Measuring Globalization

*Everyone talks about globalization, but no one has tried to measure its extent…at least not until now. The A.T. Kearney/*Foreign Policy *Magazine Globalization Index™ dissects the complex forces driving the integration of ideas, people, and economies worldwide. Which countries have become the most global? Are they more unequal? Or more corrupt?*

When you can measure what you are speaking about, and express it in numbers, you know something about it," the British physicist Lord Kelvin once observed. "But when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind."

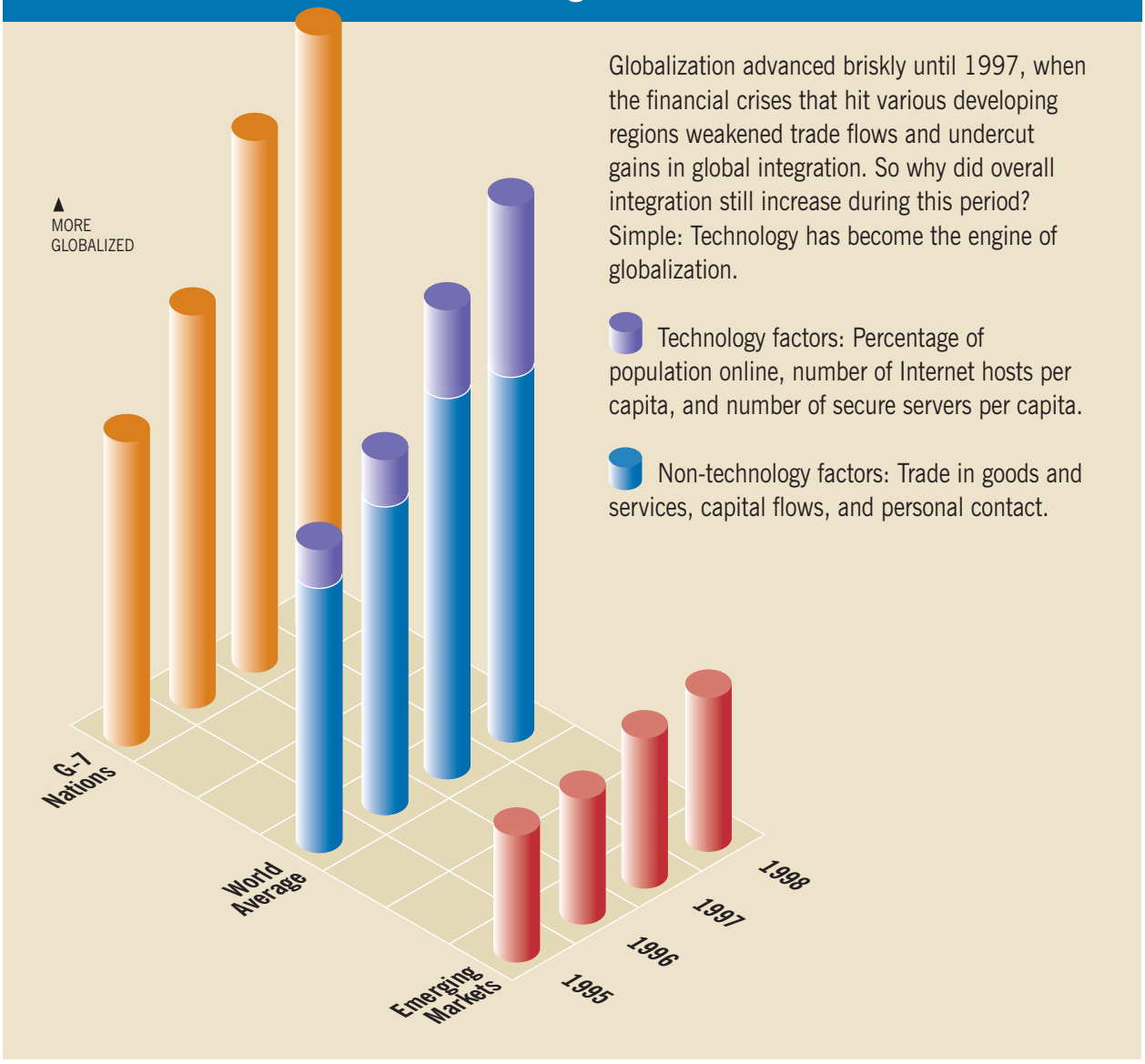
"Unsatisfactory" is the word that best describes the contemporary debate over globalization. There seems to be a consensus that globalization—whether economic, political, cultural, or environmental—is defined by increasing levels of interdependence over vast distances. But few people have undertaken the task of actually trying to measure those levels of interdependence. For instance, how do we determine the extent to which a country has become embedded within the global economy? How do we demonstrate that globalization is racing ahead, rather than just limping along? And how do we know just how worldwide the World Wide Web has become?

Like the physical universe that Lord Kelvin sought to understand, globalization may be too vast a concept to be fully captured by today's still limited set of statistical measurements. But that same challenge has not deterred physicists from their relentless pursuit to measure with ever greater accuracy the forces that hold the universe together. Nor should it deter those who seek a deeper understanding of globalization and its impact on the contemporary world. Without some means to quantify the extent of globalization, any meaningful evaluation of its effects will remain elusive.

With this challenge in mind, we present the A.T. Kearney/Foreign Policy Magazine Globalization Index™, which offers a comprehensive guide to globalization in 50 developed countries and key emerging markets worldwide. The Globalization Index "reverse-engineers" globalization and breaks it down into its most important component parts. On a country-by-country basis, it quantifies the level of personal contact across national borders by combining data on international travel, international phone calls, and cross-border remittances and other transfers. It charts the World Wide Web by assessing not only its growing number of users, but also the number of Internet hosts and secure servers through which they communicate, find information, and conduct business transactions.

The Globalization Index also measures economic integration. It tracks the movements of goods and services by examining the changing share of international trade in each country's economy, and it measures the permeability of national borders through the convergence of domestic and international prices. The index also tracks the movements of money by tabulating inward- and outward-direct-

Is Globalization Slowing Down?



Globalization advanced briskly until 1997, when the financial crises that hit various developing regions weakened trade flows and undercut gains in global integration. So why did overall integration still increase during this period? Simple: Technology has become the engine of globalization.

Technology factors: Percentage of population online, number of Internet hosts per capita, and number of secure servers per capita.

Non-technology factors: Trade in goods and services, capital flows, and personal contact.

Charts by Agnew Moyer Smith

ed foreign investment and portfolio capital flows, as well as income payments and receipts.

Given the unprecedented range of factors that the Globalization Index encompasses, we believe that it is a unique and powerful tool for understanding the forces shaping today's world. And the results of this year's index prove startling. Much of the conventional wisdom cherished by both champions and critics of globalization collapses under the weight of hard data, ranging from the pace and scale of global integration and the characteristics of the "digital divide" to the impact of globalization on income inequality, democratization, and corruption.

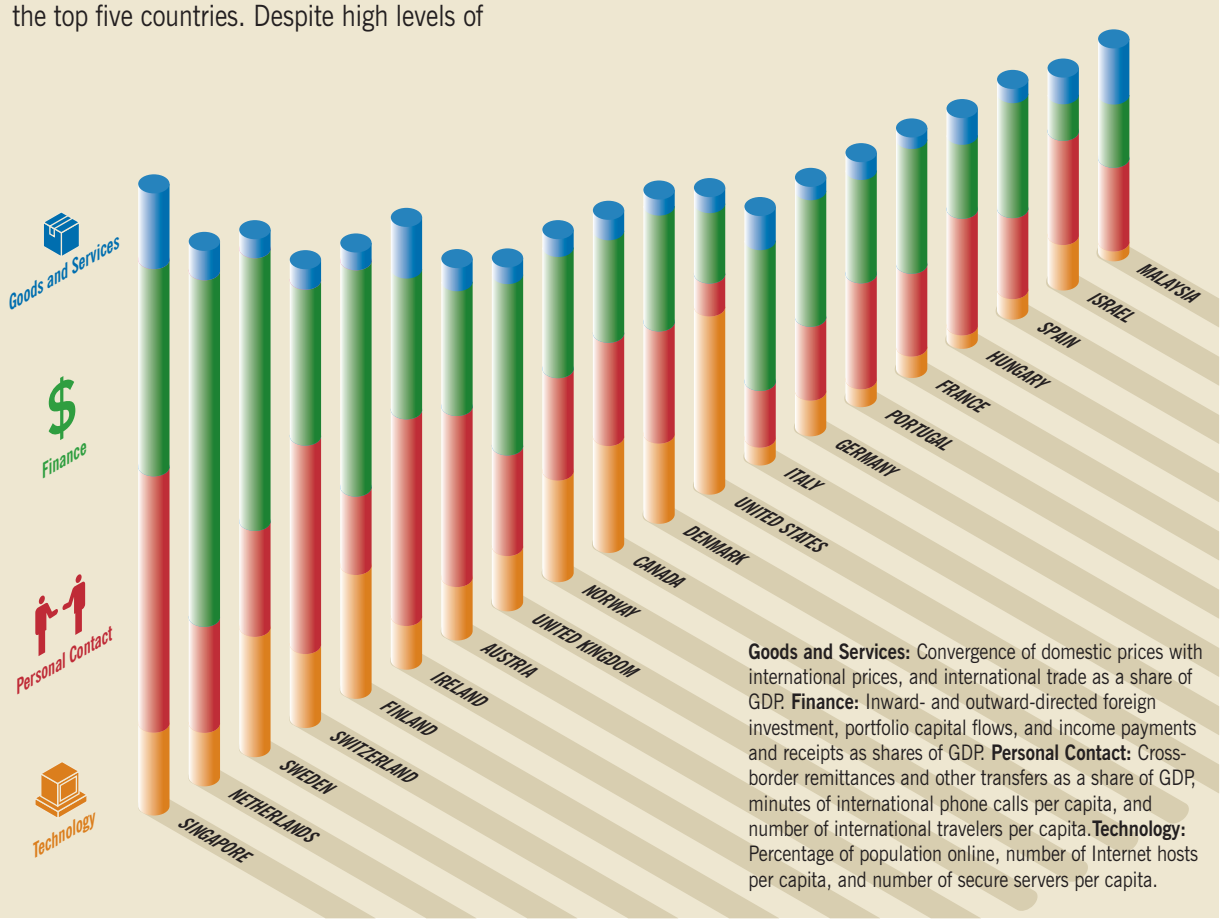
The A.T. Kearney/Foreign Policy Magazine Globalization Index™ may not settle the question of whether globalization does more good than harm. But the index provides an objective starting point for a debate that has typically relied more on anecdotal evidence than empirical facts.

LEADERS OF THE PACK

In recent years, indicators of global integration have shown remarkable growth. The number of international travelers and tourists has risen, now averaging almost three million people daily—up from only one million per day in 1980. The latest data from the United Nations Conference on Trade and Development show that foreign direct investment jumped 27 percent in 1999 to reach an all-time

The Global Top 20

Singapore leads the rankings as the most global nation in the index, due in large part to its high trade levels, heavy international telephone traffic, and steady stream of international travelers. European nations round out the rest of the top five countries. Despite high levels of integration on various technological measures, the United States remains less integrated in economic terms, leaving it twelfth in the index.



Goods and Services: Convergence of domestic prices with international prices, and international trade as a share of GDP. **Finance:** Inward- and outward-directed foreign investment, portfolio capital flows, and income payments and receipts as shares of GDP. **Personal Contact:** Cross-border remittances and other transfers as a share of GDP, minutes of international phone calls per capita, and number of international travelers per capita. **Technology:** Percentage of population online, number of Internet hosts per capita, and number of secure servers per capita.

high of U.S. $865 billion, while total cross-border flows of short- and long-term investments have more than doubled between 1995 and 1999. Due to the falling cost of international telephone calls and the rising levels of cross-border activity, the traffic on international switchboards topped 100 billion minutes for the first time in 2000. And with an online population estimated at more than 250 million and growing, more people in more distant places have the opportunity for direct communication than ever before.

The expansion of information technologies adds to globalization in ways other than facilitating communication. Some nations fear that the Internet is an engine driving U.S. cultural hegemony. Others see the Internet as a catalyst for creating global cultural communities, from Moroccan sports enthusiasts rooting for their favorite Canadian ice hockey team to antiglobalization protestors mobilizing against the World Trade Organization and the International Monetary Fund. The Internet is also an unprecedented means for disseminating ideology to a global audience, whether it is pro-democracy activists in Serbia rerouting dissident radio broadcasts to the World Wide Web or Chechen rebels maintaining their own online news service.

The full impact of information technologies on political and social life is not easily measured. But it is possible to gauge their effects on the economic sector. Information technologies make it possible for nations to sustain deeper levels of

economic integration with one another. Nowhere is this integration more evident than in financial markets, which use advanced information technologies to move U.S. $1.5 trillion around the world every day. For the United States, cross-border flows of bonds and equities alone are 54 times higher now than they were in 1970. Such flows have multiplied by 55 times for Japan and 60 times for Germany.

At first glance, these trends lend credence to the popular notion that globalization is fast creating a world that, as former Citicorp Chairman Walter Wriston put it, is "tied together in a single electronic market moving at the speed of light." But a closer look reveals that global integration appears to be growing no more rapidly now than it has been for years, and its pace may even be slowing.

Why does globalization remain sluggish even as indicators of technological integration—the number of Internet hosts, online users, and secure servers—continue to grow exponentially? The data from our broad spectrum of developed and developing markets suggest that global economic integration has wound down to something of a crawl. The drop in total trade to and from the 50 countries surveyed weighs particularly heavy in this slowdown. The chief culprit was the series of financial crises that rippled through Southeast Asia, Latin America, and Russia in the late 1990s. Strong growth in portfolio investments and foreign direct investment helped to moderate these declines, and the value of world trade has rebounded since 1999. As a result, we see a situation in which economic globalization slowed even as technological globalization continued at a rapid clip [see chart on page 57].

Some nations have pursued integration with the rest of the world more aggressively than others. The most globalized countries are small nations for which openness allows access to goods, services, and capital that cannot be produced at home. In some cases, geography has played an important role in sustaining integrated markets. The Netherlands, for instance, benefits from (among many other factors) its position at the head of the Rhine, which knits together countries that account for almost three quarters of total Dutch trade. In other cases, such as Sweden and Switzerland, relatively small domestic markets and highly educated workers have given rise to truly global companies capable of competing anywhere in the world. And a host of other factors has contributed to the globalization of other small states. Austria, for example, benefits from heavy travel and tourism, while remittances from large populations living abroad contribute to Ireland's integration with the outside world.

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Tiny Singapore stands out clearly as the world's most global country [see chart on opposite page]. The country far outdistances its nearest rivals in terms of cross-border contact between people, with per capita international outgoing telephone traffic totaling nearly 390 minutes per year. Singapore also boasts a steady stream of international travelers, equal to three times its total population. In contrast, the United States hosts only one sixth that level of international tourists and travelers and can claim less than one fourth the per capita outgoing international telephone traffic.

Yet in recent years, Singapore has struggled to maintain high levels of trade, foreign investment, and portfolio investment, which help support its globalization lead. The Asian flu is partly to blame, since the financial crisis undermined the entire region's economic performance. But Singapore's slow progress in privatizing state industries, its failure to win endorsement for a regional free-trade agreement, and its tight controls over Internet development have also slowed its integration with other countries.

Another country that ranks high on the Globalization Index is the Netherlands. But here, the story is largely economic. Within only a few short years, the Dutch have both invested heavily in other countries and seen foreign participation in their own economy rise to levels that few other nations have been willing or able to sustain. In the wake of aggressive reforms that have stripped regulations and enhanced labor flexibility, foreign investment increased from 8 percent of gross domestic product (GDP) in 1995 to more than 19 percent of GDP in

1998. Likewise, portfolio investments grew from only 5 percent to more than 30 percent over the same period, the highest levels in the world—more than double those in France and Germany and five times higher than those in the United Kingdom.

With Sweden and Finland riding the wave of Internet development to similar gains in integration with the rest of the world, the current globalization rankings may well be in flux. Singapore could slip from the lead in the coming years, as countries that are better positioned to benefit from global communications technologies or that are more aggressive about reforms to attract foreign trade and investment develop stronger ties with their neighbors.

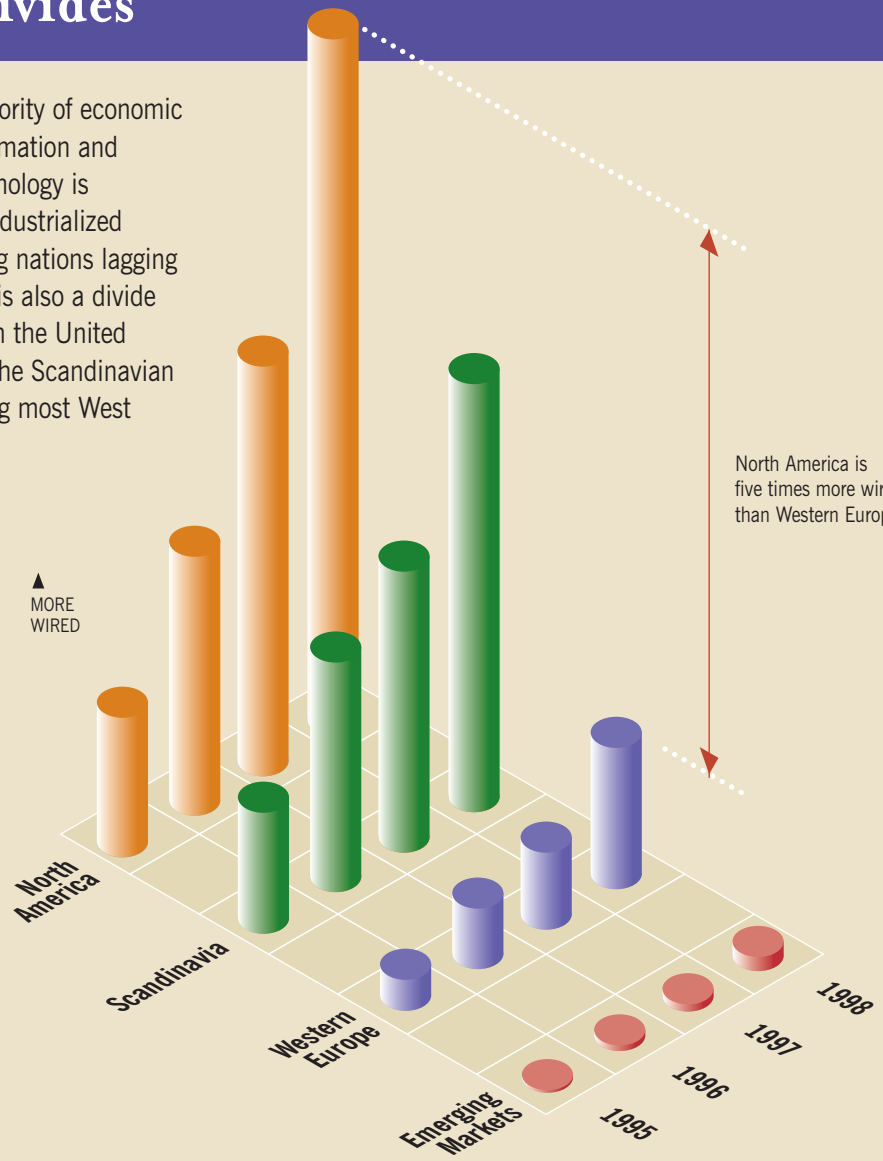
Yet despite signs of greater openness among these few leading countries, many others remain stalled at much lower levels of integration, with little indication of imminent change. Thus, there is reason to believe that the countries at the top of the rankings are only running further and further away from the pack.

THE DIGITAL ABYSS

Not all countries around the world have participated equally in the transition to the new global economy. As the chart below indicates, the digital divide between developed and emerging-market countries is now more like a digital abyss. On many

Digital Divides

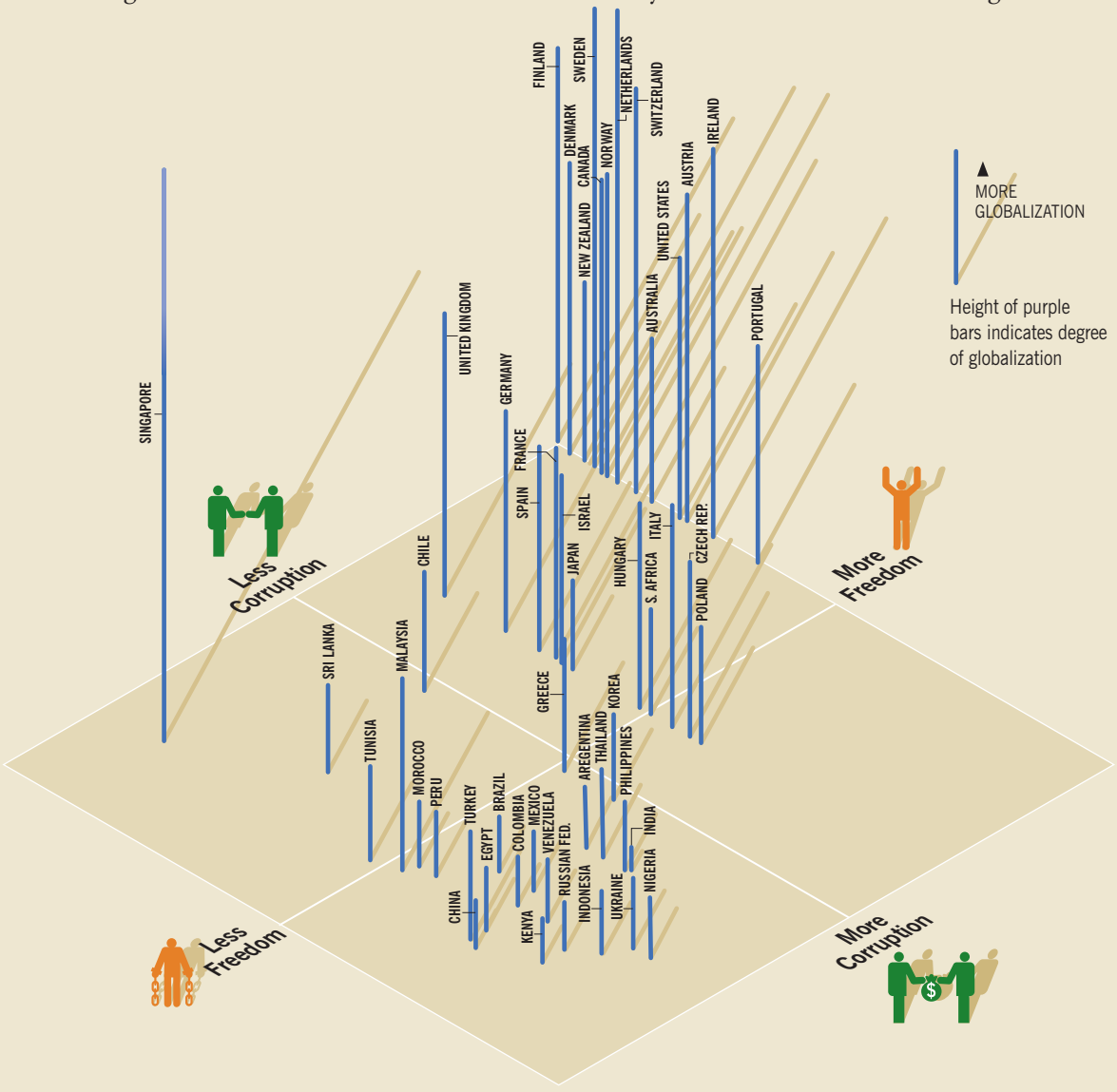
An overwhelming majority of economic activity linked to information and communications technology is concentrated in the industrialized world, with developing nations lagging far behind. But there is also a divide within the divide, with the United States, Canada, and the Scandinavian countries far outpacing most West European economies.



Globalization, Freedom, and Corruption

Freedom House, a U.S. nonpartisan organization, each year rates the levels of political rights and civil liberties in countries worldwide. A clear correlation exists between the Freedom House ratings and the rankings in the A.T. Kearney/Foreign Policy Magazine Globalization Index™. More globalized countries (such as the Netherlands and Finland) tend to have more civil liberties and political rights, while less globalized countries (such as China and Kenya) score poorly in these categories. There are some important exceptions: Singapore, for instance, is the world's most globalized economy, but it ranks poorly in the Freedom House index compared with other countries at similar levels of development.

But if Singaporean officials are somewhat authoritarian, at least they are honest. The strong correlation between the Globalization Index's country rankings and levels of perceived corruption, as measured by the international nongovernmental organization Transparency International, suggests a clear relationship between globalization and clean government. Indeed, investors perceive public officials and politicians as less corrupt in more globalized countries such as Singapore, Finland, and Sweden but more underhanded in closed countries such as Indonesia and Nigeria.



relevant measures—from the diffusion of Internet users to the number of Internet hosts—the vast majority of economic activity related to information and communications technologies is concentrated in the industrialized world.

But among industrialized countries, another digital divide exists. The Internet has penetrated deeply in the United States, with neighboring Canada not far behind. In both countries, over 25 percent of the population enjoyed Internet access by 1998 (the last year for which data are available for all countries in the survey). More recent estimates put that number above 40 percent in both countries. Perhaps more important, the United States and Canada lead the world in secure servers suitable for electronic commerce, signifying that their well-developed Internet networks can be used effectively to enhance commercial activities as well as personal communication.

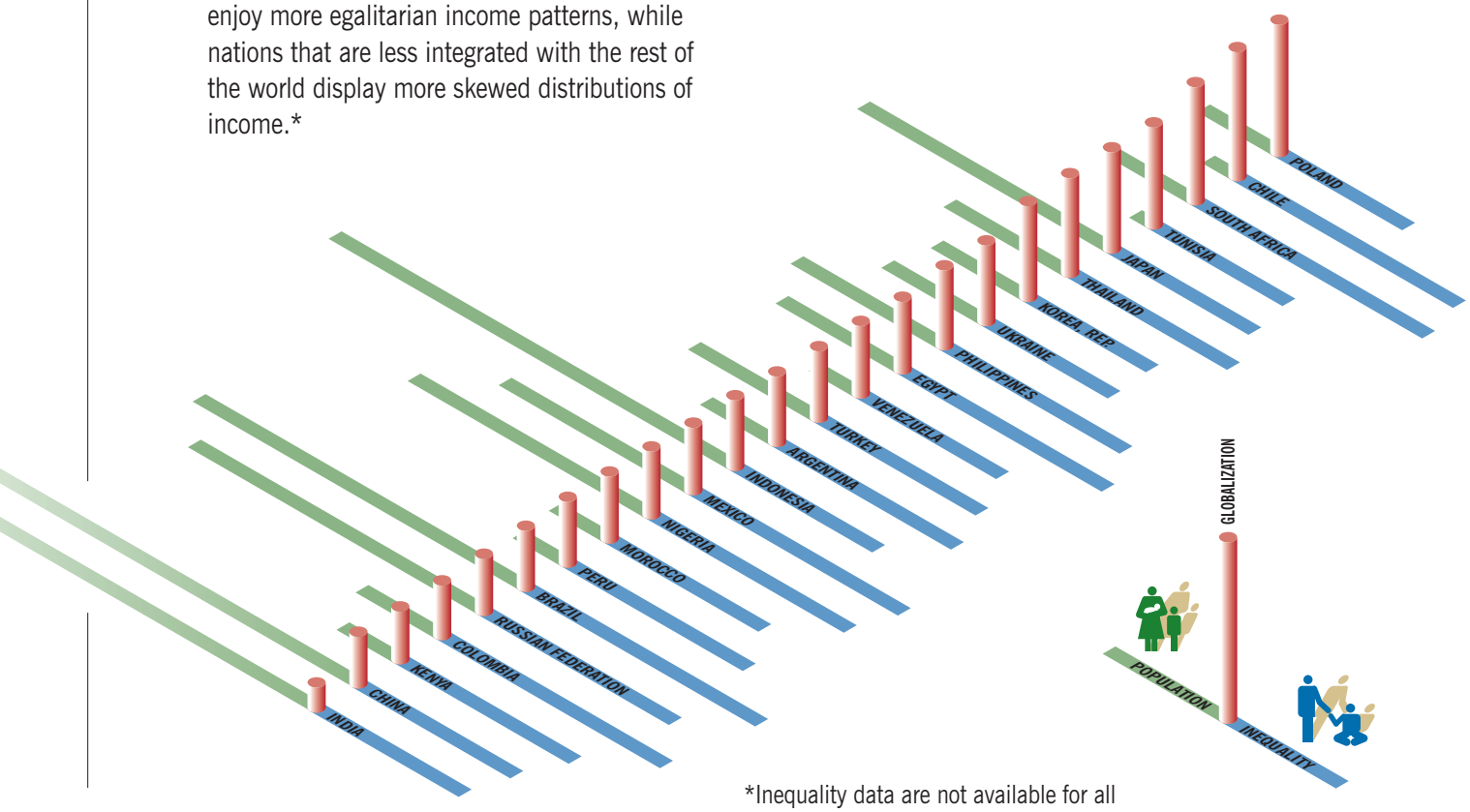
In addition to the United States and Canada, Scandinavian countries also rank among the world's most wired nations. Thirty-nine percent of Sweden's population was online in 1998, growing to 44 percent in more recent surveys. Finland and Norway led in Internet hosts, each with more than 70 servers per 1,000 inhabitants connected directly to the World Wide Web.

Indeed, if any region of the world exemplifies the changing face of global integration, that region is Scandinavia, where Sweden, Finland, and Norway have turned their traditional engineering and manufacturing prowess to work in the information technology boom while further opening their countries to trade and investment flows.

Scandinavia's technological takeoff should come as little surprise. In the last century, Sweden was among the first countries to realize the full potential of the telephone. It offered a means of mitigat-

Globalization and Inequality

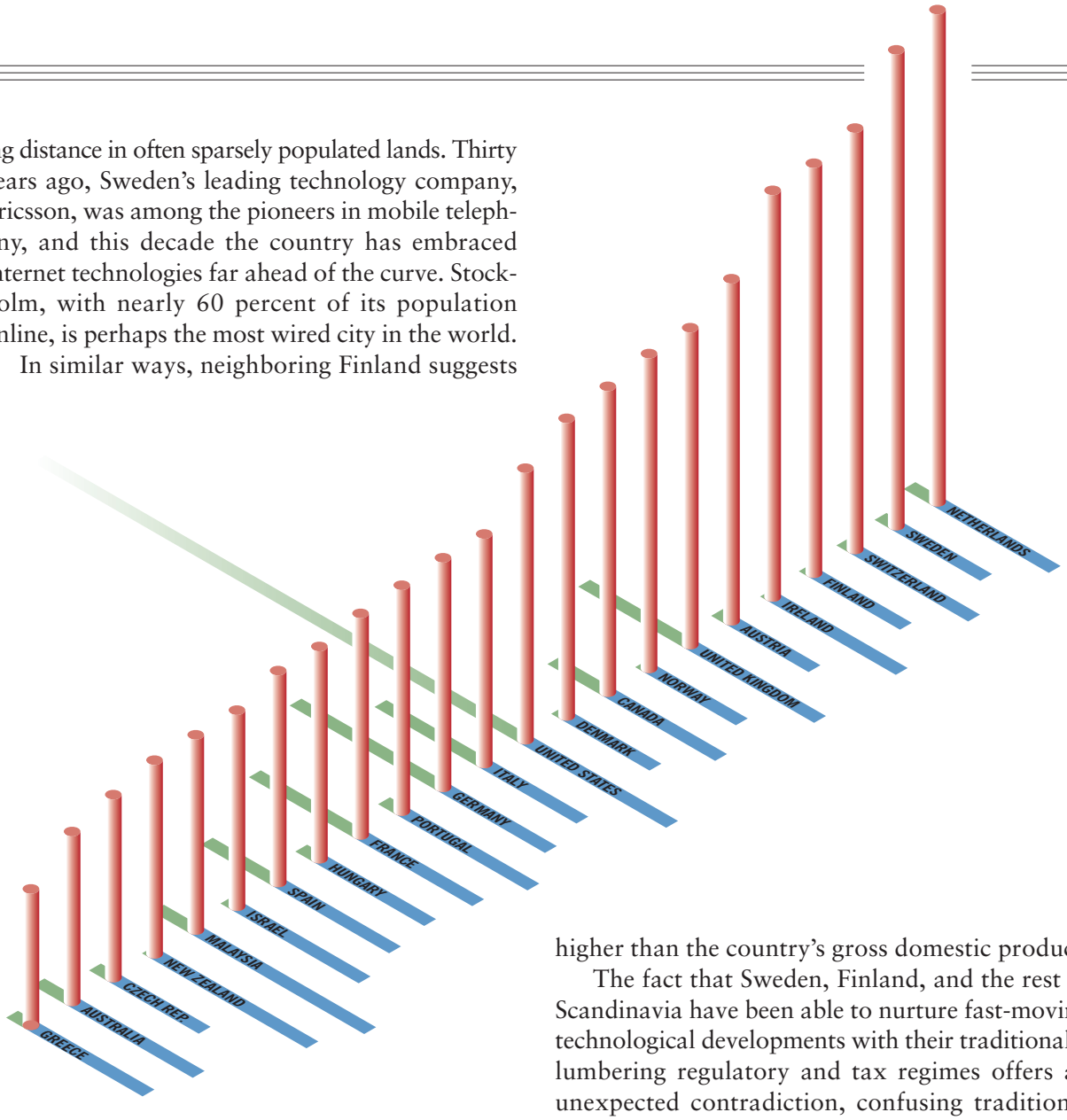
Are more globalized societies also more unequal? Not necessarily. With some exceptions, countries scoring high in the Globalization Index enjoy more egalitarian income patterns, while nations that are less integrated with the rest of the world display more skewed distributions of income.*



*Inequality data are not available for all countries in the survey.

ing distance in often sparsely populated lands. Thirty years ago, Sweden's leading technology company, Ericsson, was among the pioneers in mobile telephony, and this decade the country has embraced Internet technologies far ahead of the curve. Stockholm, with nearly 60 percent of its population online, is perhaps the most wired city in the world.

In similar ways, neighboring Finland suggests the possibilities of this Internet-led revolution. In 1995, Finland topped all others in terms of Internet access. Information technology made it possible for Finnish companies to respond to competitive pressures by diversifying both their export markets and their workforce. Recent studies show that over one quarter of Finnish exports now go to countries beyond Europe, up from less than one fifth in 1990. And nearly half the staff of Finland's 30 largest companies now operate overseas, as compared to only 15 percent in 1983. Although other countries have since pulled ahead in levels of Internet penetration, Finland has witnessed rising levels of trade and investment that have pushed it into the fifth position overall in the Globalization Index, much higher than it would have placed only a few years ago. One other symbol of success: The market capitalization of Nokia, Finland's global telecommunications giant, is now higher than the country's gross domestic product.



The fact that Sweden, Finland, and the rest of Scandinavia have been able to nurture fast-moving technological developments with their traditionally lumbering regulatory and tax regimes offers an unexpected contradiction, confusing traditional assumptions about how high levels of regulation impede globalization. But what about areas of relatively high regulation where no technological takeoff has yet been achieved? Look no further than continental Europe to see the negative effects of an unfavorable business climate on integration. Indeed, most of the countries in the euro zone, weighed down by their relatively low scores in Internet development, rank at the bottom of the top 20 globalized countries.

Concerns about the disparities between industrialized and developing countries, especially with respect to Internet access and use, have touched off a worldwide debate about the global digital divide. Rather than a division between developed and developing countries, however, the divide at this moment reflects the vast technological advances in North America and the Scandinavian countries compared with the rest of the world. Together, those two regions stand on one side of a gaping

digital chasm that appears to have left much of the remaining world behind.

If this "digital abyss" is to be bridged, developing nations have the most ground to cover. But deciding how to use their limited resources poses a difficult dilemma. Malaysia offers but one example of the perverse choices that can ensue. In an effort to attract investment and develop its high-technology capabilities, Malaysia has spent more than U.S. $3.6 billion on its Multimedia Super Corridor. At the same time, over 70 percent of the nation's primary schools lack computer facilities, and almost 10 percent lack proper connections for water and electricity. The result is an impressive infrastructure not sufficiently supported by human capital.

The general pattern of higher globalization and greater income equality holds for most countries, both in mature economies and emerging markets.

For other countries, Internet development cannot proceed unless more fundamental concerns about infrastructure are addressed. In Chile, one of the most prosperous emerging markets, 57 percent of the fixed telephone lines and 58 percent of the mobile-phone subscribers are located in the capital city, leaving most of the country without Internet access. And Africa's underdeveloped telecommunications sector has left much of that continent without reliable connections to the World Wide Web. For instance, the Democratic Republic of the Congo still has no direct link to the Internet, and a large number of African countries can count no more than a few hundred active Internet users.

MORE EQUAL THAN OTHERS

Antiglobalization critics frequently claim that globalization increases income inequality. This assertion is elegant in its simplicity, but it ignores a host of other important factors. The level of income disparity in an economy might have more to do with history, economic growth, price and wage controls, welfare programs, and education policies than it does with globalization or trade liberalization.

Moreover, the empirical evidence suggests a very different story about income disparity and globalization [see chart on pages 62-63]. Emerging-market countries that are highly globalized (such as Poland, Israel, the Czech Republic, and Hungary) exhibit a much more egalitarian distribution of income than emerging-market nations that rank near the bottom of the Globalization Index (such as Russia, China, and Argentina). There are some exceptions: Malaysia, for instance, is more globalized but less equal than Poland. But the general pattern of higher globalization and greater income equality holds for most countries, both in mature economies and emerging markets.

These findings should reinvigorate the debate over whether countries are poor and unequal because of globalization, or because they are not globalized enough. Moreover, efforts to redress global inequality should be tempered with the recognition that many countries with skewed income distribution patterns, including Brazil and Nigeria, also have large populations. That only underscores the difficulty of pulling the mass of humanity out of poverty.

A CAT SCAN OF GLOBALIZATION

Trade, foreign direct investment, international telephone calls, Internet servers—considered individually, statistics on each of these phenomena are accurate, albeit insufficient, measures of global interdependence. Yet, just as a CAT scan creates a three-dimensional image of the human anatomy from a series of two-dimensional images, the A.T. Kearney/Foreign Policy Magazine Globalization Index™ provides a comprehensive view of global integration through an analysis of its component parts.

There is, of course, an irony associated with trying to measure globalization on a nation-by-nation basis. Even the least integrated countries are being drawn together by new forces beyond their ability to control, whether it is global warming, the spread of infectious diseases, or the rise of transnational crime. And some of the most significant aspects of globalization—the spread of culture and ideas—cannot be easily quantified. These and other challenges highlight the need for a closer and more refined examination of the forces driving global integration, not to mention further refinement of the tools used to measure it. FP

Want to Know More?

FOREIGN POLICY produces the Globalization Index in collaboration with A.T. Kearney's Global Business Policy Council. The Council is a strategic service of the management consultancy A.T. Kearney, an EDS company. The A.T. Kearney/FOREIGN POLICY Magazine Globalization Index™ encompasses several key indicators: Globalization in goods and services is measured through the share of international trade (exports of goods and services plus imports of goods and services) in gross domestic product (GDP), as well as the convergence of domestic prices and world prices. Financial globalization is measured through income payments and receipts, the inflow and outflow of foreign direct investment, and the inflow and outflow of portfolio capital, all measured as a share of GDP. The globalization of personal contact is measured with international tourists and travelers as a share of population, minutes of incoming and outgoing international telephone calls per capita, and transfer payments and receipts as a share of GDP. Finally, three elements comprise the Internet connectivity indicator—the number of Internet users, the number of Internet hosts, and the number of secure servers, all measured on per capita basis.

The most recent available data were collected from a number of international sources, including the World Bank's ***World Development Indicators 2000*** (Washington: World Bank, 2000), the International Monetary Fund's ***International Financial Statistics Yearbook*** (Washington: International Monetary Fund, 2000), the International Telecommunication Union's ***Yearbook of Statistics 2000*** (Geneva: International Telecommunication Union, 2000), and the ***Secure Server Survey***, available online from Netcraft.

In "**Life is Unfair: Inequality in the World**" (FOREIGN POLICY, Summer 1998), Nancy Birdsall examines why income inequality is on the rise worldwide and offers suggestions on what nations can—and cannot—do about it. Dani Rodrik's ***Has Globalization Gone Too Far?*** (Washington: Institute for International Economics, 1997) warns that the new global economy generates a race to the bottom in labor standards. Daniel W. Drezner argues that there is no evidence to support a global race to the bottom in "**Bottom Feeders**" (FOREIGN POLICY, November/December 2000). David Dollar and Aart Kraay cite extensive data to challenge the notion that economic growth exacerbates income inequality in "**Growth *Is* Good for the Poor**" (Washington: World Bank, 2000).

"**The State of the Internet 2000**," a report published by the United States Internet Council and available online, notes the strong trend toward the development of non-English-language Web sites and offers a comprehensive overview of emerging Internet markets in Europe, Africa, Asia, and the Pacific Rim. Manuel Castells's "**Information Technology and Global Capitalism**" in Will Hutton and Anthony Giddens, eds. *On the Edge: Living with Global Capitalism* (London: Jonathan Cape, 2000) offers a philosophical perspective on how information technology has enabled forms of capitalism that are truly global. In "**Think Again: The Internet**" (FOREIGN POLICY, Summer 1999), Andrew L. Shapiro warns that, without careful regulation, digital technology may devastate low-income communities and eliminate personal privacy.

Anthony Giddens's ***Runaway World: How Globalization is Reshaping Our Lives*** (London: Profile Books, 1999) argues that the battleground of the globalized 21st century will pit fundamentalism against cosmopolitan tolerance. David Rothkopf's "**In Praise of Cultural Imperialism?**" (FOREIGN POLICY, Summer 1997) suggests that the world will be a better place thanks to the spread of U.S. culture.

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