. Over time, as countries become more "fully invested", investment returns will start to taper off, resulting in falling growth rates—a result unrelated to increased trade.

The second part of the argument is empirical. While growth rates have been trending downward in developed countries in the post-war period (at least up to the early 1990s), major trade liberalization events have coincided with movement to higher—and in the majority of cases, steeper—growth paths that lie above the lower and flatter pre-liberalization paths. These results, based on time series analyzes, parallel the findings of cross-country regressions that an open trade regime facilitates the economic growth process (see Annex Table 1).[8]

Conclusion

There is no evidence that countries, in general, are converging in per capita incomes. In fact, the income gaps appear to be growing over time. Among those countries that are nonetheless converging, an important thread that appears to tie many of them together is trade. Countries that trade extensively with one another tend to exhibit a higher incidence of income convergence than other countries. Moreover, trade-related convergence does not appear to have come at the expense of the wealthier countries. In fact, not only have the relatively poorer liberalizing countries been able to move to higher and steeper growth paths, so have their wealthier trade partners. In sum, the results presented in Chapter 2 suggest that trade provides an important contribution toward the economic growth of nations—in particular, for those countries that are lagging behind their trade partners—and hence also potentially faster alleviation of poverty.

C. Trade and poverty: is there a connection?

Chapter 3 asks whether trade liberalization and poverty are connected, and what might be done to avoid negative outcomes.

The starting point of the analysis is the so-called 'farm household' model—a stylized model of a basic production-consumption unit in the economy. At the most general level of abstraction, an increase in the price of something the household sells (labour, goods, services), or a reduction in the price of something the household consumes (goods, services), increases the real income (purchasing power) of the household, and vice versa. Thus, whether a trade reform is pro- or anti poor depends not only on the induced price effects, which in turn depends on which tariffs are being reduced, and how much of a price change is passed through to the poor, but on how the poor earn and spend their incomes. More important than price changes is whether markets exist at all: trade reform can both create and destroy markets. Extreme adverse poverty shocks are often associated with the disappearance of a market, while strong poverty alleviation can arise when markets are introduced for previously un-traded or unavailable goods.

Trade reform is also likely to have major effects on the prices of factors of production—of which the wages of the unskilled are the most important from a poverty perspective. If reform boosts the demand for labour-intensive products, it boosts the demand for labour and then either or both wages and employment will increase. However, whether this reduces poverty depends on whether the poor are strongly represented in the type of labour for which demand has risen. If the poor are mostly in unskilled families, while trade reforms boost the demand for semi-skilled labour, poverty will be un-affected—or, indeed, may even worsen as wages of un-skilled workers fall. It also depends on where the wage rate is relative to the poverty line. If wages are pushed up from subsistence to higher levels, or if the sectors ex-panding their employment offer wages above the poverty line, then poverty will be alleviated.

Trade reform can affect government revenue, but much less frequently and adversely than is popularly imagined. High tariffs tend to be associated with large exemptions, and a reduction of both may keep the tariff revenue unchanged. Even where it does not (as eventually must be true as tariffs fall to zero), it is not inevitable that the poor suffer. It is ultimately a political decision whether new taxes are introduced to make up the shortfall, or whether government expenditures are cut instead. In the former case, the impact on poverty depends on whether the new taxes fall disproportionately on the poor, and in the latter case, whether the expenditure cuts fall disproportionately on the poor. Again, this is ultimately a political decision. However, since trade reform will typi-cally raise aggregate incomes, it should generally be feasible to raise revenue elsewhere than from the poor.

Opening up the economy will often reduce risk and variability because world markets (which have many players) are more stable than domestic ones. But sometimes it will increase risk either because official stabi-lization schemes are undermined or because residents switch completely from one activity to another that offers higher average rewards but greater variability. In these cases economic vulnerability could increase, which could increase the incidence of poverty even as the average incomes of the poor increase.

The key to sustained poverty alleviation is economic growth. While growth may not benefit everyone in an economy, the growth process must be strongly biased against poor people to produce perverse outcomes on poverty. There is little reason to fear that growth associated with freer trade will fall systematically into this class, and the argument that openness stimulates long-run growth has a good deal of empirical support.

All the above refers to long-run effects. But since the gains from trade rely largely on adjusting a country's output bundle, there is a possibility that people will suffer temporary adverse shocks. This is particularly true of workers who suffer spells of unemployment. In such

8 See Rodriguez and Rodrik (1999) for a critical review of the trade and growth literature.

cases, general safety nets to protect against extreme poverty plus complementary policies supporting firms and individuals to realize their productive potential are desirable.

The essay ends with a checklist to help policy makers assess the poverty impact of trade reforms.

- Will the effects of changed border prices be passed through to the rest of the economy?
- Is reform likely to destroy effective markets or create them and allow poor consumers to obtain new goods?
- Is it likely to affect different household members differently?
- Will its spillovers be concentrated on areas/activities of relevance to the poor?
- What factors are used intensively in the most affected sectors? What will be the mix of wage and employment effects? Will wages exceed poverty levels?
- Will the reform actually affect government revenue strongly?
- Will it lead to discontinuous switches in activities? If so, will the new activities be riskier than the old ones?
- Does the reform depend upon, or affect, the ability of poor people to take risks?
- If the reform is broad and systemic, will any growth it stimulates be particularly unequalizing?
- Will the reform imply major shocks for particular localities?
- Will transitional unemployment be concentrated on the poor?

Conclusion

While there is no simple one-to-one relationship between trade and poverty, the evidence seems to indicate that trade liberalization is *generally* a positive contributor to poverty alleviation—it allows people to exploit their productive potential, assists economic growth, curtails arbitrary policy interventions and helps to insulate against shocks. However, most trade reforms will create some losers (some even in the long run), and poverty may be exacerbated temporarily. The appropriate policy response in those cases is to alleviate the hardships and facilitate adjustments rather than abandon the reform process.

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Annex Table 1: Cross-country evidence on the link between trade and growth

Source and country coverage	Trade Orientation Index	Results
Michaely (1977), developing countries.	Rate of growth of export shares.	• Positive (rank) correlation between export and growth. • The link is more pronounced in a sub-sample of middle income countries.
Feder (1983), semi-industrialized.	Export growth weighted by export shares.	• GDP growth is positively associated with export growth.
Syrquin and Chenery (1989), mixed country coverage.	Export shares of GDP controlling for country size and export specialization.	• Growth rate higher for outward oriented countries in all sub-groups: small primary-good exporters, large primary-good exporters, small manufacturing exporters, and large manufacturing exporters. •Outward orientation growth premium between 0.2 and 1.4 percentage points.
Balassa (1985), developing countries.	Trade orientation index defined on basis of difference between actual and predicted exports.	• Outward oriented countries grow faster.
Edwards (1992), developing countries.	Deviation between predicted and actual trade.	• More open (less interventionist) countries tend to grow faster. • Above result confirmed by eight out of nine other trade policy indicators.
World Bank (1987), developing countries.	Countries classified in four groups: strongly inward oriented, moderately inward oriented, moderately outward oriented, strongly outward oriented.	• Outward oriented countries tend to grow faster.
Sachs and Warner (1995), mixed country coverage.	A country is deemed to be closed if any one of the following criteria is satisfied: (1) average tariff rate above 40 %, (2) NTBs on more than 40% of imports, (3) socialist economic system, (4) state monopoly on major exports, and (5) black market premium on the exchange rate exceeding 20%.	• Open economies grow faster than closed economies by 2 to 2.5 percentage points. • Open economies have higher investment ratios, better macroeconomic balance, and a larger role of the private sector as the engine of growth.
Proudman, Redding, and Bianchi (1997), mixed country coverage.	Closed/open index on the basis of a number of measures of the stance on international trade policy.	• Open economies are found to converge to higher levels of income. • These differences remain even after making allowance for differences in relative levels of investment.
Barro (1991), mixed country coverage.	Price distortion index for investment goods. (Purchasing-power-parity deviation from sample mean for investment goods.)	• Price distortions on investment goods reduce growth.
Dollar (1992), developing countries.	Exchange rate distortions.	• Average per capita growth in the least distorted quartile of (mostly Asian) countries was 2.9%; the next quartile had a growth rate of 0.9%, the third quartile -0.2%, and the most distorted quartile -1.3%. • Reduction of the real exchange rate distortion to the Asian level would add 0.7 percentage points to Latin American growth and 1.8 percentage points to African growth.
Easterly (1993), mixed country coverage.	Index measuring how much domestic relative prices are distorted away from world market relative prices.	• Increased distortion reduces growth. One unit increase in distortion reduces growth by 1.2 percentage points.

Source and country coverage	Trade Orientation Index	Results
Lee (1993), mixed country coverage.	Index measuring the extent to which trade is distorted away from its free-trade level by real exchange rate and tariff distortions.	• Less distortion is associated with higher growth. • Trade distortions reduce growth relatively more in small, resource-scarce countries than in large, resource-rich countries.
Harrison (1995), developing countries.	Seven indexes: Trade Liberalization (1960-84), (1978-88), Black market premium, Trade shares, Real exchange rate distortions, Movements toward international prices, Bias against agriculture	• All statistically significant indexes show a positive relation between a liberal trade regime and GDP growth. • The causality between a liberal trade regime and growth runs both ways. Lagged values of growth are significant in explaining openness, and lagged values of openness are significant in explaining growth.
Edwards (1997), mixed country coverage.	Nine indexes: Sachs-Warner's (1995) openness index, World Bank's (1987) outward orientation index, Leamer's (1988) openness index, black market premium, average import tariff on manufacturing, coverage of NTBs, Heritage Foundation index of trade distortions, collected trade taxes ratio, Wolf's (1993) index of import distortions.	• The openness indexes are positively correlated with total factor productivity (TFP) growth, and the mirror image of trade distortion indexes are negatively correlated. • Trade is not the most important variable for explaining cross country differences in growth; initial GDP and human capital are more important. • Data exhibits conditional convergence.
Matin (1993), Sub-Saharan Africa.	Four indexes: Trade shares, Black market premium, Trade liberalization index, Real exchange rate distortion.	• All indexes that are statistically significant point to a positive relation between a liberal (less distortive) trade regime and growth. • The openness-growth performance link for Sub-Saharan Africa is as strong as in a control sample of other African countries.
Levine and Renelt (1992), mixed country coverage.	Sensitivity analysis for multiple indexes with cross-country regressions.	• Robust positive correlation between growth and the share of investment in GDP. • Robust positive correlation between the share of investment in GDP and the share of trade in GDP. • Two-link chain between trade and growth through investment.
Gallup and Sachs (1998), mixed country coverage.	Sachs-Warner (1995) index.	• The openness index is positively correlated with growth, controlling for other factors. • Moreover, geographical factors that make trade more costly reduces growth. Land-locked countries grow 0.9 percentage points slower than coastal economies.
Coe and Helpman (1995), OECD.	not applicable	• Domestic productivity is positively affected by the import-weighted sum of the trading partner's R&D stock.
Keller (1997), OECD.	not applicable	• Trade facilitates productivity transmission both within and between sectors.
Balasubramanyam, Salisu, and Sapsford (1996), developing countries.	World Bank openness indicator	• Low trade barriers enhance the efficiency of FDI and indirectly growth.