Chapter 1: Economic Freedom of the World, 2001

Introduction

Beginning in 1986, Michael Walker of the Fraser Institute and Nobel Laureate Milton Friedman hosted a series of conferences that focused on the measurement of economic freedom. Several other leading scholars, including Nobel Prize winners Gary Becker and Douglass North, also participated in the series. Six meetings were held during the period from 1986 to 1994, and dozens of papers were presented and several approaches were analyzed.[1] Eventually, these conferences led to the development of the Economic Freedom of the World (EFW) index. The index, currently available for 123 countries, measures the consistency of a nation's policies and institutions with economic freedom.

What Is Economic Freedom?

The key ingredients of economic freedom are personal choice, voluntary exchange, freedom to compete, and protection of person and property. Institutions and policies are consistent with economic freedom when they provide an infrastructure for voluntary exchange, and protect individuals and their property from aggressors seeking to use violence, coercion, and fraud to seize things that do not belong to them. Legal and monetary arrangements are particularly important: governments promote economic freedom when they provide a legal structure and law-enforcement system that protects the property rights of owners and enforces contracts in an even-handed manner. They also enhance economic freedom when they facilitate access to sound money. In some cases, the government itself may provide a currency of stable value. In other instances, it may simply remove obstacles that retard the use of sound money that is provided by others, including private organizations and other governments.

However, economic freedom also requires governments to refrain from many activities. They must refrain from actions that interfere with personal choice, voluntary exchange, and the freedom to enter and compete in labor and product markets. Economic freedom is reduced when taxes, government expenditures, and regulations are substituted for personal choice, voluntary exchange, and market coordination. Restrictions that limit entry into occupations and business activities also retard economic freedom.

Measurement of Economic Freedom

We are confident that the *Economic Freedom of the World* (EFW) index is the best available and that it provides a reliable measure of cross-country differences in economic freedom, using third-party data to help ensure objectivity.[2] However, as Milton Friedman noted following the publication of the first annual report, *Economic Freedom of the World, 1975–1995*, it is still a work in progress. We are constantly searching for ways to improve the measure and make it more valuable to both researchers and policy makers.

Differences among countries in the quality of the legal system and regulatory policies have proven particularly difficult to measure. Nonetheless, they exert a major impact on economic freedom. The *Economic Freedom of the World: 2001 Annual Report* contained a special chapter that used survey data to measure several of these dimensions of economic freedom that are difficult to quantify. Beginning with the 2002 report, several components based on survey data have been incorporated into the main EFW index. While we would prefer to have objective variables, we believe that the information provided by the survey data has significantly improved our measure of the differences among countries in the areas of legal structure and regulation.

The survey data are from two annual publications: the *Global Competitiveness Report* and the *International Country Risk Guide*.[3] Unfortunately, not all of the countries in the EFW index are included in the most recent *Global Competitiveness Report*. Thus, a sizable number of countries will have missing components.

Exhibit 1 indicates the structure of the index used in *Economic Freedom of the World: 2003 Annual Report*. The index measures the degree of economic freedom present in five major areas:

- Size of Government: Expenditures, Taxes, and Enterprises
- Legal Structure and Security of Property Rights
- Access to Sound Money
- Freedom to Exchange with Foreigners
- Regulation of Credit, Labor, and Business

Within the five major areas, 21 components are incorporated into the index but many of those components are themselves made up of several sub-components. Counting the various sub-components, the EFW index utilizes 38 distinct pieces of data. Each component and sub-component is placed on a scale from 0 to 10 that reflects the distribution of the underlying data. The component ratings within each area are averaged to derive ratings for each of the five areas. In turn, the summary rating is the average of the five area ratings.[4] Methodological details are found in the Appendix: Explanatory Notes and Data Sources (p. 24) at the end of this chapter.

Following is a brief explanation of the components incorporated into each of the five areas and their relationship to economic freedom. See Exhibit 1 on pages 8 and 9 for a list of all areas and components.

Area 1: Size of Government: Expenditures, Taxes and Enterprises

The four components of Area 1 indicate the extent to which countries rely on individual choice and markets rather than the political process to allocate resources, and goods and services. When government spending increases relative to spending by individuals, households, and businesses, government decision-making is substituted for personal choice and economic freedom is reduced. The first two components address this issue. Government consumption as a share of total consumption (1A) and transfers and subsidies as a share of GDP (1B) are indicators of the size of government. When government consumption is a larger share of the total, political choice is substituted for private choice. Similarly, when governments tax some people in order to provide transfers to others, they reduce the freedom of individuals to keep what they earn. Thus, the greater the share of transfers and subsidies in an economy, the less economic freedom.[5]

The third component (1C) in this area measures the extent to which countries use private rather than government enterprises to produce goods and services. Government firms play by rules that are different from those that private enterprises are subject to. They are not dependent on consumers for their revenue or on investors for risk capital. They often operate in protected markets. Thus, economic freedom is reduced as government enterprises produce a larger share of total output.

The fourth component (1D) is based on (Di) the top marginal income-tax rate and (Dii) the top marginal income and payroll tax rate, and the income threshold at which both apply. These two sub-components are averaged to calculate 1D. High marginal tax rates that apply at relatively low income levels are also indicative of reliance upon government. Such rates deny individuals the fruits of their labor. Thus, countries with high marginal tax rates are rated lower.

Taken together, the four components measure the degree of a country's reliance on personal choice and markets rather than government budgets and political decision-making. Therefore, countries with low levels of government spending as a share of the total, a smaller government enterprise sector, and lower marginal tax rates earn the highest ratings in this area.

Area 2: Legal Structure and Security of Property Rights

Protection of persons and their rightfully acquired property is a central element of both economic freedom and a civil society. Indeed, it is the most important function of government. Area 2 focuses on this issue. The key ingredients of a legal system consistent with economic freedom are rule of law, security of property rights, an independent judiciary, and an impartial court system.

Components indicating how well the protective function of government is performed were assembled from two sources: the *International Country Risk Guide* and the *Global Competitiveness Report*. The ratings from both are based on a survey approach.[6] The testing shows that the correlation between the two sets of data is high. This high correlation increases our confidence in the reliability of the country ratings in this area even when they are based solely on data from the *International Country Risk Guide*.

Security of property rights, protected by the rule of law, is essential to economic freedom. Freedom to exchange, for example, is meaningless if individuals do not have secure rights to property, including the fruits of their labor. Failure of a country's legal system to provide for the security of property rights, enforcement of contracts, and the mutually agreeable settlement of disputes will undermine the operation of a market-exchange system. If individuals and businesses lack confidence that contracts will be enforced and the fruits of their productive efforts protected, their incentive to engage in productive activity will be eroded. Furthermore, poor performance in this area is sure to deter investment. Therefore, it is highly unlikely that countries with low ratings in this area will be able to achieve and sustain high rates of growth.

Area 3: Access to Sound Money

Money oils the wheels of exchange. An absence of sound money undermines gains from trade. As Milton Friedman informed us long ago, inflation is a monetary phenomenon, caused by too much money chasing too few goods. High rates of monetary growth invariably lead to inflation. Similarly, when the rate of inflation increases, it also tends to become more volatile. High and volatile rates of inflation distort relative prices, alter the fundamental terms of long-term contracts, and make it virtually impossible for individuals and businesses to plan sensibly for the future. Sound money is essential to protect property rights and, thus, economic freedom. Inflation erodes the value of property held in monetary instruments. Governments have used inflation and printing presses, in effect, to expropriate citizens' property by devaluing it while using newly printed currency for government expenditures.

It makes little difference who provides the sound money. The important thing is that individuals have access to it. Thus, in addition to data on a country's inflation and its government's monetary policy, it is important to consider how difficult it is to use alternative, more credible, currencies. If bankers can offer saving and checking accounts in other currencies or if citizens can open foreign bank accounts, then access to sound money is increased and economic freedom expanded.

There are four components to the EFW index in Area 3. All of them are objective and relatively easy to obtain and all have been included in the earlier editions of the index. The first three are designed to measure the consistency of monetary policy (or institutions) with long-term price stability. Component 3D is designed to measure the ease with which other currencies can be used via domestic and foreign bank accounts. In order to earn a high rating in this area, a country must follow policies and adopt institutions that lead to low (and stable) rates of inflation and avoid regulations that limit the use of alternative currencies should citizens want to use them.

Area 4: Freedom to Exchange with Foreigners

In our modern world of high technology and low costs for communication and transportation, freedom of exchange across national boundaries is a key ingredient of economic freedom. The vast majority of our current goods and services are now either produced abroad or contain resources supplied from abroad. Of course, exchange is a positive-sum activity. Both trading partners gain and the pursuit of the gain provides the motivation for the exchange. Thus, freedom to exchange with foreigners also contributes substantially to our modern living standards.

Responding to protectionist critics and special-interest politics, virtually all countries adopt trade restrictions of various types. Tariffs and quotas are obvious examples of roadblocks that limit international trade. Because they reduce the convertibility of currencies, controls on the exchange rate also retard international trade. The volume of trade is also reduced by administrative factors that delay the passage of goods through customs. Sometimes these delays are the result of inefficiency while in other instances they reflect the actions of corrupt officials seeking to extract bribes.

The components in this area are designed to measure a wide variety of restraints that affect international exchange: these include tariffs, quotas, hidden administrative restraints, exchange rate and capital controls. The regulatory items of Component 4B (regulatory trade barriers) and Component 4Ei (capital market controls) are based on survey data from the *Global Competitiveness Report*. The other components in this area can be quantified objectively. In order to get a high rating in this area, a country must have low tariffs, a trade sector larger than expected, efficient administration of customs, a freely convertible currency, and few controls on capital.

Exhibit 1: The Areas and Components of the EFW Index

1 Size of Government: Expenditures, Taxes, and Enterprises

- A General government consumption spending as a percentage of total consumption
- B Transfers and subsidies as a percentage of GDP
- C Government enterprises and investment as a percentage of GDP
- D Top marginal tax rate (and income threshold to which it applies)
  - i Top marginal tax rate (excluding applicable payroll taxes)
  - ii Top marginal tax rate (including applicable payroll taxes)

2 Legal Structure and Security of Property Rights

- A Judicial independence—the judiciary is independent and not subject to interference by the government or parties in disputes
- B Impartial court—a trusted legal framework exists for private businesses to challenge the legality of government actions or regulation
- C Protection of intellectual property
- D Military interference in rule of law and the political process
- E Integrity of the legal system

3 Access to Sound Money

- A Average annual growth of the money supply in the last five years minus average annual growth of real GDP in the last ten years
- B Standard inflation variability in the last five years
- C Recent inflation rate
- D Freedom to own foreign currency bank accounts domestically and abroad

4 Freedom to Exchange with Foreigners

- A Taxes on international trade
  - i Revenue from taxes on international trade as a percentage of exports plus imports
  - ii Mean tariff rate
  - iii Standard deviation of tariff rates
- B Regulatory trade barriers
  - i Hidden import barriers—no barriers other than published tariffs and quotas
  - ii Costs of importing—the combined effect of import tariffs, licence fees, bank fees, and the time required for administrative red-tape raises the costs of importing equipment

Exhibit 1 continued: The Areas and Components of the EFW Index

- C Actual size of trade sector compared to expected size
- D Difference between official exchange rate and black market rate
- E International capital market controls
  - i Access of citizens to foreign capital markets and foreign access to domestic capital markets
  - ii Restrictions on the freedom of citizens to engage in capital market exchange with foreigners —index of capital controls among 13 IMF categories

5 Regulation of Credit, Labor, and Business

- A Credit Market Regulations
  - i Ownership of banks—percentage of deposits held in privately owned banks
  - ii Competition—domestic banks face competition from foreign banks
  - iii Extension of credit—percentage of credit extended to private sector
  - iv Avoidance of interest rate controls and regulations that lead to negative real interest rates
  - v Interest rate controls—interest rate controls on bank deposits and/or loans are freely determined by the market
- B Labor Market Regulations
  - i Impact of minimum wage—the minimum wage, set by law, has little impact on wages because it is too low or not obeyed
  - ii Hiring and firing practices—hiring and firing practices of companies are determined by private contract
  - iii Share of labor force whose wages are set by centralized collective bargaining
  - iv Unemployment Benefits—the unemployment benefits system preserves the incentive to work
  - v Use of conscripts to obtain military personnel
- C Business Regulations
  - i Price controls—extent to which businesses are free to set their own prices
  - ii Administrative conditions and new businesses—administrative procedures are an important obstacle to starting a new business
  - iii Time with government bureaucracy—senior management spends a substantial amount of time dealing with government bureaucracy
  - iv Starting a new business—starting a new business is generally easy
  - v Irregular payments—irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection, or loan applications are very rare

Area 5: Regulation of Credit, Labor, and Business

When regulations restrict entry into markets and interfere with the freedom to engage in voluntary exchange, they reduce economic freedom. The final area of the index focuses on this topic. Because of the difficulties involved in developing objective measures of regulatory restraints, a substantial number (10 of 15) of the sub-components in this area are based on survey data.

Regulatory restraints that limit the freedom of exchange in credit, labor, and product markets are included in the index. The first component (5A) reflects conditions in the domestic credit market. The first two sub-components provide evidence on the extent to which the banking industry is dominated by private firms and whether foreign banks are permitted to compete in the market. The final three sub-components indicate the extent to which credit is supplied to the private sector and whether controls on interest rates interfere with the market in credit. Countries that used a private banking system to allocate credit to private parties and refrained from controlling interest rates received higher ratings for this component of the regulatory area.

Many types of labor-market regulations infringe on the economic freedom of employees and employers. Among the more prominent are minimum wages, dismissal regulations, centralized wage setting, extensions of union contracts to nonparticipating parties, unemployment benefits that undermine the incentive to accept employment, and conscription.[7] The labor market component (5B) is designed to measure the extent to which these restraints upon economic freedom are present across countries. In order to earn high marks in the component rating regulation of the labor market, a country must allow market forces to determine wages and establish the conditions of dismissal, avoid excessive unemployment benefits that undermine work incentives, and refrain from the use of conscription.

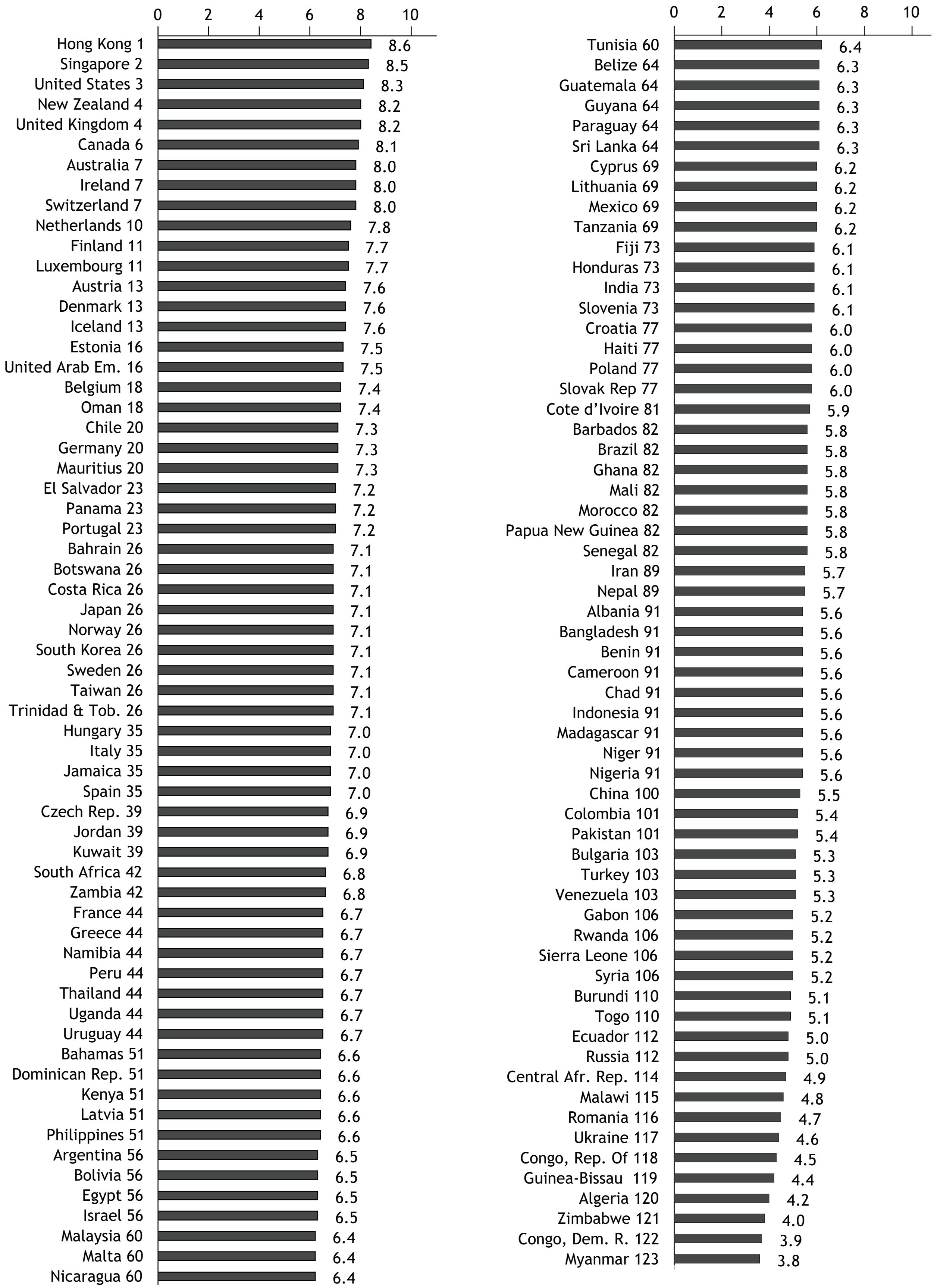
Like the regulation of the credit markets and labor markets, the regulation of business activities (Component 5C) inhibits economic freedom. The components that rank the regulation of business are designed to identify the extent to which regulatory restraints and bureaucratic procedures limit competition and the operation of markets. In order to score high in this portion of the index, countries must allow markets to determine prices and refrain from regulatory activities that retard entry into business and increase the cost of producing products. They also must refrain from playing favorites—from using their power to extract financial payments and reward some businesses at the expense of others.

Summary Economic Freedom Ratings, 2001

Exhibit 2 presents summary economic freedom ratings, sorted from highest to lowest. These ratings are for the year 2001. The EFW index is calculated back to 1970 as data availability allows; see the Country Data Tables (pages 39–161) for information from past years. Hong Kong, Singapore, and the United States remain in the top three positions, as they were in the 2002 report. The other nations in the top 10 are New Zealand, United Kingdom, Canada, Australia, Ireland, Switzerland, and the Netherlands. At the bottom of the list are the Central African Republic, Malawi, Romania, Ukraine, the Republic of Congo, Guinea-Bissau, Algeria, Zimbabwe, Democratic Republic of the Congo, and, in last place, Myanmar.

As previously discussed, the new survey data (18 sub-components) are not available for all of the countries covered by the EFW Index. Thus, the ratings of the other countries are based on only 20 of the 38 sub-components of this index. Two of the areas, Size of Government: Expenditures, Taxes, and Enterprises (Area 1) and Access to Sound Money (Area 3), are unaffected by the omitted variables. The omissions, however, could be important in Legal Structure and Security of Property Rights (Area 2) and Regulation of Credit, Labor, and Business (Area 5) and, to a lesser extent, in Freedom to Exchange with Foreigners (Area 4). In Legal Structure and Security of Property Rights, only two of the five components are available for the countries not covered by the *Global Competitiveness Report*. Only five of the 15 sub-components in Regulation of Credit, Labor, and Business are available for these countries. While we have made statistical adjustments that enhance the overall comparability among the 123 countries, comparisons between the nations that have the survey data and the nations that do not should be made with a degree of caution.[8]

Exhibit 2: Summary Economic Freedom Ratings, 2001



Area Economic Freedom Ratings (and Rankings), 2001

Exhibit 3 presents the ratings (and rankings in parentheses) for each of the five areas of the index plus the ratings for 5A, 5B, and 5C.

A number of interesting patterns emerge from an analysis of these data. The high-income industrial economies generally rank quite high for Legal Structure and Security of Property Rights (Area 2), Access to Sound Money (Area 3), and Freedom to Exchange with Foreigners (Area 4). Their ratings were lower, however, for Size of Government: Expenditures, Taxes, and Enterprises (Area 1) and Regulation of Credit, Labor, and Business (Area 5). This was particularly true for Western European countries.

However, a number of developing nations show the opposite pattern. Bolivia makes an interesting case study. It shows that reasonably sized government is not enough to reap the benefits of economic freedom. The institutions of economic freedom, such as the rule of law and property rights, as well as sound money, trade openness, and sensible regulation are required. Bolivia was ranked 17th in Size of Government: Expenditures, Taxes, and Enterprises (Area 1) and a respectable 29th for Sound Money. However, Bolivia scored poorly in all the other categories, especially Legal Structure and Security of Property Rights, where it placed 111th. In Freedom to Exchange with Foreigners, Bolivia ranked 60th, while in Regulation of Credit, Labor, and Business, Bolivia ranked 77th.

Weakness in the rule of law and property rights is particularly pronounced in sub-Sahara Africa, among Islamic nations, and for several nations that were part of the former Soviet block, though many of these nations have successfully reformed. For example, Slovenia ranks 28th in the rule of law and property rights. However, many Latin American and Southeast Asian nations also score poorly for rule of law and property rights. The nations that rank poorly in this category also tend to score poorly in the trade and regulation categories, though several of these nations have reasonably sized governments and sound money.

The economies most open to foreign trade were Hong Kong, Singapore, and Ireland. Two former Soviet block nations also rank in the top 10 in openness to trade, Estonia in 5th place and Hungary in 10th. The least regulated countries—those at the top in Regulation of Credit, Labor, and Business (Area 5)—were Hong Kong, the United States, the United Kingdom, New Zealand, Iceland, and Canada.

Exhibit 3: Area Economic Freedom Ratings (and Rankings), 2001

	Areas										Components of Area 5					
	1 Size of Government: Expenditures, Taxes, and Enterprises		2 Legal Structure and Security of Property Rights		3 Access to Sound Money		4 Freedom to Exchange with Foreigners		5 Regulation of Credit, Labor, and Business		5A Credit Market Regulations		5B Labor Market Regulations		5C Business Regulations	
Albania	5.5	*(75)*	4.6	*(80)*	7.1	*(77)*	5.3	*(113)*	5.7	*(67)*	5.2	*(110)*				
Algeria	4.3	*(104)*	2.9	*(113)*	4.6	*(113)*	5.8	*(100)*	3.7	*(122)*	2.3	*(122)*				
Argentina	7.9	*(7)*	3.6	*(100)*	9.6	*(19)*	6.1	*(92)*	5.4	*(80)*	7.4	*(49)*	5.6	*(26)*	3.3	*(78)*
Australia	6.1	*(54)*	9.3	*(2)*	9.4	*(31)*	7.7	*(36)*	7.2	*(8)*	8.9	*(14)*	5.9	*(22)*	6.9	*(7)*
Austria	4.8	*(88)*	8.9	*(7)*	9.6	*(11)*	8.5	*(9)*	6.0	*(44)*	7.9	*(36)*	4.2	*(65)*	5.9	*(21)*
Bahamas	7.5	*(16)*	6.8	*(33)*	6.8	*(90)*	5.1	*(114)*	6.8	*(16)*	9.5	*(1)*				
Bahrain	6.8	*(33)*	5.9	*(55)*	9.1	*(41)*	7.6	*(40)*	6.4	*(25)*	8.4	*(22)*				
Bangladesh	7.2	*(25)*	3.0	*(110)*	7.0	*(85)*	5.5	*(110)*	5.3	*(84)*	5.9	*(97)*	6.6	*(10)*	3.5	*(75)*
Barbados	3.9	*(113)*	6.6	*(37)*	6.7	*(94)*	5.0	*(115)*	6.6	*(21)*	8.3	*(25)*				
Belgium	4.6	*(97)*	7.8	*(19)*	9.7	*(5)*	8.9	*(4)*	5.9	*(51)*	8.4	*(21)*	4.9	*(45)*	4.5	*(57)*
Belize	6.0	*(61)*	6.2	*(45)*	6.9	*(88)*	5.6	*(108)*	6.9	*(12)*	9.3	*(6)*				
Benin	6.5	*(49)*	4.3	*(86)*	6.5	*(100)*	5.5	*(112)*	5.1	*(97)*	7.6	*(41)*				
Bolivia	7.4	*(17)*	3.0	*(111)*	9.4	*(29)*	7.1	*(60)*	5.5	*(77)*	8.0	*(35)*	4.3	*(59)*	4.1	*(66)*
Botswana	5.3	*(80)*	7.0	*(26)*	8.7	*(53)*	7.9	*(33)*	6.7	*(18)*	8.0	*(33)*	6.8	*(7)*	5.3	*(31)*
Brazil	6.3	*(50)*	4.9	*(72)*	6.1	*(105)*	6.4	*(82)*	5.3	*(88)*	5.9	*(100)*	4.7	*(53)*	5.4	*(30)*
Bulgaria	4.6	*(95)*	4.8	*(73)*	4.5	*(114)*	7.2	*(56)*	5.4	*(78)*	6.9	*(65)*	4.9	*(44)*	4.5	*(55)*
Burundi	6.1	*(58)*	3.3	*(105)*	6.1	*(106)*	4.3	*(118)*	5.5	*(75)*	5.4	*(109)*				
Cameroon	5.4	*(78)*	4.4	*(81)*	6.5	*(98)*	5.8	*(97)*	6.0	*(45)*	7.0	*(62)*				
Canada	6.5	*(48)*	9.0	*(6)*	9.5	*(27)*	8.1	*(24)*	7.3	*(6)*	8.4	*(20)*	6.5	*(13)*	6.9	*(8)*
Central Afr. Rep.	4.1	*(109)*	4.3	*(88)*	7.0	*(82)*	4.8	*(116)*	4.5	*(116)*	6.8	*(71)*				
Chad	6.7	*(39)*	4.2	*(91)*	6.6	*(95)*	5.8	*(98)*	4.6	*(115)*	5.7	*(104)*				
Chile	6.1	*(59)*	6.2	*(47)*	9.6	*(15)*	8.3	*(14)*	6.4	*(26)*	8.3	*(24)*	4.2	*(66)*	6.6	*(11)*
China	3.8	*(115)*	5.1	*(68)*	6.9	*(87)*	7.0	*(67)*	4.7	*(111)*	4.7	*(116)*	4.6	*(55)*	4.8	*(46)*
Colombia	4.6	*(92)*	3.4	*(103)*	7.5	*(71)*	6.4	*(83)*	5.2	*(94)*	7.0	*(60)*	3.7	*(74)*	4.7	*(48)*
Congo, Dem. Rep.	5.1	*(84)*	2.4	*(119)*	4.3	*(115)*	3.2	*(121)*	4.6	*(114)*	2.5	*(121)*				
Congo, Rep. of	3.9	*(112)*	2.4	*(120)*	4.2	*(116)*	7.1	*(63)*	4.7	*(109)*	4.1	*(119)*				
Costa Rica	7.3	*(21)*	6.5	*(42)*	7.9	*(66)*	7.9	*(32)*	5.9	*(52)*	6.7	*(75)*	6.1	*(20)*	5.0	*(41)*
Côte d’Ivoire	7.5	*(15)*	3.7	*(99)*	7.0	*(80)*	6.1	*(91)*	5.4	*(81)*	7.3	*(51)*				
Croatia	4.1	*(108)*	5.2	*(67)*	7.8	*(67)*	6.7	*(76)*	6.1	*(37)*	9.1	*(9)*	4.9	*(43)*	4.3	*(62)*
Cyprus	6.1	*(53)*	6.9	*(32)*	6.9	*(86)*	5.8	*(101)*	5.5	*(74)*	8.8	*(16)*				
Czech Rep.	4.5	*(99)*	6.6	*(39)*	9.4	*(32)*	8.1	*(23)*	5.8	*(60)*	6.8	*(67)*	5.4	*(32)*	5.1	*(38)*
Denmark	3.9	*(114)*	9.2	*(4)*	9.7	*(7)*	8.2	*(17)*	6.9	*(11)*	9.4	*(4)*	4.7	*(49)*	6.6	*(10)*
Dominican Rep.	8.5	*(4)*	3.8	*(96)*	8.1	*(59)*	6.5	*(81)*	6.1	*(40)*	7.5	*(45)*	6.2	*(19)*	4.7	*(49)*
Ecuador	9.0	*(2)*	2.5	*(118)*	2.6	*(122)*	7.0	*(69)*	4.0	*(120)*	4.3	*(118)*	3.7	*(75)*	3.9	*(69)*
Egypt	7.1	*(27)*	4.6	*(77)*	9.5	*(21)*	6.1	*(88)*	5.0	*(100)*	5.9	*(92)*	4.0	*(67)*	5.2	*(36)*
El Salvador	8.7	*(3)*	4.4	*(84)*	9.5	*(22)*	7.4	*(46)*	6.2	*(34)*	7.3	*(52)*	5.2	*(36)*	6.0	*(19)*
Estonia	6.5	*(46)*	6.5	*(40)*	8.8	*(48)*	8.8	*(5)*	6.8	*(13)*	9.0	*(11)*	5.1	*(38)*	6.4	*(15)*
Fiji	6.1	*(56)*	5.5	*(63)*	7.0	*(81)*	6.1	*(89)*	5.8	*(56)*	6.4	*(84)*				
Finland	4.5	*(101)*	9.3	*(1)*	9.6	*(13)*	8.2	*(20)*	6.7	*(17)*	8.7	*(17)*	3.6	*(77)*	7.9	*(1)*
France	2.8	*(121)*	7.1	*(25)*	9.6	*(17)*	7.9	*(29)*	6.2	*(35)*	8.2	*(27)*	5.0	*(41)*	5.3	*(32)*

Exhibit 3 (continued): Area Economic Freedom Ratings (and Rankings), 2001

	Areas										Components of Area 5					
	1 Size of Government: Expenditures, Taxes, and Enterprises		2 Legal Structure and Security of Property Rights		3 Access to Sound Money		4 Freedom to Exchange with Foreigners		5 Regulation of Credit, Labor, and Business		5A Credit Market Regulations		5B Labor Market Regulations		5C Business Regulations	
Gabon	4.5	*(98)*	4.3	*(87)*	5.8	*(109)*	5.6	*(106)*	5.6	*(73)*	6.3	*(88)*				
Germany	4.2	*(107)*	8.7	*(10)*	9.6	*(12)*	8.7	*(7)*	5.4	*(82)*	7.7	*(40)*	2.8	*(80)*	5.6	*(24)*
Ghana	5.7	*(69)*	4.2	*(89)*	5.8	*(108)*	7.5	*(44)*	5.8	*(55)*	5.8	*(102)*				
Greece	5.9	*(64)*	5.6	*(61)*	9.3	*(35)*	7.6	*(39)*	5.3	*(89)*	7.2	*(53)*	3.8	*(70)*	4.8	*(45)*
Guatemala	8.5	*(5)*	2.6	*(115)*	8.9	*(46)*	6.6	*(77)*	5.1	*(98)*	7.2	*(55)*	4.0	*(69)*	4.1	*(67)*
Guinea-Bissau	4.0	*(111)*	3.0	*(109)*	3.3	*(119)*	6.1	*(90)*	5.6	*(71)*	7.3	*(50)*				
Guyana	4.1	*(110)*	5.2	*(65)*	7.9	*(64)*	8.1	*(22)*	6.2	*(31)*	7.1	*(58)*				
Haiti	7.3	*(20)*	2.0	*(122)*	8.3	*(58)*	5.5	*(111)*	7.0	*(10)*	9.5	*(3)*	8.2	*(1)*	3.4	*(76)*
Honduras	7.4	*(18)*	2.6	*(117)*	8.3	*(57)*	7.1	*(62)*	5.2	*(92)*	6.6	*(77)*	5.2	*(37)*	3.8	*(70)*
Hong Kong	9.1	*(1)*	7.0	*(27)*	9.2	*(38)*	9.8	*(1)*	8.0	*(1)*	8.8	*(15)*	7.8	*(2)*	7.4	*(5)*
Hungary	4.7	*(89)*	6.7	*(34)*	8.5	*(56)*	8.5	*(10)*	6.6	*(23)*	8.1	*(28)*	5.8	*(24)*	5.8	*(23)*
Iceland	6.0	*(62)*	8.9	*(9)*	9.0	*(43)*	6.8	*(71)*	7.5	*(5)*	7.9	*(38)*	6.9	*(6)*	7.8	*(2)*
India	7.3	*(19)*	5.7	*(58)*	6.9	*(89)*	5.7	*(103)*	5.0	*(102)*	5.9	*(95)*	5.3	*(33)*	3.7	*(71)*
Indonesia	6.8	*(34)*	2.9	*(112)*	6.2	*(103)*	7.7	*(35)*	4.2	*(118)*	5.1	*(112)*	4.8	*(48)*	2.7	*(80)*
Iran	6.5	*(45)*	5.9	*(51)*	8.1	*(61)*	4.2	*(120)*	3.9	*(121)*	4.8	*(114)*				
Ireland	6.1	*(55)*	8.4	*(16)*	9.5	*(26)*	9.1	*(3)*	6.7	*(19)*	8.2	*(26)*	5.5	*(30)*	6.3	*(16)*
Israel	2.6	*(122)*	7.4	*(21)*	9.4	*(33)*	7.7	*(37)*	5.3	*(85)*	6.1	*(89)*	4.3	*(60)*	5.5	*(26)*
Italy	4.6	*(96)*	7.4	*(22)*	9.6	*(18)*	8.2	*(18)*	5.1	*(96)*	6.8	*(68)*	3.6	*(76)*	5.0	*(39)*
Jamaica	7.6	*(13)*	5.6	*(62)*	9.0	*(42)*	7.2	*(54)*	5.6	*(68)*	6.4	*(83)*	6.2	*(17)*	4.3	*(63)*
Japan	5.6	*(70)*	7.2	*(24)*	9.6	*(10)*	6.8	*(72)*	6.1	*(39)*	6.5	*(79)*	6.4	*(15)*	5.4	*(29)*
Jordan	5.6	*(71)*	6.1	*(50)*	9.6	*(9)*	7.1	*(59)*	5.8	*(54)*	6.8	*(70)*	6.4	*(14)*	4.3	*(60)*
Kenya	6.6	*(43)*	4.0	*(94)*	9.0	*(44)*	7.1	*(64)*	6.2	*(32)*	7.1	*(59)*				
Kuwait	6.1	*(60)*	6.9	*(29)*	8.1	*(60)*	7.2	*(57)*	6.2	*(33)*	7.0	*(63)*				
Latvia	5.2	*(82)*	5.7	*(59)*	8.8	*(47)*	7.6	*(41)*	5.7	*(61)*	7.9	*(39)*	4.7	*(51)*	4.7	*(50)*
Lithuania	5.2	*(81)*	5.1	*(69)*	7.5	*(70)*	7.8	*(34)*	5.5	*(76)*	6.8	*(69)*	4.5	*(57)*	5.3	*(33)*
Luxembourg	4.6	*(94)*	8.6	*(12)*	9.7	*(4)*	8.6	*(8)*	6.8	*(14)*	9.0	*(12)*				
Madagascar	7.0	*(30)*	4.6	*(79)*	6.3	*(102)*	5.6	*(109)*	4.8	*(108)*	5.9	*(94)*				
Malawi	4.2	*(106)*	5.3	*(64)*	2.9	*(120)*	5.9	*(95)*	5.7	*(62)*	5.5	*(108)*				
Malaysia	5.6	*(72)*	6.1	*(48)*	6.8	*(91)*	7.4	*(48)*	6.1	*(43)*	6.0	*(90)*	6.6	*(11)*	5.6	*(25)*
Mali	5.7	*(68)*	5.0	*(71)*	7.1	*(76)*	6.5	*(80)*	4.8	*(106)*	5.8	*(103)*				
Malta	5.8	*(65)*	7.2	*(23)*	7.3	*(75)*	6.0	*(93)*	5.7	*(64)*	5.9	*(93)*				
Mauritius	7.6	*(14)*	6.7	*(35)*	9.5	*(28)*	7.1	*(61)*	5.7	*(63)*	7.4	*(46)*	5.0	*(42)*	4.7	*(47)*
Mexico	7.6	*(10)*	3.6	*(101)*	7.1	*(78)*	7.3	*(50)*	5.2	*(93)*	6.6	*(76)*	4.7	*(50)*	4.2	*(64)*
Morocco	5.5	*(77)*	5.9	*(54)*	7.0	*(84)*	5.6	*(107)*	5.3	*(87)*	7.2	*(54)*	4.3	*(61)*	4.4	*(58)*
Myanmar	3.5	*(117)*	3.2	*(106)*	6.1	*(107)*	1.7	*(122)*	4.5	*(117)*	3.4	*(120)*				
Namibia	4.5	*(102)*	7.9	*(18)*	7.4	*(73)*	6.5	*(79)*	7.2	*(7)*	9.5	*(2)*	6.7	*(9)*	5.5	*(27)*
Nepal	5.2	*(83)*	4.8	*(74)*	6.8	*(92)*	5.8	*(102)*	5.9	*(53)*	6.7	*(73)*				
Netherlands	4.6	*(93)*	9.1	*(5)*	9.5	*(20)*	8.8	*(6)*	6.8	*(15)*	9.1	*(10)*	5.2	*(35)*	6.0	*(20)*
New Zealand	6.7	*(37)*	8.9	*(8)*	9.5	*(24)*	8.4	*(11)*	7.6	*(4)*	9.3	*(5)*	6.1	*(21)*	7.4	*(4)*
Nicaragua	5.8	*(66)*	3.2	*(107)*	8.7	*(55)*	8.0	*(27)*	6.2	*(30)*	7.4	*(48)*	6.4	*(16)*	4.9	*(43)*
Niger	6.0	*(63)*	4.4	*(83)*	7.0	*(83)*	5.9	*(96)*	4.6	*(112)*	5.9	*(99)*				

Exhibit 3 (continued): Area Economic Freedom Ratings (and Rankings), 2001

	Areas										Components of Area 5					
	1 Size of Government: Expenditures, Taxes, and Enterprises		2 Legal Structure and Security of Property Rights		3 Access to Sound Money		4 Freedom to Exchange with Foreigners		5 Regulation of Credit, Labor, and Business		5A Credit Market Regulations		5B Labor Market Regulations		5C Business Regulations	
Nigeria	6.2	*(51)*	3.1	*(108)*	5.7	*(110)*	7.0	*(68)*	5.9	*(47)*	7.1	*(57)*	7.1	*(4)*	3.5	*(74)*
Norway	4.7	*(90)*	8.3	*(17)*	9.0	*(45)*	7.5	*(45)*	5.9	*(49)*	7.6	*(43)*	4.0	*(68)*	6.2	*(17)*
Oman	5.8	*(67)*	6.9	*(31)*	9.7	*(6)*	7.9	*(31)*	6.6	*(22)*	8.9	*(13)*				
Pakistan	7.3	*(23)*	3.4	*(104)*	6.5	*(97)*	4.3	*(119)*	5.4	*(79)*	5.1	*(111)*				
Panama	7.8	*(8)*	4.7	*(75)*	9.6	*(14)*	7.5	*(43)*	6.2	*(36)*	8.4	*(23)*	5.6	*(27)*	4.5	*(53)*
Pap. New Guinea	6.5	*(47)*	4.4	*(85)*	6.2	*(104)*	5.9	*(94)*	6.0	*(46)*	6.9	*(66)*				
Paraguay	8.1	*(6)*	2.8	*(114)*	8.8	*(50)*	7.2	*(55)*	4.8	*(107)*	6.4	*(81)*	3.4	*(79)*	4.6	*(52)*
Peru	7.6	*(11)*	4.2	*(90)*	8.8	*(49)*	7.3	*(52)*	5.6	*(70)*	8.1	*(30)*	4.2	*(64)*	4.5	*(56)*
Philippines	6.9	*(31)*	3.9	*(95)*	9.2	*(37)*	7.4	*(47)*	5.7	*(65)*	7.6	*(42)*	5.7	*(25)*	3.7	*(73)*
Poland	4.5	*(100)*	5.8	*(56)*	7.6	*(69)*	6.7	*(75)*	5.3	*(86)*	7.5	*(44)*	4.3	*(62)*	4.1	*(65)*
Portugal	5.1	*(85)*	7.6	*(20)*	9.5	*(25)*	8.1	*(25)*	5.9	*(50)*	8.0	*(34)*	4.6	*(54)*	5.2	*(34)*
Romania	4.6	*(91)*	4.6	*(76)*	2.3	*(123)*	6.6	*(78)*	5.3	*(83)*	6.7	*(74)*	5.0	*(39)*	4.3	*(61)*
Russia	5.5	*(73)*	3.8	*(97)*	4.9	*(112)*	6.7	*(74)*	4.2	*(119)*	4.7	*(115)*	4.5	*(56)*	3.4	*(77)*
Rwanda	5.5	*(76)*	2.0	*(121)*	7.5	*(72)*			5.8	*(57)*	6.3	*(85)*				
Senegal	6.8	*(32)*	4.4	*(82)*	7.3	*(74)*	5.8	(99)	4.9	*(105)*	6.6	*(78)*				
Sierra Leone	6.2	*(52)*	3.5	*(102)*	6.5	*(101)*	4.5	*(117)*	5.2	*(91)*	4.4	*(117)*				
Singapore	7.8	*(9)*	8.5	*(15)*	9.6	*(16)*	9.4	*(2)*	7.0	*(9)*	7.9	*(37)*	5.6	*(28)*	7.7	*(3)*
Slovak Rep.	3.0	*(120)*	5.6	*(60)*	8.0	*(62)*	8.3	*(12)*	5.0	*(101)*	5.9	*(98)*	4.7	*(52)*	4.5	*(54)*
Slovenia	2.5	*(123)*	7.0	*(28)*	8.7	*(54)*	7.3	*(53)*	5.1	*(95)*	6.7	*(72)*	3.8	*(73)*	4.9	*(44)*
South Africa	5.5	*(74)*	6.6	*(36)*	7.9	*(65)*	7.3	*(51)*	6.5	*(24)*	8.5	*(18)*	5.4	*(31)*	5.4	*(28)*
South Korea	7.3	*(24)*	6.4	*(43)*	9.5	*(23)*	7.3	*(49)*	5.2	*(90)*	6.4	*(80)*	4.3	*(63)*	5.0	*(40)*
Spain	5.0	*(86)*	6.3	*(44)*	9.4	*(30)*	8.0	*(26)*	6.3	*(28)*	8.1	*(29)*	5.0	*(40)*	5.8	*(22)*
Sri Lanka	7.0	*(28)*	5.2	*(66)*	6.7	*(93)*	6.4	*(85)*	5.9	*(48)*	6.4	*(82)*	6.2	*(18)*	5.2	*(35)*
Sweden	3.0	*(119)*	8.6	*(13)*	9.8	*(1)*	8.2	*(19)*	6.1	*(38)*	8.4	*(19)*	3.4	*(78)*	6.5	*(12)*
Switzerland	7.0	*(29)*	8.6	*(14)*	9.7	*(8)*	8.3	*(15)*	6.6	*(20)*	8.1	*(32)*	5.3	*(34)*	6.5	*(13)*
Syria	3.7	*(116)*	5.1	*(70)*	8.0	*(63)*	6.2	*(86)*	2.9	*(123)*	0.7	*(123)*				
Taiwan	6.1	*(57)*	5.9	*(53)*	9.7	*(3)*	8.0	*(28)*	5.8	*(58)*	6.3	*(86)*	4.9	*(46)*	6.1	*(18)*
Tanzania	4.9	*(87)*	6.1	*(49)*	8.8	*(51)*	5.6	*(105)*	5.8	*(59)*	5.6	*(105)*				
Thailand	6.8	*(35)*	6.2	*(46)*	6.6	*(96)*	7.7	*(38)*	6.1	*(42)*	7.0	*(61)*	6.6	*(12)*	4.7	*(51)*
Togo	4.4	*(103)*	3.7	*(98)*	6.5	*(99)*	6.2	*(87)*	4.6	*(113)*	5.8	*(101)*				
Trinidad & Tob.	6.6	*(44)*	6.5	*(41)*	9.1	*(40)*	7.0	*(65)*	6.3	*(27)*	7.2	*(56)*	6.7	*(8)*	5.1	*(37)*
Tunisia	5.3	*(79)*	6.9	*(30)*	7.0	*(79)*	6.4	*(84)*	6.1	*(41)*	8.1	*(31)*	3.8	*(72)*	6.4	*(14)*
Turkey	6.7	*(40)*	4.1	*(93)*	3.8	*(117)*	7.2	*(58)*	4.9	*(103)*	6.0	*(91)*	4.4	*(58)*	4.3	*(59)*
Uganda	6.8	*(36)*	4.6	*(78)*	9.2	*(36)*	7.5	*(42)*	5.6	*(69)*	5.0	*(113)*				
Ukraine	3.5	*(118)*	4.2	*(92)*	3.7	*(118)*	6.8	*(70)*	4.9	*(104)*	5.5	*(107)*	5.9	*(23)*	3.2	*(79)*
United Arab Em.	7.6	*(12)*	6.6	*(38)*	9.1	*(39)*	8.2	*(21)*	6.2	*(29)*	7.0	*(64)*				
United Kingdom	6.6	*(42)*	9.2	*(3)*	9.3	*(34)*	8.3	*(13)*	7.7	*(3)*	9.2	*(7)*	7.1	*(5)*	6.8	*(9)*
United States	7.3	*(22)*	8.7	*(11)*	9.8	*(2)*	7.9	*(30)*	7.8	*(2)*	9.2	*(8)*	7.3	*(3)*	6.9	*(6)*
Uruguay	6.7	*(38)*	5.8	*(57)*	8.7	*(52)*	6.8	*(73)*	5.6	*(72)*	6.3	*(87)*	5.5	*(29)*	5.0	*(42)*
Venezuela	7.1	*(26)*	1.9	*(123)*	5.6	*(111)*	7.0	*(66)*	5.1	*(99)*	7.4	*(47)*	3.8	*(71)*	4.0	*(68)*
Zambia	6.6	*(41)*	5.9	*(52)*	7.6	*(68)*	8.3	*(16)*	5.7	*(66)*	5.9	*(96)*				

A Chain-Weighted Summary Index

One of the most valuable aspects of this index of economic freedom is that, for many countries, it can be calculated back to 1970. We rate 53 countries in 1970; 70 in 1975; 102 in 1980, 109 in 1985, 113 in 1990, and 123 in 1995, 2000, and 2001. Using this longitudinal data, researchers are better able to examine the impact of economic freedom over time.

One problem that arises, however, is that the underlying data are more complete in recent years than in earlier years. As a result, changes in the index ratings over time may reflect the fact that some components are missing in some years but not in others. This is similar to comparing GDP or a price index over time when we know that the underlying goods and services used to calculate these statistics are constantly changing. The problem of missing components threatens the comparability of the index ratings over time.

In order to correct for this problem, we have constructed a summary economic freedom index that is based on the 2000 rating as a base year. Changes to the index going backward in time are then based only on changes in components that were present in adjacent years. For instance, the 1995 rating is based on the 2000 rating but is adjusted based on the changes in the underlying data between 1995 and 2000 for those components that were present in both years. If the common components in 1995 were the same as in 2000, then the 1995 rating would be the same as the 2000 rating; if the 1995 components were lower than the common 2000 components, then the 2000 rating would be adjusted downward proportionately for 1995 to reflect this. This procedure was repeated backward in time to 1970.

Exhibit 4 presents this "chain-weighted" economic freedom index for years from 1970 to 2001. For researchers doing longitudinal studies of economic freedom, we believe this set of data to be of the highest quality.

Note on corrected error in Exhibit 4

An error was discovered in the original computation of the chain-weighted summary index of economic freedom presented in *Economic Freedom of the World: 2002 Annual Report*. This has since been corrected. Although the differences are slight in most cases, readers are advised to use the chain-weighted summary index published in this volume.

Exhibit 4: A Chain-Weighted Summary Index

	1970	1975	1980	1985	1990	1995	2000	2001
Albania					3.5	4.3	5.5	5.7
Algeria			3.9	3.9	3.5	3.6	4.2	4.3
Argentina	4.4	2.8	3.9	3.5	4.4	6.4	7.2	6.5
Australia	6.6	5.8	6.4	6.8	7.4	7.8	8.0	7.9
Austria	6.1	5.8	6.2	6.3	6.9	7.0	7.4	7.5
Bahamas		6.1	5.8	5.8	6.2	6.3	6.5	6.5
Bahrain			6.9	6.5	6.8	6.9	7.3	7.1
Bangladesh		2.9	3.1	3.5	4.3	5.1	5.5	5.4
Barbados		5.0	5.0	5.4	5.7	5.7	5.6	5.6
Belgium	7.3	6.6	6.9	6.9	7.3	7.2	7.4	7.4
Belize			5.0	4.8	5.7	6.3	6.2	6.2
Benin			4.9	4.6	4.9	4.5	5.7	5.7
Bolivia			4.2	3.3	5.2	6.3	6.7	6.5
Botswana			5.0	5.2	5.6	6.2	7.0	7.0
Brazil	5.3	4.3	4.0	3.6	4.3	4.4	5.3	5.7
Bulgaria				4.5	3.5	4.2	5.3	5.2
Burundi		3.9	4.0	4.4	4.6	4.2	5.1	5.1
Cameroon			5.4	5.7	5.8	5.2	5.4	5.8
Canada	7.4	6.6	7.0	7.1	7.7	7.8	8.1	8.0
Central Afr. Rep.				4.4	5.0	4.7	4.9	5.2
Chad				4.9	4.7	4.6	5.3	5.8
Chile	3.6	3.6	5.2	5.8	6.7	7.3	7.5	7.3
China			4.0	5.2	4.6	5.2	5.4	5.5
Colombia	5.3	4.9	4.6	5.1	4.9	5.4	5.5	5.4
Congo, Dem. R.	4.4	3.9	2.8	3.7	3.5	3.9	3.7	4.3
Congo, Rep. of			4.5	4.5	4.9	4.8	4.9	4.4
Costa Rica		5.7	4.9	4.8	6.5	6.7	7.3	7.1
Côte d'Ivoire			4.9	5.6	5.4	5.4	5.7	5.7
Croatia						4.1	5.5	6.2
Cyprus		5.4	5.3	5.3	5.9	6.1	6.1	6.3
Czech Rep.						5.8	6.8	6.8
Denmark	6.6	5.9	6.1	6.2	7.0	7.4	7.6	7.6
Dominican Rep.			4.6	4.3	4.2	5.9	6.7	6.7
Ecuador	3.7	4.8	5.1	4.3	5.1	6.0	5.2	5.0
Egypt		3.9	4.5	5.0	4.8	5.9	6.7	6.5
El Salvador			4.3	4.1	4.5	6.8	7.2	7.2
Estonia						5.4	6.9	7.4
Fiji		5.2	5.4	5.6	5.9	6.1	6.0	6.1
Finland	6.7	5.8	6.4	6.6	7.1	7.3	7.6	7.7
France	6.2	5.5	5.7	5.8	6.9	6.8	7.0	6.7
Gabon			3.7	4.3	4.8	4.7	5.3	5.3
Germany	7.3	6.8	7.1	7.2	7.5	7.5	7.6	7.3
Ghana		3.2	2.4	2.6	4.5	5.3	5.6	5.6
Greece	6.2	5.7	5.5	5.2	5.8	6.3	6.8	6.7
Guatemala	5.8	6.4	5.9	4.7	5.6	6.7	6.4	6.4
Guinea-Bissau					2.9	3.5	4.1	4.6

Exhibit 4 (continued): A Chain-Weighted Summary Index

	1970	1975	1980	1985	1990	1995	2000(	2001
Guyana						4.8	6.5	6.5
Haiti			5.5	5.7	5.5	5.4	6.3	5.9
Honduras			5.5	5.4	5.2	6.0	6.3	6.2
Hong Kong	8.2	8.3	8.4	8.2	8.5	9.0	8.8	8.6
Hungary			4.2	5.0	4.9	6.3	6.6	6.9
Iceland	6.1	4.3	4.9	5.1	6.6	7.3	7.7	7.6
India	5.0	4.2	5.0	4.7	4.9	5.6	6.1	6.1
Indonesia	4.8	5.3	5.2	6.2	6.6	6.6	5.9	5.6
Iran	6.6	6.5	3.9	4.2	4.6	4.4	5.1	5.4
Ireland	6.5	5.8	6.2	6.2	7.1	8.2	8.1	8.0
Israel	4.7	4.1	3.5	4.1	4.2	5.8	6.7	6.5
Italy	5.8	5.1	5.2	5.5	6.4	6.5	7.1	7.0
Jamaica			3.9	4.4	5.4	6.2	6.9	6.9
Japan	6.2	5.9	6.4	6.5	7.2	7.0	7.3	7.1
Jordan		5.2	5.0	5.5	5.6	6.2	7.2	6.9
Kenya	4.7	4.5	4.6	5.0	5.3	5.7	6.5	6.6
Kuwait			5.5	7.6	4.9	6.4	7.0	7.1
Latvia						4.6	6.5	6.6
Lithuania						4.7	6.2	6.2
Luxembourg	7.0	7.0	6.8	7.2	7.5	7.5	7.7	7.6
Madagascar			4.2	4.5	4.3	4.4	5.2	5.8
Malawi		4.8	4.3	4.5	4.7	4.3	4.6	5.0
Malaysia	6.2	6.0	6.6	6.7	7.3	7.4	6.7	6.4
Mali		5.2	5.3	5.0	5.1	5.2	5.7	5.8
Malta			5.1	4.9	5.3	6.6	6.4	6.4
Mauritius		4.5	4.6	5.8	6.0	7.2	7.3	7.3
Mexico	6.1	5.4	5.1	4.4	5.8	6.2	6.1	6.2
Morocco	5.6	5.0	4.4	5.0	4.9	5.9	5.9	5.9
Myanmar			4.9	4.5	3.1	3.6	3.4	4.1
Namibia					4.7	6.2	6.5	6.7
Nepal			5.3	4.9	5.2	5.2	5.6	5.8
Netherlands	7.1	6.4	6.9	7.1	7.5	7.8	8.0	7.8
New Zealand	6.1	5.5	6.1	6.0	7.4	8.6	8.2	8.2
Nicaragua			3.7	1.7	2.4	5.1	6.4	6.4
Niger			5.3	5.7	5.1	4.9	5.5	5.6
Nigeria	3.4	3.6	3.5	3.7	3.5	3.4	5.4	5.5
Norway	5.9	5.4	5.7	6.2	6.9	7.4	7.2	7.1
Oman				6.3	6.3	6.9	7.3	7.3
Pakistan	4.3	3.7	4.5	5.1	5.0	5.6	5.5	5.4
Panama		6.3	5.1	5.6	6.3	7.1	7.2	7.2
Pap. New Guinea				5.9	6.3	6.3	5.9	6.0
Paraguay			5.4	4.8	5.4	6.3	6.4	6.4
Peru	4.7	3.9	3.9	2.9	3.6	6.1	6.8	6.7
Philippines	5.2	4.9	4.9	4.8	5.5	7.2	7.1	6.7
Poland				3.8	3.6	5.3	5.8	6.0
Portugal	6.0	3.8	5.6	5.4	6.1	7.3	7.3	7.2

Exhibit 4 (continued): A Chain-Weighted Summary Index

	1970	1975	1980	1985	1990	1995	2000	2001
Romania				4.7	4.2	3.7	4.6	4.6
Russia						4.1	4.5	5.0
Rwanda					5.0	3.9	4.6	5.3
Senegal			4.6	5.0	5.3	4.6	5.8	5.9
Sierra Leone		5.5	5.2	3.8	3.8	4.2	5.2	5.2
Singapore	7.4	7.2	7.5	7.8	8.5	8.8	8.6	8.5
Slovak Rep						5.3	6.1	6.0
Slovenia						4.7	5.9	5.9
South Africa	6.0	5.5	5.4	5.0	5.2	6.3	6.7	6.8
South Korea	5.1	5.1	5.4	5.5	6.0	6.5	7.0	7.1
Spain	6.2	5.5	5.7	5.9	6.3	7.0	7.3	7.0
Sri Lanka			4.8	5.0	4.9	6.1	6.1	6.1
Sweden	5.6	5.2	5.6	6.2	6.7	7.2	7.4	7.2
Switzerland	7.6	7.3	7.7	7.9	8.0	8.0	8.2	8.0
Syria	4.5	4.8	3.8	3.5	3.4	4.2	5.0	5.2
Taiwan	6.9	5.8	6.6	6.9	7.1	7.3	7.2	7.1
Tanzania	4.4	3.8	3.9	3.5	3.8	4.9	5.8	6.7
Thailand	5.7	5.6	5.8	5.9	6.8	7.2	6.6	6.7
Togo			4.1	5.4	5.1	4.8	5.0	5.1
Trinidad & Tob.		4.3	4.5	4.4	5.4	6.6	7.0	7.0
Tunisia	4.5	4.6	4.9	4.7	5.4	6.0	6.1	6.2
Turkey	3.5	3.8	3.5	4.7	4.8	5.7	5.8	5.3
Uganda			2.9	2.4	2.6	4.8	6.6	6.7
Ukraine						3.7	4.5	4.6
Unit. Arab Em.			5.8	6.6	7.3	7.1	7.6	7.5
United Kingdom	5.9	5.7	6.1	6.9	7.7	8.1	8.3	8.3
United States	7.0	7.1	7.4	7.5	8.2	8.3	8.5	8.3
Uruguay			5.3	5.5	6.0	5.8	6.5	6.6
Venezuela	7.3	6.2	6.7	6.2	5.6	4.2	5.8	5.3
Zambia		4.1	4.5	3.5	2.9	4.6	6.4	6.8
Zimbabwe			4.2	4.2	4.5	5.4	4.8	4.0

Correlations between Economic Freedom and Other Indicators

The EFW index is very useful as a correlate with other *desiderata* such as income per person, economic growth, income distribution and so on. The following set of bar charts (Exhibits 5–9) illustrates some of these basic relationships. The EFW index is highly correlated with income per capita and economic growth; life expectancy is over 20 years longer in the top economic-freedom quintile compared with the bottom quintile. That economic freedom contributes to a faster growing, more efficient economy that translates into better, longer lives is hardly a controversial finding.[9]

Many critics of economic freedom focus on the supposed inability of the free-market to create a "just" distribution of income or in caring for the poor. Exhibits 7 and 9 present the evidence on the validity of these arguments. First, the distribution of income is no more unequal in countries with market-oriented economies than in those that are economically repressive. Moreover, it bears repeating that economically free societies are more productive and that this added productivity translates into higher incomes for all groups. The final bar chart shows the average level of income of the poorest tenth in society.

Concluding Thoughts

The degree of economic freedom present is influenced by numerous factors. No single statistic will be able to capture all of these factors or to represent their interrelations fully. We believe that the index presented here captures most of the important elements and provides a reasonably good measure of differences among countries in economic freedom. However, something as complex as economic freedom is difficult to measure with precision. Thus, *small differences* between countries should not be taken very seriously.

As this work goes forward, it should open doors for fruitful research in several areas. Certainly, it should be of value to those seeking to pinpoint the strengths and weaknesses of institutions and policies. It should also be useful to those seeking to enhance our knowledge of economic development and the process of economic growth. Researchers analyzing the interrelations among economic freedom, civil liberties, and democratic decision-making should also find these data of value.

Exhibit 5: Economic Freedom and Per-Captia Income

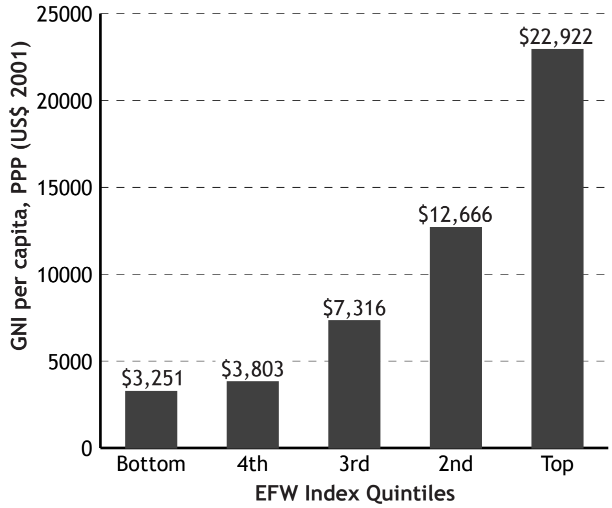


Exhibit 6: Economic Freedom and Life Expectancy

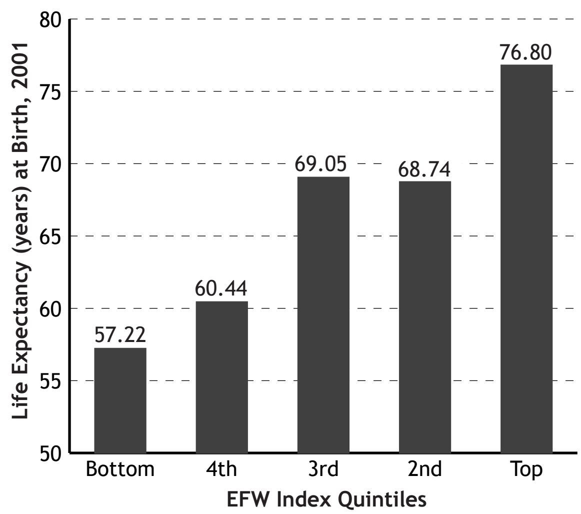


Exhibit 7: Economic Freedom and the Income Level of the Poorest 10%

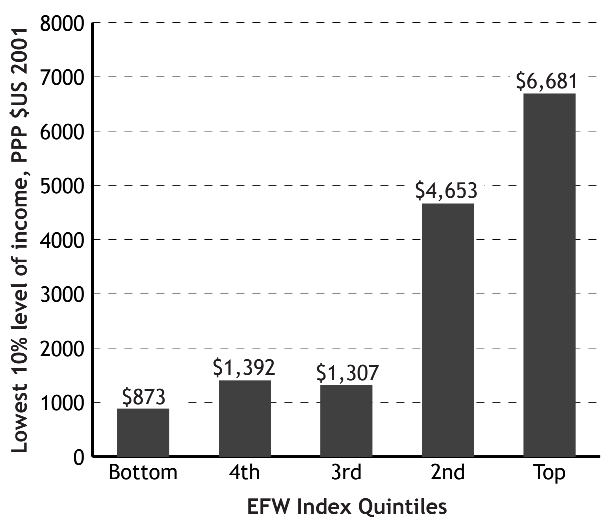


Exhibit 8: Economic Freedom and Economic Growth

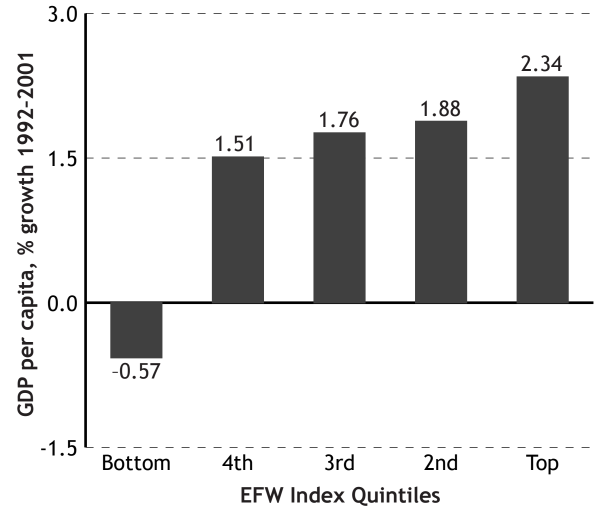
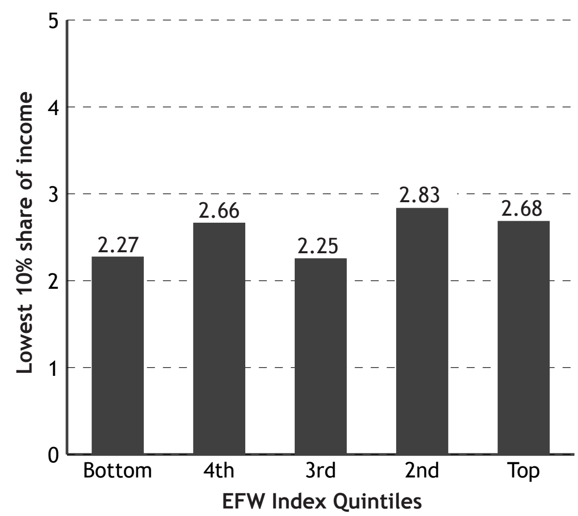


Exhibit 9: Economic Freedom and the Income Share of the Poorest 10%



Notes

1 See Michael A. Walker, ed. *Freedom, Democracy, and Economic Welfare* (Vancouver: The Fraser Institute, 1988); Walter Block, ed., *Economic Freedom: Toward a Theory of Measurement*, (Vancouver: The Fraser Institute, 1991); and Stephen T. Easton and Michael A. Walker, eds., *Rating Global Economic Freedom*, (Vancouver: The Fraser Institute, 1992).

2 Researchers can find all the data at www.freetheworld.com. See the Appendix: Explanatory Notes and Data Sources (p. 24) for a list of sources used in constructing the index.

3 The focus of these reports differs substantially from the emphasis of the *Economic Freedom of the World*. The *International Country Risk Guide* is directed toward investors seeking information about financial and political risks that might affect their investments in different countries. The primary focus of the *World Competitiveness Report* is on the use of technology, quality of the physical infrastructure, skill of the labor force and other factors influencing the attractiveness of a country for business activity. However, the two reports also provide information on legal structure, security of property rights, and the regulatory environment. This is the information that is of value for our purposes.

4 Over the years, we have struggled with how to assign weights to various components and areas to construct a summary index. After experimenting with three different weighting schemes in the first edition, we finally settled on using principle component analysis to assign weights statistically. Although principle component analysis has the advantage of being value-neutral, it does create problems of its own. In particular, when two components are closely correlated, as often happens, then principle component analysis tends to assign low weights to one or both of these components. In essence, the principle component analysis wants to drop out the interrelated components. But, we often want to include these components even if they are correlated with other components in order to offset measurement error in the data and to increase the number of countries we can rate. We, therefore, decided to return to using a simple average to combine the components into area ratings and the area ratings into summary ratings in the 2002 report. Although this edition of the index uses averages, we do not mean to imply that all components and areas of economic freedom are equally important in whatever sense. Readers who want to reweigh the components and areas to suit themselves are invited to do so.

5 Economists often speak of the protective and productive functions of government. The protective function involves protecting citizens and their property against aggressors. It includes the provision of national defense, police protection, and a system of justice. The productive function involves the provision of a limited set of public goods like sound money, flood control, and environmental quality that are difficult to provide through markets. Countries with high incomes currently spend only about 10% to 15% of GDP on these activities. For evidence on this point, see James Gwartney, Robert Lawson, and Randall Holcombe, "The Size and Scope of Government and Economic Growth," *Cato Journal* 18, 2 (Fall, 1998): 163–90.

6 The *International Country Risk Guide* data are computed from an in-house panel of experts whereas the *Global Competitiveness Report* data are based on a survey of business decision-makers. For our purposes here, however, we will refer to both sources as being survey-based.

7 For information on how centralized wage setting, restrictive dismissal regulations, and lucrative unemployment benefits have reduced employment and increased unemployment among OECD countries, see Edward Bierhanzl and James Gwartney, “Regulation, Unions, and Labor Markets,” *Regulation* (Summer, 1998): 40–53, and Horst Siebert, “Labor Market Rigidities: At the Root of Unemployment in Europe,” *Journal of Economic Perspectives* 11, 3 (1997): 37–54.

8 In Areas 2, 4, and 5, we ran a regression among the countries for which we had complete data for the year 2000. The dependent variable was the area rating *with the survey data* and the independent variable was the area rating *excluding the survey data*. The regression relationship indicates how the omission of the survey data affects the area rating. The regression estimates were used to adjust the area ratings for the countries without survey data and, thereby, make them more comparable with the ratings of the countries for which the survey data were available. The same adjustments were performed in all years in any case where a country did not have the survey data available.

9 For research of this type, see John W. Dawson, “Institutions, Investment, and Growth: New Cross-Countries and Panel Data Evidence,” *Economic Inquiry* 36 (October 1998): 603–19; Stephen T. Easton and Michael Walker, “Income, Growth, and Economic Freedom,” *American Economic Review* 87, 2 (May, 1997): 328–32; and James Gwartney, Randall Holcombe, and Robert Lawson, “Economic Freedom and the Environment for Economic Growth,” *Journal of Institutional and Theoretical Economics* (December 1999): 643–63.

Appendix: Explanatory Notes and Data Sources

1 Size of Government: Expenditures, Taxes, and Enterprises

A General government consumption spending as a percentage of total consumption

The rating for this component is equal to: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. The V_i is the country's actual government consumption as a proportion of total consumption, while the V_{max} and V_{min} were set at 40 and 6 respectively. Countries with a larger proportion of government expenditures received lower ratings. If the ratio of a country's government consumption to total consumption is close to the minimum value of this ratio during the 1990 base year, the country's rating will be close to 10. In contrast, if this ratio is close to the highest value during the base year, the rating will be close to zero.

Sources: World Bank, *World Development Indicators* (various issues) and International Monetary Fund (various issues), *International Financial Statistics*.

B Transfers and subsidies as a percentage of GDP

The rating for this component is equal to: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. The V_i is the country's ratio of transfers and subsidies to GDP, while the V_{max} and V_{min} represent the maximum and minimum values of this component during the 1990 base year. The formula will generate lower ratings for countries with larger transfer sectors. When the size of a country's transfer sector approaches that of the country with the largest transfer sector during the base year, the rating of the country will approach zero.

Sources: International Monetary Fund (various years), *Government Finance Statistics Yearbook*; World Bank (various issues), *World Development Indicators*; International Monetary Fund (various issues), *International Financial Statistics*; and Inter-American Development Bank, *Economic and Social Progress in Latin America, 1994*.

C Government enterprises and investment as a percentage of GDP

Data on the number, composition, and share of output supplied by State-Operated Enterprises (SOEs) and government investment as a share of total investment were used to construct the 0-to-10 ratings. Countries with more government enterprises and government investment received lower ratings. When there were few SOEs and government investment was generally less than 15% of total investment, countries were given a rating of 10. When there were few SOEs other than those involved in industries where economies of scale reduce the effectiveness of competition (*e.g.*, power generation) and government investment was between 15% and 20% of the total, countries received a rating of 8. When there were, again, few SOEs other than those involved in energy and other such industries and government investment was between about 20% and 25% of the total, countries were rated at 7. When SOEs were present in the energy, transportation, and communication sectors of the economy and government investment was between about 25% and 30% of the total, countries were assigned a rating of 6. When a substantial number of SOEs operated in many sectors, including manufacturing, and government investment was generally between 30% and 40% of the total, countries received a rating of 4. When numerous SOEs operated in many sectors, including retail sales, and government investment was between about 40% and 50% of the total, countries were rated at 2. A rating of zero was assigned when the economy was dominated by SOEs and government investment exceeded 50% of the total.

Sources: World Bank (various issues), *World Development Indicators*; World Bank Policy Research Report (1995), *Bureaucrats in Business*; Rexford A. Ahene and Bernard S. Katz, eds. (1992), *Privatization and Investment in Sub-Saharan Africa*; Manuel Sanchez and Rossana Corona, eds. (1993), *Privatization in Latin America*; Iliya Harik and Denis J. Sullivan, eds. (1992), *Privatization and Liberalization in the Middle East*; OECD (various issues), *Economic Surveys*; and L. Bouten and M. Sumlinski, *Trends in Private Investment in Developing Countries: Statistics for 1970–1995*.

D Top marginal tax rate (and income threshold at which it applies)

i Top marginal tax rate (excluding applicable payroll taxes)

ii Top marginal tax rate (including applicable payroll taxes)

Countries with higher marginal tax rates that take effect at lower income thresholds received lower ratings based on the matrix below. The income threshold data were converted from local currency to 1982/1984 US dollars (using beginning-of-year exchange rates and the US Consumer Price Index). The figures included sub-national rates if applicable.

Source: Price Waterhouse, *Individual Taxes: A Worldwide Summary* (various issues).

	Income Threshold Level (1982/1984 US$)			
Top Marginal Tax Rate	< 25,000	25,000-50,000	50,000-150,000	>150,000
<20%	10	10	10	10
21%-25%	9	9	10	10
26%-30%	8	8	9	9
31%-35%	7	7	8	9
36%-40%	5	6	7	8
41%-45%	4	5	6	7
46%-50%	3	4	5	5
51%-55%	2	3	4	4
56%-60%	1	2	3	3
61%-65%	0	1	2	2
66%-70%	0	0	1	1
>70%	0	0	0	0

2 Legal Structure and Security of Property Rights

Special Note: The ratings for Area 2 from 1970 to 1995 are the same as the ratings for Area V from *Economic Freedom of the World: 2001 Annual Report*. Please see that report for methodological details.

A Judicial independence—the judiciary is independent and not subject to interference by the government or parties in disputes

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford University Press); World Economic Forum (2000), *Global Competitiveness Report 2000* (Oxford: Oxford University Press).

B Impartial courts: a trusted legal framework exists for private businesses to challenge the legality of government actions or regulation

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford University Press); World Economic Forum (2000), *Global Competitiveness Report 2000* (Oxford: Oxford University Press). Kaufmann, Daniel, Aart Kraay and Pablo Zoido-Lobaton (2002), *Governance Matters II: Updated Indicators for 2000/01*, World Bank Policy Research Working Paper No. 2772 (http://www.worldbank.org/wbi/governance/govdata2001.htm). This project creates an aggregated measure of governance based on an array of different indicators from different sources in six different areas: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. We used the 1997/98 and 2000/01 Rule of Law estimates to fill in gaps in our Component 2-B (Impartial courts) for 1995 and 2000 respectively.

C Protection of intellectual property

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001-2002* (Oxford: Oxford Univ. Press).

D Military interference in rule of law and the political process

This component is based on the Political Risk Component G (Military in Politics) from the *International Country Risk Guide*.

Source: PRS Group (various issues), *International Country Risk Guide*; Kaufmann, Daniel, Aart Kraay and Pablo Zoido-Lobaton (2002), *Governance Matters II: Updated Indicators for 2000/01*, World Bank Policy Research Working Paper No. 2772 (http://www.worldbank.org/wbi/governance/govdata2001.htm). This project creates an aggregated measure of governance based on an array of different indicators from different sources in six different areas: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. We used the 1997/98 and 2000/01 Political Stability estimates to fill in gaps in our Component 2-D (Military interference) for 1995 and 2000 respectively.

E Integrity of the legal system

This component is based on the Political Risk Component I (Law and Order) from the *International Country Risk Guide*.

Source: PRS Group (various issues), *International Country Risk Guide*.

3 Access to Sound Money

A Average annual growth of the money supply in the last five years minus average annual growth of real GDP in the last ten years

The M1 money supply figures were used to measure the growth rate of the money supply. The rating is equal to: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the average annual growth rate of the money supply during the last five years adjusted for the growth of real GDP during the previous 10 years. The values for V_{min} and V_{max} were set at 0% and 50%, respectively. Therefore, if the adjusted growth rate of the money supply during the last five years was zero, indicating that money growth was equal to the long-term growth of real output, the formula generates a rating of 10. Ratings decline as the adjusted growth of the money supply differs from zero. When the adjusted annual money growth is equal to (or greater than) 50%, a rating of zero results.

Sources: World Bank (various issues), *World Development Indicators*, with updates from International Monetary Fund (various issues), *International Financial Statistics*.

B Standard inflation variability in the last five years

Generally, the GDP deflator was used as the measure of inflation for this component. When these data were unavailable, the Consumer Price Index was used. The following formula was used to determine the 0-to-10 scale rating for each country: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the country's standard deviation of the annual rate of inflation during the last five years. The values for V_{min} and V_{max} were set at 0% and 25%, respectively. This procedure will allocate the highest ratings to the countries with least variation in the annual rate of inflation. A perfect 10 results when there is no variation in the rate of inflation over the five-year period. Ratings will decline toward zero as the standard deviation of the inflation rate approaches 25% annually.

Sources: World Bank (various issues), *World Development Indicators*, with updates from International Monetary Fund (various issues), *International Financial Statistics*.

C Recent inflation rate

Generally, the CPI was used as the measure of inflation for this component. The 0-to-10 country ratings were derived by the following formula: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the rate of inflation during the most recent year. The values for V_{min} and V_{max} were set at 0% and 50%, respectively—the lower the rate of inflation, the higher the rating. Countries that achieve perfect price stability earn a rating of 10. As the inflation rate moves toward a 50% annual rate, the rating for this component moves toward zero. A zero rating is assigned to all countries with an inflation rate of 50% or more.

Source: World Bank (various issues), *World Development Indicators*, with updates from International Monetary Fund (various issues), *International Financial Statistics*.

D Freedom to own foreign currency bank accounts domestically and abroad

When foreign currency bank accounts were permissible without restrictions both domestically and abroad, the rating was 10; when these accounts were restricted, the rating was zero. If foreign currency bank accounts were permissible domestically but not abroad (or vice versa), the rating was 5.

Sources: International Monetary Fund (various issues), *Annual Report on Exchange Arrangements and Exchange Restrictions*; Currency Data and Intelligence, Inc. (various issues), *World Currency Yearbook*.

4 Freedom to Exchange with Foreigners

A Taxes on international trade

i Revenue from taxes on international trade as a percentage of exports plus imports

The formula used to calculate the ratings for this component was: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the revenue derived from taxes on international trade as a share of the trade sector. The values for V_{min} and V_{max} were set at 0% and 15%, respectively. This formula leads to lower ratings as the average tax rate on international trade increases. Countries with no specific taxes on international trade earn a perfect 10. As the revenues from these taxes rise toward 15% of international trade, ratings decline toward zero. (Note that, except for two or three extreme observations, the revenues from taxes on international trade as a share of the trade sector are within the 0% to 15% range.)

Sources: International Monetary Fund (various issues), *Government Finance Statistics Yearbook;* International Monetary Fund (various issues), *International Financial Statistics*.

ii Mean tariff rate

The formula used to calculate the 0-to-10 rating for each country was: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the country's mean tariff rate. The values for V_{min} and V_{max} were set at 0% and 50%, respectively. This formula will allocate a rating of 10 to countries that do not impose tariffs. As the mean tariff rate increases, countries are assigned lower ratings. The rating will decline toward zero as the mean tariff rate approaches 50%. (Note that, except for two or three extreme observations, all countries have mean tariff rates within this 0% to 50% range.)

Sources: World Bank (various issues), *World Development Indicators*; OECD (1996), *Indicators of Tariff and Non-tariff Trade Barriers*; World Bank, *World Development Report 2000*; J. Michael Finger, Merlinda D. Ingco, and Ulrich Reincke (1996), *Statistics on Tariff Concessions Given and Received*; Judith M. Dean, Seema Desai, and James Riedel (1994), *Trade Policy Reform in Developing Countries since 1985: A Review of the Evidence*; GATT (1979), *The Tokyo Round of Multilateral Trade Negotiations, Vol. II: Supplementary Report*; UNCTAD (1987), *Revitalizing Development, Growth and International Trade: Assessment and Policy Options*; R. Erzan and K. Kuwahara (1989), The Profile of Protection in Developing Countries, *UNCTAD Review* 1, 1 : 29–49; and Inter-American Development Bank (data supplied to the authors).

iii Standard deviation of tariff rates

Compared to a uniform tariff, wide variation in tariff rates exerts a more restrictive impact on trade and, therefore, on economic freedom. Thus, countries with greater variation in their tariff rates should be given lower ratings. The formula used to calculate the 0-to-10 ratings for this component was: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the standard deviation of the country's tariff rates. The values for V_{min} and V_{max} were set at 0% and 25%, respectively. This formula will allocate a rating of 10 to countries that impose a uniform tariff. As the standard deviation of tariff rates increases toward 25%, ratings decline toward zero. (Note that, except a few very extreme observations, the standard deviations of the tariff rates for the countries in our study fall within this 0% to 25% range.)

Sources: World Bank (various issues), *World Development Indicators*; OECD (1996), *Indicators of Tariff and Non-tariff Trade Barriers*; World Bank, *1997 World Development Indicators CD-Rom*; Jang-Wha Lee and Phillip Swagel (1994), *Trade Barriers and Trade Flows across Countries and Industries*, NBER Working Paper Series No. 4799; and Inter-American Development Bank (data supplied to the authors).

B Regulatory Trade Barriers

i Hidden import barriers—no barriers other than published tariffs and quotas

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

ii Costs of importing—the combined effect of import tariffs, licence fees, bank fees, and the time required for administrative red-tape raises the costs of importing equipment

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

C Actual size of trade sector compared to expected size

Regression analysis was used to derive an expected size of the trade sector based on various structural and geographic characteristics. (A basic description of the methodology is available upon request.) The actual size of the trade sector was then compared with the expected size for the country. If the actual size of the trade sector is greater than expected, this figure will be positive. If it is less than expected, the number will be negative. The percent change of the negative numbers was adjusted to make it symmetrical with the percent change of the positive numbers. The following formula was used to place the figures on a 0-to-10 scale: $(V_i - V_{min}) / (V_{max} - V_{min})$ multiplied by 10. V_i is the country's actual value for the component. V_{max} and V_{min} were set at 100% and −50%, respectively. (Note that −50% is symmetrical with +100%.) This procedure allocates higher ratings to countries with large trade sectors compared to what would be expected, given their population, geographic size, and location. On the other hand, countries with small trade sectors relative to the expected size receive lower ratings.

Sources: World Bank (various issues), *World Development Indicators*; International Monetary Fund (various issues), *International Financial Statistics*; and Central Intelligence Agency, *1997 World Factbook*.

D Difference between official exchange rate and black market rate

The formula used to calculate the 0-to-10 ratings for this component was the following: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i is the country's black-market exchange rate premium. The values for V_{min} and V_{max} were set at 0% and 50%, respectively. This formula will allocate a rating of 10 to countries without a black-market exchange rate; *i.e.*, those with a domestic currency that is fully convertible without restrictions. When exchange rate controls are present and a black market exists, the ratings will decline toward zero as the black market premium increases toward 50%. A zero rating is given when the black market premium is equal to, or greater than, 50%.

Sources: World Bank (various issues), *World Development Indicators*; Currency Data and Intelligence, Inc. (various issues of the yearbook and the monthly report supplement), *World Currency Yearbook*; and International Monetary Fund (various issues), *International Financial Statistics*.

E International capital market controls

i Access of citizens to foreign capital markets and foreign access to domestic capital markets

Source: World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

ii Restrictions on the freedom of citizens to engage in capital market exchange with foreigners—index of capital controls among 13 IMF categories

The IMF reports on 13 different types of capital controls. This component is based on the number of capital controls levied. The 0-to-10 rating is constructed by taking 13 minus the number of capital controls divided by 13 and multiplied by 10.

Source: International Monetary Fund (various issues), *Annual Report on Exchange Arrangements and Exchange Restrictions*.

5 Regulation of Credit, Labor, and Business

A Credit Market Regulations

i Ownership of banks—percentage of deposits held in privately owned banks

Data on the percentage of bank deposits held in privately owned banks were used to construct rating intervals. Countries with larger shares of privately held deposits received higher ratings. When privately held deposits totaled between 95% and 100%, countries were given a rating of 10. When private deposits constituted between 75% and 95% of the total, a rating of 8 was assigned. When private deposits were between 40% and 75% of the total, the rating was 5. When private deposits totaled between 10% and 40%, countries received a rating of 2. A zero rating was assigned when private deposits were 10% or less of the total.

Sources: Euromoney Publications (various editions), *The Telrate Bank Register*; World Bank (1994), *Adjustment in Africa: Reforms, Results, and the Road Ahead*; Price Waterhouse, *Doing Business in ...* publication series; H.T. Patrick and Y.C. Park, eds. (1994), *The Financial Development of Japan, Korea, and Taiwan: Growth, Repression, and Liberalization*; D.C. Cole and B.F. Slade (1996), *Building a Modern Financial System: The Indonesian Experience*; and information supplied by member institutes of the Economic Freedom Network.

ii Competition—domestic banks face competition from foreign banks (GCR)

Source: World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

iii Extension of credit—percentage of credit extended to private sector

For this component, higher values are indicative of greater economic freedom. Thus, the formula used to derive the country ratings for this component was $(V_i - V_{min}) / (V_{max} - V_{min})$ multiplied by 10. V_i is the share of the country's total domestic credit allocated to the private sector. V_{max} is the maximum value and V_{min} the minimum value for the figure during the 1990 base year. Respectively, these figures were 99.9% and 0%. The formula allocates higher ratings as the share of credit extended to the private sector increases. A country's rating will be close to 10 when the private sector's share of domestic credit is near the base-year maximum (99.9%). A rating near zero results when the private sector's share of credit is close to the base-year minimum (10.0%).

Sources: International Monetary Fund (various issues), *International Financial Statistics;* and (1996) *Statistical Yearbook of the Republic of China*.

iv Avoidance of interest rate controls and regulations that lead to negative real interest rates

Data on credit-market controls and regulations were used to construct rating intervals. Countries with interest rates determined by the market, stable monetary policy, and positive real deposit and lending rates received higher ratings. When interest rates were determined primarily by market forces and the real rates were positive, countries were given a rating of 10. When interest rates were primarily market-determined but the real rates were sometimes slightly negative (less than 5%) or the differential between the deposit and lending rates was large (8% or more), countries received a rating of 8. When the real deposit or lending rate was persistently negative by a single-digit amount or the differential between them was regulated by the government, countries were rated at 6. When the deposit and lending rates were fixed by the government and the real rates were often negative by single-digit amounts, countries were assigned a rating of 4. When the real deposit or lending rate was persistently negative by a double-digit amount, countries received a rating of 2. A zero rating was assigned when the deposit and lending rates were fixed by the government and real rates were persistently negative by double-digit amounts or hyperinflation had virtually eliminated the credit market.

Source: International Monetary Fund (various issues, as well as the monthly supplements), *International Financial Statistics Yearbook*.

v Interest rate controls—interest rate controls on bank deposits and/or loans are freely determined by the market

This particular component was not presented in the 2001 GCR publication only due to space constraints but the data were provided to us directly from the World Economic Forum.

B Labor Market Regulations

i Impact of minimum wage—the minimum wage, set by law, has little impact on wages because it is too low or not obeyed

This component is based on two survey responses obtained from the *Global Competitiveness Report 2001–2002*. The first question, which was not presented in the GCR publication due to space constraints asked about the overall "impact of the minimum wage"; the second question, which was included in the published report, asked about the strength of enforcement of the minimum wage law. Countries received higher ratings if the survey respondents indicated the minimum wage had a small impact and/or was not strongly enforced. Countries received lower ratings if the impact was deemed to be great and/or if the law was strongly enforced.

Source: World Economic Forum (2001), *Global Competitiveness Report 2001-2002* (Oxford: Oxford Univ. Press).

ii Hiring and firing practices—hiring and firing practices of companies are determined by private contract

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

iii Share of labor force whose wages are set by centralized collective bargaining

This particular component was not presented in the GCR publication due to space constraints but the data were provided to us directly from the World Economic Forum.

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press).

iv Unemployment Benefits—the unemployment benefits system preserves the incentive to work

Source: World Economic Forum (2000), *Global Competitiveness Report 2000* (Oxford: Oxford Univ. Press).

v Use of conscripts to obtain military personnel

Data on the use and duration of military conscription were used to construct rating intervals. Countries with longer conscription periods received lower ratings. A rating of 10 was assigned to countries without military conscription. When length of conscription was six months or less, countries were given a rating of 5. When length of conscription was more than six months but not more than 12 months, countries were rated at 3. When length of conscription was more than 12 months but not more than 18 months, countries were assigned a rating of 1. When conscription periods exceeded 18 months, countries were rated zero.

Source: International Institute for Strategic Studies (various issues), *The Military Balance*.

C Business Regulations

i Price controls—extent to which businesses are free to set their own prices

The more widespread the use of price controls, the lower the rating. The survey data of the International Institute for Management Development (IMD), *World Competitiveness Report*, various editions, were used to rate the 46 countries (mostly developed economies) covered by this report. For other countries, the Price Waterhouse series, *Doing Business in …* and other sources were used to categorize countries. Countries were given a rating of 10 if no price controls or marketing boards were present. When price controls were limited to industries where economies of scale may reduce the effectiveness of competition (*e.g.*, power generation), a country was given a rating of 8. When price controls were applied in only a few other industries, such as agriculture, a country was given a rating of 6. When price controls were levied on energy, agriculture, and many other staple products that are widely purchased by households, a rating of 4 was given. When price controls applied to a significant number of products in both agriculture and manufacturing, the rating was 2. A rating of zero was given when there was widespread use of price controls throughout various sectors of the economy.

Sources: Institute for Management Development (various issues), *World Competitiveness Report*; Price Waterhouse, *Doing Business in …* publication series; World Bank (1994), *Adjustment in Africa: Reforms, Results, and the Road Ahead*; Economist Intelligence Unit, *EUI Country Reports and Country Commerce, 2001*; and US State Department (various years), *Country Commercial Guides* and *Country Reports on Economic Policy and Trade Practices*.

ii Administrative conditions and new businesses—administrative procedures are an important obstacle to starting a new business

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

iii Time with government bureaucracy—senior management spends a substantial amount of time dealing with government bureaucracy

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

iv Starting a new business: starting a new business is generally easy

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).

v Irregular payments—irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection, or loan applications are very rare

Sources: World Economic Forum (2003), *Global Competitiveness Report 2002–2003* (Oxford: Oxford Univ. Press); World Economic Forum (2001), *Global Competitiveness Report 2001–2002* (Oxford: Oxford Univ. Press).