

Globalization Ledger™

Global Business Policy Council

April 2000



Introduction

The 1999 World Trade Organization meeting in Seattle will be remembered for making the issue of globalization front-page news. Since then, globalization — the integration of economies around the world — has inspired passionate debate, angry op-eds and frequent protests, with little resolution in sight. Opponents of globalization routinely blame it for undermining human rights, weakening environmental protection and pushing workers everywhere into a “race to the bottom” for low wages and poor working conditions. Meanwhile, supporters contend that open markets and free trade — the hallmarks of globalization — act as economic engines generating higher living standards and shared prosperity for all.

To gain insight into this contentious issue, the Global Business Policy Council of A.T. Kearney developed the *Globalization Ledger*[™], a comprehensive analysis of 34 countries comprising more than three-quarters of the world’s gross domestic product (GDP). Using a unique statistical gauge, the study ranked countries based on the scope and pace of their integration with the world economy, then analyzed how they have fared against a range of social and economic indicators. By quantifying an abstract idea, this simple method allowed statistics to speak clearly, without ideological bias.

The study’s results indicate that, overall, countries integrating rapidly with the world economy have fared better than those integrating more slowly. In part, this is true because the fastest globalizing countries have enjoyed rates of economic growth that averaged 30 to 50 percent higher over the past 20 years. But the same countries also enjoyed greater political freedom, benefited from more social spending and received higher scores on the United Nations Human Development Index, an indicator of longevity, literacy and standard of living.

Despite these improvements, rapid globalizers have witnessed a growing gap between rich and poor. The study’s results show that income distribution has grown 15 to 20 percent less equitable in rapidly globalizing countries, while improved income equality has been the norm in countries that have been slower to globalize.

Yet these results do not mean that globalization has been detrimental to the world’s most poor. In fact, the *Globalization Ledger* reveals a dramatic drop in the number of people living in poverty. In 1980, roughly 34 percent of the world’s population lived in absolute poverty as defined by the World Bank; by 1990, that number had dropped by more than half. In other words, 1.4 billion people escaped absolute poverty as a result of economic growth associated with globalization.

Still, globalization poses a host of other challenges for rapidly globalizing countries, including rising corruption and higher levels of environmental pollution. Only by effectively addressing such challenges can leaders ensure that, on globalization’s ledger, the benefits continue to outweigh the costs.

THE SCOPE AND PACE OF GLOBALIZATION

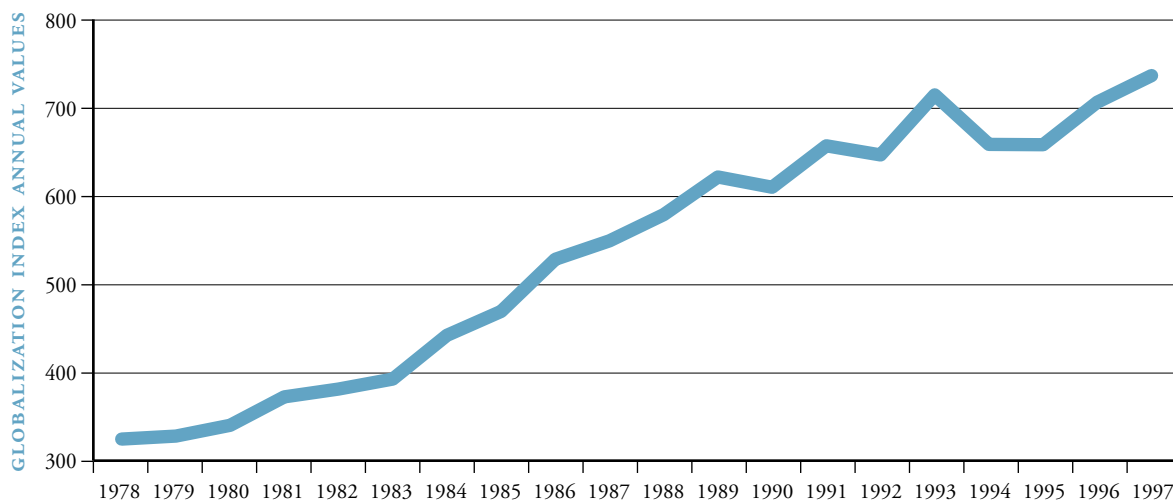
Globalization has made tremendous advances over the past 20 years. Rapid economic development in Asia, the expansion of a common European market, and the growth of trade and investment agreements worldwide have helped to drive this process, as have important developments in transportation, telecommunications and computing technology.

To assess the scope and pace of this process, A.T. Kearney developed the Globalization Index, a measure incorporating 10 critical indicators of global economic integration (*see figure 1*). These indicators include export and import totals, foreign direct investment levels, and travel and tourism receipts, along with more complex indicators that gauge the relative importance of foreign-owned factors of production and the relative distortion of price and exchange rate signals (*see Appendix*).

The Globalization Index reveals that Western Europe, North America and Japan accounted for much of the world's global economic integration between 1978 and 1997, the last year for which complete data is available. These regions globalized steadily through the late 1980s, after which Japan's stagnation, debt crises in Latin America and signs of trouble in emerging Asia began to complicate the further integration of the world economy.

The developing world has experienced shorter but more intense periods of globalization. Latin American countries globalized rapidly between 1978 and 1982, when high oil and other commodity prices encouraged increased trade and massive overseas borrowing. This burst of economic interaction increased globalization throughout Latin America. As debt burdens grew unsustainable, however, these countries retreated into a "lost decade" of stagnant

FIGURE 1: Globalization Index, 1978–1997



Source: A.T. Kearney

growth and hyperinflation. The Mexican peso crisis further weakened the region's integration with global markets, and Latin America has only recently begun to globalize in earnest.

Emerging markets in Asia also experienced slow globalization during the first half of the study period. Beginning in the mid-1980s, globalization gained momentum in this region, which has since achieved high rates of integration with the world economy.

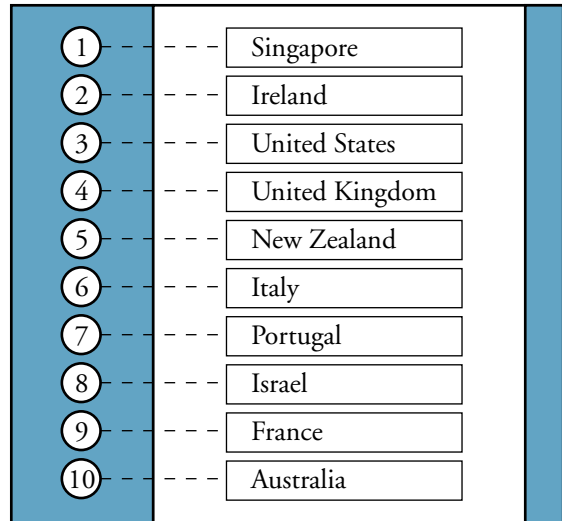
The best at being global

A handful of countries has led the shift toward a more integrated world economy. From year to year, these countries have consistently strengthened their links with global markets and have increasingly opened themselves to external economic influences, thereby becoming the “most global” countries in the world (*see figure 2*).

Topping the list of global countries is Singapore. Over the past 20 years, its entrepôt economy has enabled the country to serve as a regional hub, providing critical financial, managerial and other services to booming Southeast Asian markets. Singapore has successfully attracted foreign investment, mostly regional corporate headquarters and knowledge-intensive industries, and has served as the main gateway for Southeast Asian trade. In fact, total exports and imports had reached 311 percent of its GDP by 1997, nearly double the total of any other country in the study.

The relatively small, open economies of Ireland and New Zealand have also achieved deep integration with the world economy. Their winning combination of stable, competitive wage rates, low tariffs and friendly regulatory environments has enticed a variety of foreign investments, with many firms producing goods

FIGURE 2: Most global countries, 1997



Source: A.T. Kearney

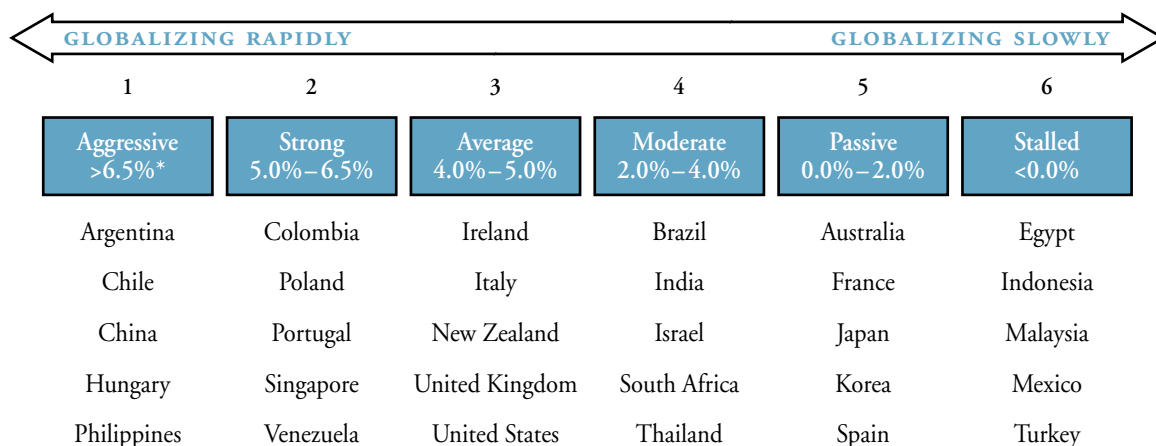
for export to neighboring countries. Similar factors have favored Israel and Portugal, countries that have also benefited from money remitted from nationals living abroad, whose contributions play an important role in globalization.

Finally, highly developed industrial countries ranked high on the Globalization Index. The United Kingdom serves as the world's leading financial center—its portfolio, capital and interest payments alone totaling 42 percent of its GDP. The United States also plays a prominent role in international finance but, more importantly, serves as the center of world tourism, with travel and tourism receipts nearly three times higher than those of any other country in the sample.

The race to globalize

For countries that have integrated less fully into the world economy, globalization poses significant challenges. Many countries have approached

FIGURE 3: Globalization tiers



Note: *Countries in each tier are listed in alphabetical order. See Appendix for explanation of how scores on the Globalization Index were derived.
Source: A. T. Kearney

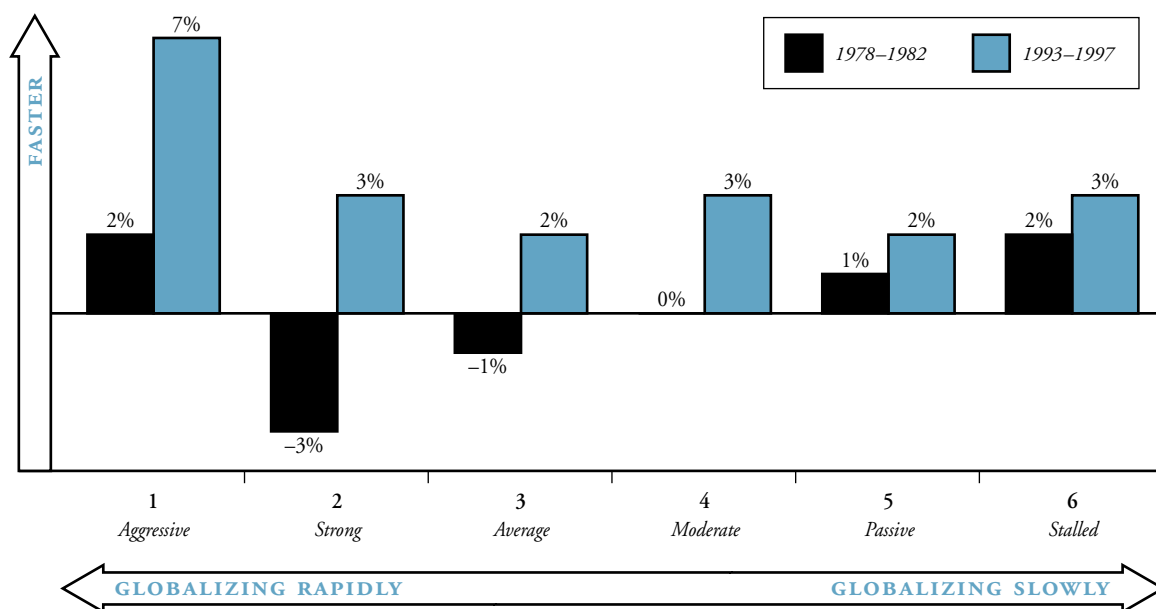
globalization cautiously, shielding their markets from international competition. But others have embraced it, opening their economies to ever greater levels of international influence in recent years. Like start-ups hoping to evolve into established corporations, these rapid globalizers are likely to experience significant changes as they race to join the global leaders.

Rapid globalizers can be grouped loosely into three categories: post-crisis, transition and politically liberalized economies. In Latin America, post-crisis economies such as Argentina and Chile—and to a lesser extent Colombia and Venezuela—have emerged from the “lost decade” with a renewed interest in reform. These countries have reduced economic regulation, privatized state enterprises and encouraged foreign investment while reducing foreign debt and restoring credit ratings. As a result, portfolio investments have grown robustly, and foreign investment has surged.

The transition economies of Hungary and Poland (along with China) have also globalized rapidly. Relaxed regulations and reduced state intervention have exposed their formerly socialist economic structures to vigorous international influence. Despite the continuing challenges of high tariffs and price distortions, foreign investors have committed considerable portfolio and direct-investment funds to these countries. Hungary and Poland have also enjoyed tremendous growth in their travel and tourism industries.

The Philippines and Portugal exemplify politically liberalized countries that have enjoyed renewed international favor following the end of authoritarian political regimes. Since the fall of the Marcos government in 1986, the Philippines has aggressively reformed its economic institutions. Although Portugal shed its authoritarian government more than a decade earlier, it undertook serious economic reforms

FIGURE 4: Per capita GDP growth (adjusted for purchasing power), 1978–1982 vs. 1993–1997



Source: A. T. Kearney

only after joining the European Union in 1986. These developments have helped both countries gain access to international credit, thus raising overseas borrowing. Hospitable environments for investment and tourism have also developed, while nationals working abroad continue to remit large sums of money.

GLOBALIZATION AND ECONOMIC DEVELOPMENT

Do countries that globalize rapidly fare better or worse than their slower counterparts? To better understand the effects of globalization, we grouped the countries in the study into six tiers according to their pace of globalization, measured as the annual rate of change in their Globalization Index scores (see figure 3). Countries that globalized rapidly were classified

as “aggressive” or “strong” globalizers, whereas countries that globalized slowly or inconsistently were grouped as “passive” or “stalled” globalizers. Countries falling between these extremes were put into the “average” or “moderate” tiers (see Appendix for more details).

This classification allowed countries experiencing differing rates of globalization to be compared across a range of economic, social and political indicators.

GDP growth

Over the past 20 years, aggressive and strong globalizers have experienced consistently higher rates of economic growth than their more slowly globalizing neighbors. As figure 4 shows, per capita GDP growth rose most significantly for aggressive globalizers, more than tripling from

2.1 percent to 7.1 percent. Strong globalizers added an average of 5.2 percentage points to their annual per capita growth rates over the same period.

In contrast, stalled globalizers failed to achieve sustained improvements in economic growth. As a group, their per capita economic growth rate rose only modestly—from 2.2 to 3 percent over the study period. Although these rates climbed slightly higher during the 1980s, per capita growth in stalled globalizers consistently lagged that in aggressive globalizers by nearly half after 1982.

Over the past 20 years, aggressive and strong globalizers have experienced consistently higher rates of economic growth than their more hesitant neighbors.

These results highlight the critical role that economic liberalization—a process closely linked with globalization—has played in generating and sustaining high growth rates. Beginning in the late 1970s and early 1980s, countries such as China, Argentina and the Philippines began reforms to improve productivity, facilitate trade and encourage foreign investment. As these reforms took hold, per capita income growth accelerated sharply for aggressive

and strong globalizers. The more heavily regulated economies among stalled globalizers, however, could not replicate these gains.

Currency valuation

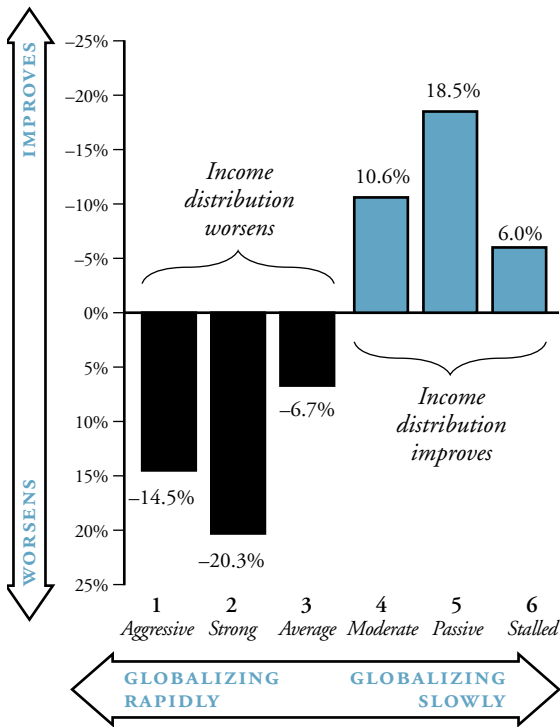
Historically, international markets have overvalued the currencies of aggressive globalizers by significant margins. Research suggests that, between 1978 and 1997, nominal exchange rates among these countries averaged 23.8 percent above “equilibrium” values, which are the values expected based on economic fundamentals. With the exception of moderate globalizers, which experienced a modest overvaluation of 2.7 percent, international markets undervalued the currencies of all other countries by 2.7 to 8.4 percent.

Overvalued currencies may reflect the market’s sustained confidence in the economic performance of aggressive globalizers. However, these same countries are highly susceptible to external shocks. The Asian financial crisis, for example, caused a 49 percent real devaluation in aggressive globalizers between 1996 and 1998, while real exchange rates tumbled by no more than half that amount in other countries.

Income distribution

Over the past two decades, income distribution has grown considerably less equitable in aggressive and strong globalizing countries. As figure 5 illustrates, income equality deteriorated by 14.5 percent for aggressive globalizers, while income distribution for strong globalizers slipped by 20.3 percent. Countries at the other end of the globalizing spectrum witnessed improvements in their income equality—income distribution improved by 6 percent for stalled globalizers and more than 18 percent for passive globalizers.

FIGURE 5: Change in income distribution, 1978–1997



Source: A. T. Kearney

These results suggest that developing countries at both ends of the globalization spectrum face a policy dilemma. On average, countries that embrace globalization achieve substantially higher rates of per capita economic growth. Yet rapid integration into the world economy may also restructure their economies, creating opportunities for a small minority of citizens to earn a disproportionate share of the material rewards.

In contrast, countries that shy away from globalization face considerably less pressure to reorganize domestic markets, helping to sustain relatively equitable income distribution patterns. Unfortunately, such countries appear

less able to stimulate high rates of per capita economic growth.

Weighing income distribution and economic growth

Deteriorating income equality in the top tiers of the globalization spectrum raises serious concerns about globalization’s economic benefits. Critics have long suggested that open markets generate powerful adverse consequences for those most vulnerable to economic change. If so, might globalization’s rising tide lift the most luxurious boats only to drown the poor?

Detailed analysis of a broad sample of 76 countries revealed the effects of changing income distribution patterns and economic growth rates between 1980 and 1990, providing insight into the changing patterns of poverty worldwide. In individual countries where reliable data was available, results were calculated through 1997.

The results of this research suggest that the growing gap between rich and poor in rapidly globalizing countries is but one of the forces affecting incomes among the poor. Equally important is that economic growth has accompanied globalization. In economies that have grown rapidly, the positive effects of growth have outpaced the negative impact of inequitable income distribution. Overall, the combined effect has substantially improved living conditions for the world’s most poor.

Without economic growth, the percentage of the world’s population living in poverty— as measured several ways— would have grown rapidly between 1980 and 1990. According to the results, the number of poor earning less than US\$1 per day, the World Bank’s measure of “extreme poverty,” would have jumped from

297 million to 653 million in only one decade, climbing from almost 1 in 12 people worldwide to nearly 1 in 7.* Those earning less than US\$2 per day, the World Bank’s standard for “absolute poverty,” would likewise have surged from 34 percent of world population to more than 42 percent. In other words, without economic growth, deteriorating income distribution patterns would have most heavily affected the poor.

Actual developments between 1980 and 1990 bear little resemblance to these scenarios. Due largely to the “income effect” of sustained economic growth, the ranks of the world’s most poor contracted sharply during this period. In percentage terms, the share of the world’s population earning less than US\$2 per day shrank by more than half, from 34 to 16.6 percent (*see figure 6*). More significantly, the number of people living on US\$1 per day slipped from 297 million to 146 million, even as the world’s population surged in the least developed countries. As a result, extreme poverty rates fell from nearly 8 to 3.3 percent of the total population.

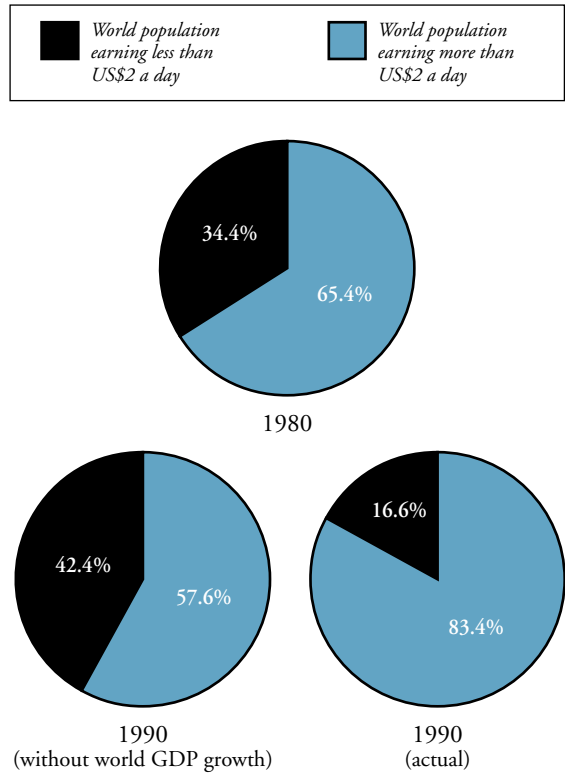
Results by region

On a regional basis, Asia achieved the most dramatic reduction in poverty levels between 1980 and 1990. In 1990, eight of every ten people in the region earned more than US\$2 per day, up from only five in 10 the decade before. In just 10 years, more than one billion people were raised above the absolute poverty line in Asia and absolute poverty levels were reduced by nearly 60 percent.

Asians at all income levels fared well between 1980 and 1990. The poorest 10 percent of the population saw its per capita income rise from

**Income measurements and other measures of poverty have been calculated in constant 1991 U.S. dollars in purchasing power parity terms.*

FIGURE 6: World population and absolute poverty rates, 1980 and 1990



Source: A. T. Kearney

US\$494 to US\$785 per person. This rise may appear insignificant when compared to the four-fold growth enjoyed by the richest 10 percent of the population. Yet in percentage terms, income growth among the poorest matched the 60 percent growth experienced by the next most wealthy bracket — in which incomes rose from US\$2,600 to US\$4,400 per person — and outpaced the 40 percent gain among the middle class (*see figure 7*).

Not surprisingly, Asia achieved this remarkable income growth during a time of rapid globalization, when economic liberalization and growing international trade buoyed overall

FIGURE 7: Median per capita income by decile and region (in constant U.S. dollars)

Decile	World		Africa		Asia		South America	
	1980	1990	1980	1990	1980	1990	1980	1990
1	\$1,116	\$1,490	\$300	\$393	\$494	\$784	\$855	\$1,071
5	\$3,515	\$4,048	\$994	\$1,189	\$1,359	\$1,976	\$3,226	\$3,481
9	\$7,280	\$9,507	\$2,843	\$4,113	\$2,682	\$4,400	\$9,229	\$13,291
10	\$11,060	\$37,099	\$5,343	\$23,474	\$4,105	\$17,185	\$17,022	\$110,865
Ratios								
1st vs. 10th	10.21	30.99	17.8	59.8	8.3	21.9	19.9	103.5
1st vs. 9th	6.41	6.59	9.5	10.5	5.4	5.6	10.8	12.4

Source: A.T. Kearney

economic growth. In contrast, Africa began the 1980s with similar poverty rates, but without substantial economic growth, poverty levels decreased by only 4 percent. Latin America suffered flat economic performance and saw no poverty reduction at all.

Results by country

Examining how purchasing power was distributed among population segments during the past decade offers further evidence that globalization has not been detrimental to the poor. In China, an aggressive globalizer in which income inequality worsened during the 1990s, the poorest tenth of the population still experienced a 30 percent increase in purchasing power between 1990 and 1997.

Income distribution figures for the Philippines, the most aggressively globalizing country over the past five years, show that the poorest tenth experienced income growth of 7 percent during the same period—fully 3 percentage points better than the richest tenth of

the population. Even in Venezuela, a strong globalizer where income for all groups contracted during the later part of the study period, the poorest tenth realized a 16 percent increase in its purchasing power by 1997, when compared with 1990.

Together, these findings strongly suggest that globalization can occur in an environment in which the poor, as well as the rich, experience meaningful income growth.

GLOBALIZATION AND SOCIOPOLITICAL DEVELOPMENT

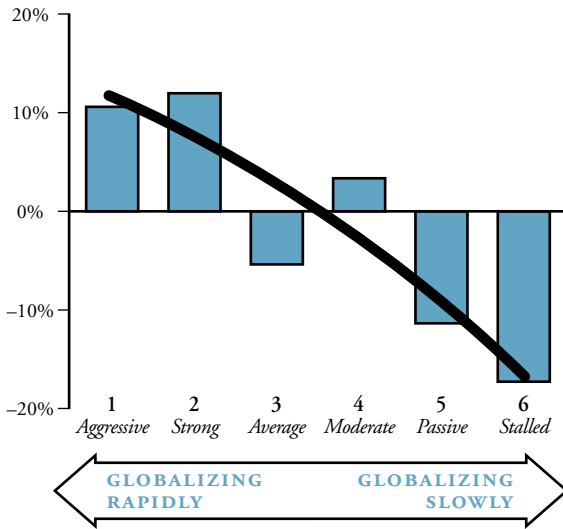
Political and social development

As the following results show, rapid globalizers often fare better in social and political terms.

Political freedom

Between 1978 and 1997, rapidly globalizing countries significantly expanded political and civil liberties as measured by Freedom House, a leading U.S. nongovernmental organization based in New York. During this time, aggressive

FIGURE 8: Change in political freedom and civil rights, 1978–1997



Sources: A.T. Kearney; Freedom House

globalizers raised their scores by an average of 10.5 percent, while strong globalizers raised their average scores by 12 percent (see figure 8).

Countries at the other end of the globalization spectrum stand in stark contrast. Scores in political freedom and civil rights fell more than 11 percent in the passive globalizers, while dropping 17.3 percent in the stalled globalizers.

At a minimum, these findings suggest that economic integration across national borders has not hindered the gradual expansion of political and civil rights. Increased globalization may do much to expand the sphere for political expression in countries with initially low levels of political freedom if, as others have argued, the rule of law, expansion of choice and the empowerment of individual consumers that aid economic development have a strong relationship to political freedom. As these forces take

hold in aggressive and strong globalizers, the environment for political expression in these countries is likely to further improve.

Corruption

In aggressive globalizers, perceived corruption among public officials and politicians grew more than 40 percent between 1984 and 1997. In contrast, stalled globalizers experienced a reduction in corruption levels over the same period, according to the Corruption Perceptions Index developed by Transparency International, an international nongovernmental organization that tracks corporate governance and bribery.

This trend suggests that the necessary social and legal evolution has lagged behind the rapid pace of economic change. The resulting gap between markets and enforcement mechanisms—particularly evident in aggressive and strong globalizers—leaves an underregulated space in which corruption may be able to grow and flourish.

Social spending

As countries globalize, citizens often call upon their governments to mitigate the painful social and economic dislocation that international exposure may bring. The growth of social expenditures in aggressive and strong globalizers suggests that governments have responded with increased funding for social safety nets, worker training and small business loan guarantees, among other such programs aimed at easing the economic transition. Rising levels of economic growth permit additional leeway for budget increases in rapidly globalizing countries. For passive and stalled globalizers, however, these needs are less likely to be acute and the additional budgetary leeway is less likely to be available.

Findings show that government social spending was reduced or remained flat in passive and stalled globalizers but expanded significantly in aggressive and strong globalizers. Between 1978 and 1997, strong globalizers more than doubled their public contributions for health, housing, social security, education and other social concerns. In contrast, public spending on such social concerns fell by more than one-half for passive globalizers during the same period.

By 1997, aggressive globalizers contributed an average of 10.4 percent of real GDP to social expenditures, while strong globalizers contributed 19.3 percent to similar concerns, both up substantially from earlier levels. Stalled globalizers spent considerably less, at only 6.6 percent of GDP.

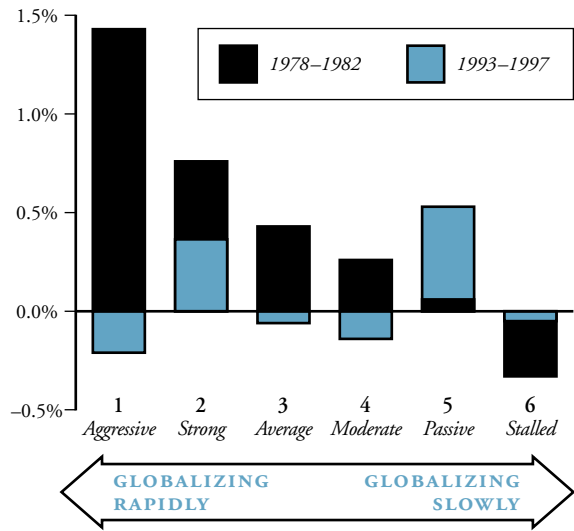
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Environment

Water pollution

Between 1978 and 1997, stalled globalizers reduced levels of waterborne fecal coliform bacteria, a strong scientific indicator of waterborne disease and other forms of water contamination, more substantially than countries at

FIGURE 9: Change in water pollution levels, 1978–1982 vs. 1993–1997



Source: A.T. Kearney

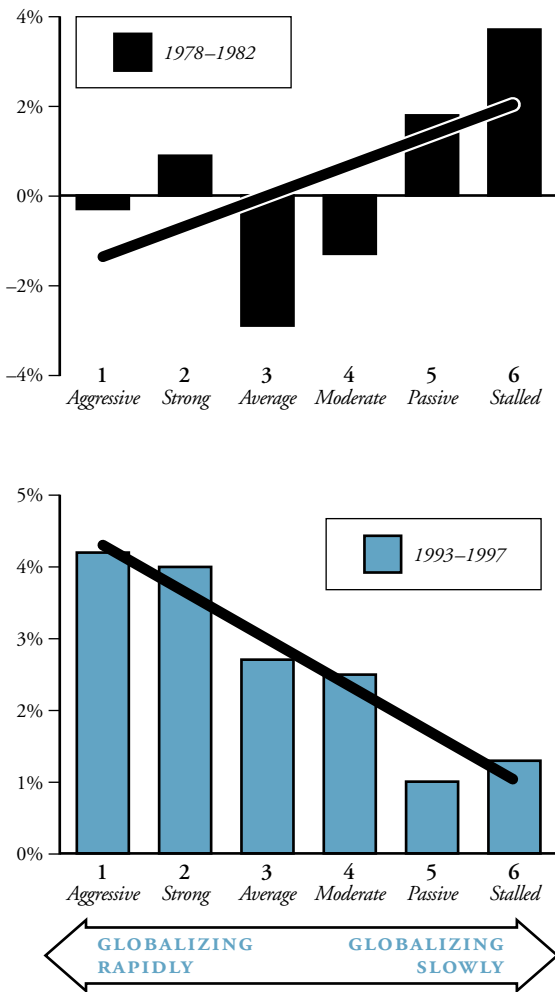
the other end of the globalization spectrum. Their annual reductions averaged 0.9 percent, a significant change in this sensitive indicator. As figure 9 shows, however, the pace of these improvements slowed over time.

In both aggressive and strong globalizers, the average fecal coliform bacteria count rose modestly over the same period. Recorded levels grew steeply through the first half of the study but declined consistently thereafter, suggesting that rapid globalizers developed better methods for handling untreated wastewater—perhaps through improvements in their sewage systems and sanitation infrastructure—during the latter half of the study period.

Carbon dioxide emissions

Over the past two decades, air quality has deteriorated rapidly in aggressively globalizing nations.

FIGURE 10: Change in carbon dioxide emissions, 1978–1982 vs. 1993–1997



Source: A. T. Kearney

In the first five years of the study period, results indicate that countries in the top tier saw slight declines in their average emissions of carbon dioxide. As economic performance grew after 1982, however, annual emissions of carbon dioxide steadily rose, averaging more than 4.0 percent by the end of the study period (see figure 10).

Passive and stalled globalizers experienced a very different trend. In these countries, average annual emissions of carbon dioxide grew rapidly between 1978 and 1982, reaching as high as 6.4 percent, in spite of relatively low levels of economic growth. Between 1993 and 1997, however, the rise in annual emissions slowed to less than one-quarter of that level.

The substantial difference in economic growth rates between the top and bottom tiers may account for these trends. For aggressive and strong globalizers, environmental rules and enforcement mechanisms may have proven inadequate to handle dramatic economic growth, or “dirty” industries may have contributed to economic development. Passive and stalled globalizers, with much slower levels of economic growth, may have been better able to minimize harmful emissions as awareness of pollution problems grew.

Education

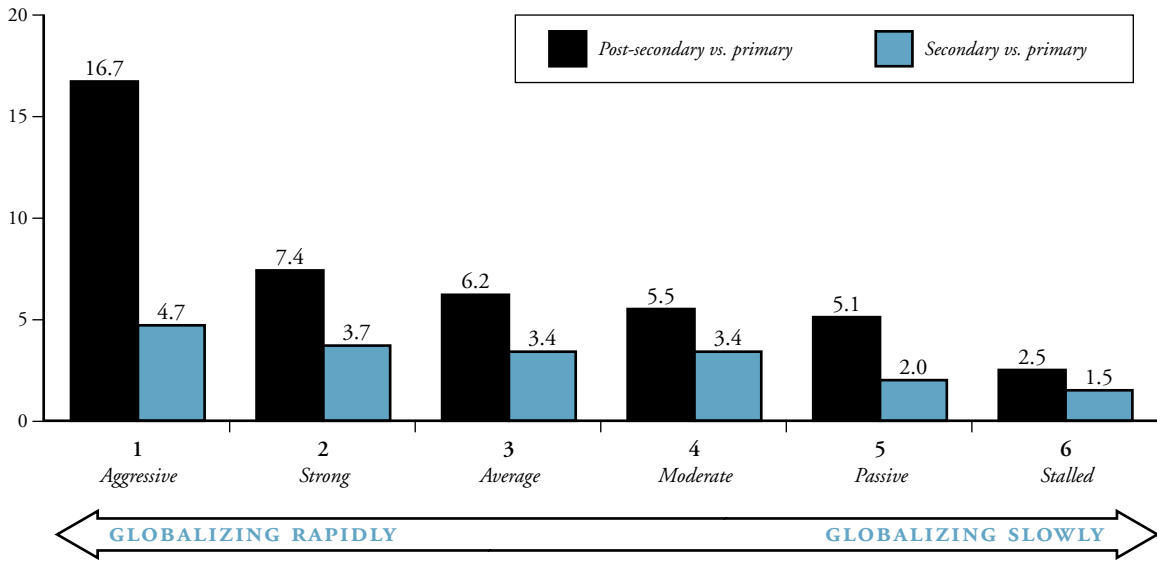
Education spending

Top-tier countries appear to place a heavy emphasis on higher education, funding universities at substantially higher rates than countries in the bottom tiers. On average, aggressive globalizers spent almost US\$17 on higher education for every dollar spent on primary education between 1980 and 1997, while the second tier of strong globalizers spent nearly US\$7.5 (see figure 11).

Similar spending patterns also held for secondary institutions. Aggressive globalizers budgeted nearly five times more for high schools and technical training programs than for primary schools, while strong globalizers budgeted nearly four times as much.

Not surprisingly, countries at the other end of the globalization spectrum invested rel-

FIGURE II: Ratio of post-secondary and secondary education expenditures to primary education expenditures, 1980–1997



Source: A.T. Kearney

actively less in secondary and post-secondary education during the same period. On average, stalled globalizers spent only US\$2.50 on post-secondary education and US\$1.50 on secondary education for every dollar spent on primary education.

School enrollment

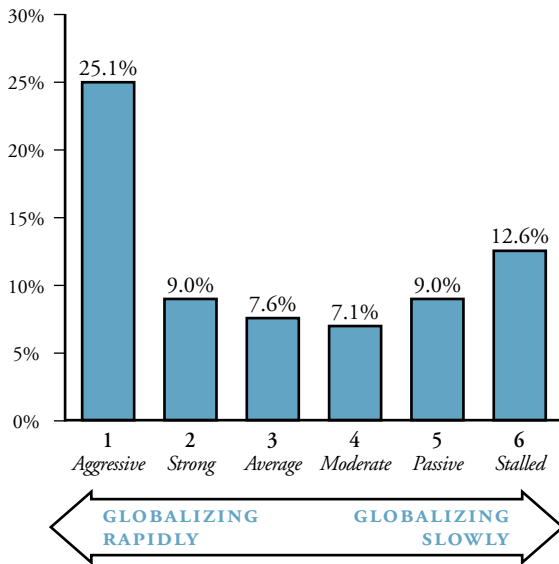
As public outlays for higher education grew, participation in post-primary education increased most substantially in the top two tiers. For aggressive globalizers, enrollment in colleges and universities rose 11.6 percent after 1993, the first year for which complete information is available. Likewise, secondary school enrollment expanded by 4.1 percent between 1983 and 1997, following an earlier downturn. Strong globalizers experienced a similar trend,

with secondary-school enrollment rising more than 4.6 percent over the same period.

For countries in the bottom two tiers, participation in education rose much less significantly. High school enrollment grew less than 2 percent for passive globalizers and 2.1 percent for stalled globalizers, while growth in post-secondary enrollment was one-third to one-half that found in the aggressive globalizers.

These results are significant for several reasons. On an individual basis, secondary and post-secondary education prepares students to compete successfully in a more integrated global economy. Higher education better equips workers to exploit the opportunities that globalization brings. On a national level, education appears to promote labor productivity, foster technological and managerial innovation,

FIGURE 12: Change in HDI scores, 1980–1997



Source: A.T. Kearney

and contribute heavily to economic growth. By expanding access to secondary and post-secondary education, then, rapidly globalizing countries may position themselves to compete more successfully in the global economy.

Health

Human Development Index scores

Despite critics' contentions that global economic integration adversely affects vulnerable populations, aggressive globalizers experienced improvements in social development at nearly double the rate of their more slowly globalizing counterparts. Between 1980 and 1997, all countries registered improvements in their annual scores on the Human Development Index (HDI), a measure created by the United Nations Development Program to assess achievements in life span, literacy and overall quality of life. As figure 12 indi-

cates, however, average scores for aggressive globalizers rose more than 25 percent, nearly twice the rate achieved by stalled globalizers. Aggressive globalizers began with comparatively low HDI scores in 1980, but their advances pushed them ahead of the stalled globalizers by 1997.

More importantly, countries in the top tier demonstrated an unmatched ability to transform economic growth into gains in social development. Research findings indicate that aggressive globalizers experienced substantially higher rates of elasticity between HDI scores and GDP growth. As a result, their HDI scores grew nearly three times faster for each percentage point of economic growth than the scores of stalled globalizers. These findings suggest that deeper economic integration can accompany improvements in quality of life measures.

Average Human Development Index scores for aggressive globalizers rose more than 25 percent, nearly twice the rate of stalled globalizers.

Life expectancy

Stalled globalizers recorded the most dramatic increase in life expectancy, extending the average life span by 8 percent—more than five years—over the past two decades. Aggressive

globalizers also witnessed robust improvements, although at half the pace, and saw life expectancy rise by more than 3.5 years. Average and moderate globalizers fared the worst, but still improved this measure, adding less than three years to the average individual's life.

During the 20-year study period, average year-to-year improvements in life expectancy slowed considerably as world life expectancy reached record highs. Passive and stalled globalizers experienced this trend most dramatically, with annual rates of improvement slipping by more than half between 1978 and 1997. Aggressive globalizers, however, demonstrated a remarkable capacity for maintaining a consistent rate of increase in life expectancy. In fact, these countries accelerated improvements in life expectancy throughout the study's 20-year timeframe.

Infant mortality and infant morbidity

Between 1978 and 1997, infant mortality declined most significantly for passive and stalled globalizers, both in absolute and proportional terms. During this time, the number of infant deaths in these countries declined by

more than half, from an initial average of 76.4 to less than 35 per thousand births. More importantly, countries in these tiers demonstrated a greater ability than their counterparts to sustain consistently high rates of improvement through the entire study period.

Infant morbidity—the incidence of non-fatal disease in the first year of life—fell most significantly in aggressive globalizers, where average rates were highest in 1978. Yet stalled globalizers showed a greater ability to sustain consistent rates of improvement from year to year, albeit at a slightly slower rate.

These findings suggest that the measures adopted by countries in the bottom tiers have, on average, had more success in safeguarding infants. Vigorous immunization campaigns and consistently lower levels of water pollution, as detailed above, may help to explain these results. Given the high initial levels of infant mortality and morbidity in these countries, however, even small investments in improved healthcare have yielded far greater results than in countries where fundamental public health gains have already been realized.

Conclusion

The research that is the basis for this *Globalization Ledger* offers convincing evidence that, on the whole, countries that embrace globalization fare better than those that resist it. At the most basic level, this is true because aggressive globalizers have enjoyed rates of economic growth much higher than those of their more hesitant neighbors. Of perhaps greater interest, these top-tier countries have also witnessed striking improvements in a wide variety of social indicators—precisely the criteria that matter most to globalization’s detractors. As a result, these findings may facilitate a discussion of the implications of globalization without the usual polemics.

For aggressive and strong globalizers, increased interaction with the global economy has unleashed changes with positive implications for their citizens. These countries have seen their political freedoms and civil liberties greatly expand. They have raised spending on secondary and higher education, and significantly increased attendance at post-primary schools. Their governments have increased spending on health, housing, social security and other social programs, leading to much higher measures of human development, strong improvements in sanitation and longer life spans. These factors have helped them build more internationally competitive economies while mitigating the adverse effects of their often difficult economic transitions.

Like all balance sheets, the *Globalization Ledger* also reveals liabilities hidden beneath the surface of the changing global economy. The costs associated with rapid globalization are clear. Rapidly globalizing countries have experienced troubling deterioration in income equality, even while witnessing an increase in incomes among the poor. They have seen dramatic growth in corruption among public officials and have failed to halt rising air pollution levels. And they have proven less effective than other countries in providing basic health services, including certain critical measures of infant care.

As the debate over globalization unfolds, both opponents and proponents must struggle to separate fiction from fact. This means understanding that global economic integration promises a variety of social and economic benefits to countries that embrace it. But one must also acknowledge that globalization has its liabilities, which must be better identified and addressed if global economic integration is to provide greater prosperity and opportunity to an ever-increasing share of the world’s population.

Appendix

GLOBALIZATION LEDGER METHODOLOGY

At a time of heated debate regarding the pros and cons of globalization, the *Globalization Ledger*[™] offers a balanced, statistical examination of the process of global economic integration. By applying a unique methodology to widely available indicators, the report examines changes in economic, political and social variables to better understand advances in globalization.

This methodology allows valuable comparisons to be drawn between rapidly globalizing countries and slowly globalizing countries across a wide variety of indicators, thus creating “snapshots” of economic, political, and social development in countries at various stages of globalization. These portraits provide valuable information for drawing conclusions about the implications of globalization in the developing world.

The Globalization Ledger has been constructed from nearly 50,000 individual data points. The report is not intended to prove causality between globalization and the results observed. Rather, the report adopts a transparent methodology that lets the collected data speak for itself without assumptions of relationship that may distort the results.

COUNTRIES INCLUDED IN THE ANALYSIS

The Globalization Ledger examined the extent of globalization in 34 individual countries over the 20-year period from 1978 to 1997. These countries were carefully selected to produce a representative cross-section of strategically important

developed and emerging markets in a variety of world regions. In total, these countries represent approximately two-thirds of world population and slightly more than three-quarters of world economic output. These countries are as follows:

- Argentina
- Australia
- Brazil
- Chile
- China
- Colombia
- Czech Republic
- Egypt
- France
- Greece
- Hungary
- India
- Indonesia
- Ireland
- Israel
- Italy
- Japan
- Korea
- Malaysia
- Mexico
- New Zealand
- Philippines
- Poland
- Portugal
- Russian Federation
- Singapore
- South Africa
- Spain
- Thailand
- Turkey
- Ukraine
- United Kingdom
- United States
- Venezuela

In certain instances, political transitions and other geopolitical changes precluded major markets from consideration. This was the case with Germany, whose reunification in 1990 greatly expanded the size of the country and complicated data analysis, as well as with Hong Kong, where the reversion to Chinese control in July 1997 complicated the collection of trade statistics and financial data. Consequently, we made the decision not to include these countries in the analysis.

MEASURING GLOBALIZATION: THE GLOBALIZATION INDEX

Globalization can be simply defined as a process of economic integration that links national economies more closely to global markets. Generally, this process is heavily associated with international trade and foreign investment flows. However, globalization should be understood as a more complex phenomenon defined by the increasing transparency of national boundaries to information and people, as well as to goods, services and capital.

Recognizing this complexity, the Globalization Index measured 10 independent variables to assess the overall level of globalization in each country. These variables gauge economic interaction and integration between countries. They can be loosely categorized as productive, financial and personal economic indicators, and are defined as follows.

Productive economy

- *Convergence.* Convergence measures the proximity between the nominal and the purchasing price parity (PPP) measures of GDP. These measures converge toward parity as domestic prices within a given country come to reflect the world prices of international markets, thus indicating the reduction of barriers and other distortions in the local economy. In contrast, divergence can result from restrictions on trade or from exchange rate overvaluation or undervaluation.
- *GDP versus GNP.* This measure compares payments made to foreign-owned factors of production operating domestically (a component of GDP) to payments received by domestic-owned factors of production operating abroad (a compo-

nent of GNP). Divergence from parity indicate that domestic-owned or foreign-owned multinational corporations contribute heavily to economic output, thus suggesting greater openness to, and integration with, the global economy.

- *Tariffs.* Low tariff barriers indicate openness to international trade.
- *Trade.* Trade levels are measured as the total combined value of exports and imports as a percentage of gross domestic product (GDP). Highly global countries record high levels of trade in relation to total domestic economic output.

Financial economy

- *Portfolio flows.* The movement of portfolio capital across national borders offers an important indication of access to international financial markets, either as a source of financing or as a recipient of short-term investment. This measure is calculated as the sum of inflows and outflows of capital as a percentage of GDP.
- *Foreign direct investment flows.* The magnitude of foreign direct investment in a country indicates its openness to foreign economic participation and its commitment to long-term capital flows. This measure is calculated as the sum of inward and outward foreign direct investment as a percentage of GDP.
- *Income payments.* Calculated as the sum of interest payments and receipts as a percentage of GDP, this measure indicates how much a country is open to borrowing and lending abroad and has a long-term commitment to international capital markets.
- *Credit ratings.* High credit ratings reflect a country's credit-worthiness, market orientation, macroeconomic orthodoxy and perceived open-

ness to external economic influences. For clarity, the Globalization Index employed standard numerical ratings devised by *Institutional Investor* magazine.

Personal economy

- *Travel and tourism.* An important gauge of the global experience of individuals, this indicator measures total payments and receipts for travel services on a per capita basis.
- *Remittances.* This is the magnitude of unilateral transfers from nationals living and working abroad, measured on a per capita basis. It defines one important measure of global economic integration and suggests the relative importance of immigration to a given economy.

Following the collection of comprehensive data, indices were created to measure the relative performance of countries across each of the 10 independent variables. Because these indices were progressive, scores rose from year to year with no ceiling on the absolute value attainable. This methodology permitted comparisons to be drawn both between countries and between individual years over the 20-year study period. Most importantly, the methodology made it possible to easily amalgamate the results into a single comprehensive index.

The result is a Globalization Index capable of comparing countries on the basis of their overall achievements in global economic integration. The index allows the total level of globalization in each country to be calculated for any given year. The Globalization Index also allows the categorization of countries based on the pace at which their globalization scores have changed over time.

We grouped countries based on their performance over the last five years of the study period, the time span most closely associated with globalization in the popular consciousness. Between 1993 and 1997, the average annual pace of globalization measured 4.5 percent. When countries are grouped into globalization tiers based on their performance relative to this average, the following divisions, as used throughout the *Globalization Ledger*, emerge.

Note that the transformation from centrally planned socialist economies to mixed or free-market economies complicated calculations for certain countries where data had previously been exaggerated, reported in a different manner or omitted. The Czech Republic, the Russian Federation and Ukraine were omitted because this problem produced unrealistic rates of globalization growth between 1993 and 1997. Greece was also excluded because critical data during the same period was missing.

ECONOMIC, POLITICAL, AND SOCIAL INDICATORS

The *Globalization Ledger* analyzed more than 30 economic, social and political indicators for the entire sample of countries. Weighted averages were constructed for the six globalization tiers for each of these indicators, allowing the globalization tiers to be analyzed across the study's 20 year time period. Over 50,000 individual data points were used in this analysis.

Panel data was compiled using statistics from the *World Development Indicators* (WDI) statistical handbook published annually by the World Bank, except where otherwise noted in the text. Complete and reliable data sets for all

indicators are available only through 1997, restricting analysis to this year.

INCOME SIMULATION MODEL

Analyzing the plight of the world's poor involved using a statistical model simulating global income distribution for 76 countries, accounting for more than 75 percent of world population. This income simulation model used general quadratic calculations of Lawrenz curves to generate detailed information about each country's

income distribution in constant dollar terms, adjusted for international prices. Measuring income distribution in this way allowed comparisons to be drawn for a large number of countries between 1980 and 1990.

Because few countries have provided updated income distribution information beyond 1990, further analysis was not possible for the broad sample. Instead, income distribution patterns were analyzed through 1997 in select countries where data permitted.

