Chapter 2: A More Comprehensive Index of Economic Freedom for 58 Countries

by James Gwartney, Charles Skipton, and Robert Lawson

Introduction

More than a decade ago, we set out to develop an accurate measure of economic freedom. From the outset, we wanted the measure to be based to the fullest extent possible on objective quantifiable data and transparent procedures. We wanted an index that others, regardless of their political orientation, could replicate. We did not want our subjective views to influence the rating or ranking of any country.

Because of these standards, it was sometimes necessary to omit important dimensions of economic freedom. In some cases components were omitted because it was impossible to obtain the required data for a large number of countries. In other cases, potential variables were omitted because their nature virtually precluded objective measurement. It is particularly difficult to quantify the impact of regulation objectively. Nonetheless, restrictive regulations can exert an important influence on the degree of economic freedom present in a country.

To incorporate regulatory restraints into the index more fully, this chapter uses survey data to supplement the objective components of our current index and thereby develops a more comprehensive index of economic freedom. This broader index will integrate a number of factors that, until now, have either been omitted or poorly reflected in the index. Specifically, the broader index more accurately reflects cross-country differences in the freedom to contract and compete in business activities and labor markets. It also makes it easier to pinpoint the strengths and weaknesses of each country more accurately. Because of limitations of the data, at this time it is possible to construct the broader index for only 58 countries. We hope to expand coverage to more countries in the future.

Background on the Survey Data

The broad index uses the components of the economic freedom index for 2001 that was described in chapter 1. These data are supplemented with survey information from two other sources: the *Global Competitiveness Report 2000* (GCR) of the World Economic Forum and the *World Competitiveness Yearbook 2000* (WCY) of the International Institute for Management Development. The reports cover approximately 50 countries.[1]

The focus of the competitiveness reports differs decidedly from the emphasis of the Economic Freedom Index. The competitiveness reports seek to measure the attractiveness (“competitiveness”) of a country for business activity. While they contain some information on policy and institutions, much of their focus is on the use of technology, quality of the physical infrastructure, and skill of the labor force. Variables like spending on research, number of telephones and internet hookups, miles of highways, cost of air travel, and the wages and educational levels of workers are included in these indexes. These indicators may be helpful to those making business and investment decisions but they have little to do with economic freedom.

The competitiveness reports, however, also contain information derived from annual surveys of business owners and managers operating in each of the countries. Some of the survey questions address the quality of the regulatory and institutional environment. This is particularly true for the *Global Competitiveness Report*. While we would prefer to have objective variables, the survey data do provide information on some of the elements of economic freedom that are elusive and difficult to measure. When available, these data can be used to improve our measurement of economic freedom.

Areas of the More Comprehensive Index

To develop a broader index of economic freedom, we combined survey data from the competitiveness reports with components of the *Economic Freedom of the World* Index. The resulting, more comprehensive, index contains 45 components.[2] The components were categorized and used to rate each country in the seven major areas of the index. In turn, the seven area ratings were used to calculate a summary index. The areas of the more comprehensive index (which do not correspond exactly to the seven areas of the *Economic Freedom of the World* Index) are:

I Size of Government

II Legal Structure and Security of Property Rights

III Access to Sound Money

IV Freedom to Trade with Foreigners

V Regulation of Capital and Financial Markets

VI Regulation of Labor Markets

VII Freedom to Operate and Compete in Business

While these seven areas are not the sum total of economic freedom, they clearly make up a major part of it.[3] The sections that follow will indicate the precise components used to measure the degree of economic freedom in each of the seven areas. We will also indicate the ratings and rankings of each country in the area. The concluding section presents the summary rating of this broader index for each of the 58 countries.

AREA I: SIZE OF GOVERNMENT

Box 1

- **a Total government expenditures as a percentage of GDP.**
- b Size of government consumption, transfers, and subsidies.
  - i General government consumption expenditures as a percentage of total consumption.
  - ii Transfers and subsidies as a percentage of GDP.
- c Government enterprises and investment as a percentage of GDP.
- d Price controls: extent to which businesses are free to set their own prices.

Note: **Bold-face type** indicates the variable is not in the current *Economic Freedom of the World* Index.

Box 1 indicates the five components that make up Area 1: Size of Government.[4] These components measure the extent to which countries rely on individual choice and markets rather than the political process to allocate resources, 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 three components address this issue.

Total government expenditure as a share of GDP (Component I-a) is the most comprehensive indicator of government relative to private spending. As this ratio rises from 10% to 50%, the rating for this component falls from 10 to 0.[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. High-income countries currently spend only about 10% of GDP on these activities.[6] Thus, governments can spend sufficiently to perform their protective and productive functions and still earn the highest possible rating for this component.

The combined impact of government consumption as a share of total consumption and transfers and subsidies as a share of GDP is also indicative of government size. 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. The ratings for these two components are averaged and integrated into the index as an alternative measure for size of government.[7]

The fourth component measures the extent to which countries use private rather than government enterprises to produce goods and services. Government firms play by different rules than private enterprises. 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. Governments may also undermine the operation of markets through the imposition of price controls. Thus, countries that rely more extensively on price controls receive a lower rating for the fifth component.

Taken together, the five 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 few price controls earn the highest ratings in this area. Table 2-1 in the Appendix presents each country's component ratings and raw data on which they were based. The component ratings were averaged and used to derive the area rating.

Exhibit 2-1 indicates the size of government area rating for each country ranked from high to low. The five highest-ranked countries in this area are Hong Kong, El Salvador, Peru, Singapore, and Argentina. Mexico ranks sixth while Chile and the United States tied for seventh. The economies of these countries are characterized by small levels of government expenditures, few government enterprises, and few, if any, price controls. Thus, they rely extensively on voluntary exchange and market coordination to direct economic activities. In contrast, the economies of Israel, Ukraine, Slovakia, China, Jordan, and Poland are dominated by government. Therefore, these countries receive low ratings in this area.

As countries become richer, governments often engage more extensively in tax transfer activities. This increases both government spending and transfers as a share of GDP, pulling down the Area I rating. As a result, many high-income countries have a below-average rating in Area I. For example, the ratings of Germany, Finland, Luxembourg, Italy, Denmark, Norway, Sweden, Austria, France, and Belgium place them in the bottom half of the distribution. Countries such as China and Russia with extensive price controls and a sizable government enterprise sector are also rated low in this area.

Area II: Legal Structure and Security of Property Rights

Box 2:

- a Rule of law: legal institutions support the principles of the rule of law, and individuals have access to a nondiscriminatory judiciary.
- b Legal security of private ownership: private property rights are clearly delineated and protected by law.
- **c Protection of intellectual property (GCR-7.09).**
- **d Judicial independence: the judiciary is independent and not subject to interference by the government or parties in disputes (GCR-4.05).**
- **e Legal corruption: irregular payments to judges, court personnel, or other officials are rare (GCR-4.08).**
- **f Impartial courts: a trusted legal framework exists for private businesses to challenge the legality of government actions or regulations (GCR-4.09).**

Note: **Bold-face type** indicates the variable is not in the current *Economic Freedom of the World* Index.
GCR = *Global Competitiveness Report.* The numbers indicate the specific component of the report.

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. Thus, the legal system of an economically free country must provide for the security of property rights, enforcement of contracts, and the mutually agreeable settlement of disputes. Failure in this area 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 from aggressors, their incentive to engage in productive activity is eroded.

Area II focuses on how well this protective function of government is performed. Rule of law, protection of private property, an independent judiciary, and an impartial court system for the settlement of disputes are the key ingredients of a legal system consistent with economic freedom. As Box 2 indicates, the components in this area reflect these factors. Because development of an objective measure in this area is extremely difficult, the components are based on survey data. The "rule of law" component is from the *International Country Risk Guide* published by PRS Group; the other components are from the *Global Competitiveness Report*.

Table 2-2 of the appendix presents the component ratings for legal structure and security of property rights. The component ratings were averaged and used to derive the area rating. Exhibit 2-2 presents the country area rating for each of the 58 countries of our study. Luxembourg, Finland, Australia, Netherlands, Austria, Denmark, Germany, and the United Kingdom headed the list of countries with legal systems most consistent with economic freedom. Quite a number of countries had high ratings in this area: there were 12 countries with ratings of 9.0 or higher and another 10 with ratings above 8.0.

On the other hand, 13 countries received ratings of less than 5.0, indicating substantial problems with their legal systems. Peru, Indonesia, Ecuador, Venezuela, Ukraine, and Russia received the lowest ratings. Bolivia, Mexico, Colombia, El Salvador, Bulgaria, China, and the Philippines were also rated low. Poorly defined property rights not only reduce economic freedom, they also deter investment and retard economic growth. It is highly unlikely that countries with a low rating in this area will be able to sustain high rates of growth without substantially improving the quality of their legal system.

AREA III: ACCESS TO SOUND MONEY

Box 3

- 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 deviation of annual inflation in the last five years.
- c Annual inflation in the most recent year.
- d Freedom of citizens to own foreign currency bank accounts domestically and abroad.
- e Difference between the official exchange rate and the black market rate.

Note: All the variables in this area are in the *Economic Freedom of the World* Index.

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. It is 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 and make it virtually impossible for individuals and businesses to plan sensibly for the future.

It makes little difference who provides the sound money. The important thing is that individuals have access to it. Thus, in addition to a country's inflation rate, it is also important to consider how difficult it is to use alternative, more credible currencies. Is it legal to conduct transactions in currencies other than the one issued by the government? Can the domestic currency be easily converted to other currencies? Can bankers offer saving and checking accounts in other currencies? If the answer to each of these questions is "yes," access to sound money is increased and economic freedom expanded.

As Box 3 shows, the area index contains five components. The first three are designed to measure the consistency of monetary policy (or institutions) with long-term price stability. Components (d) and (e) are designed to measure the ease with which other currencies can be used. 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

Exhibit 2-1: Area I, Size of Government

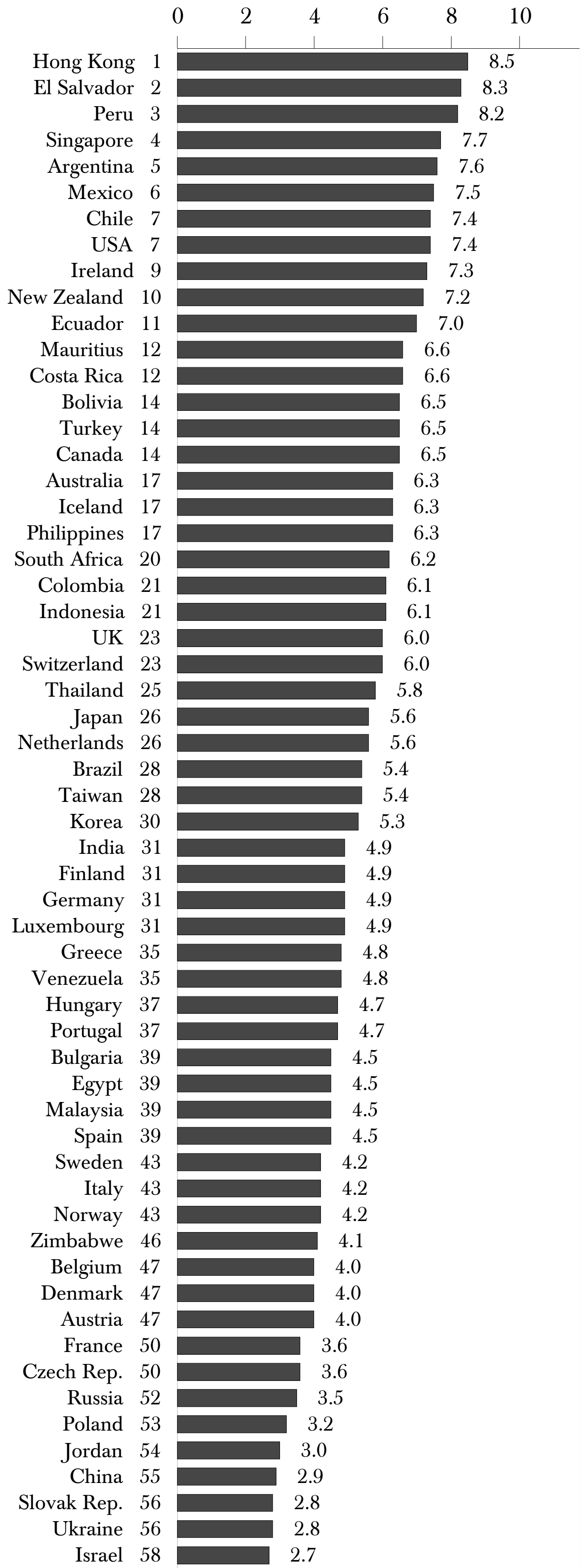
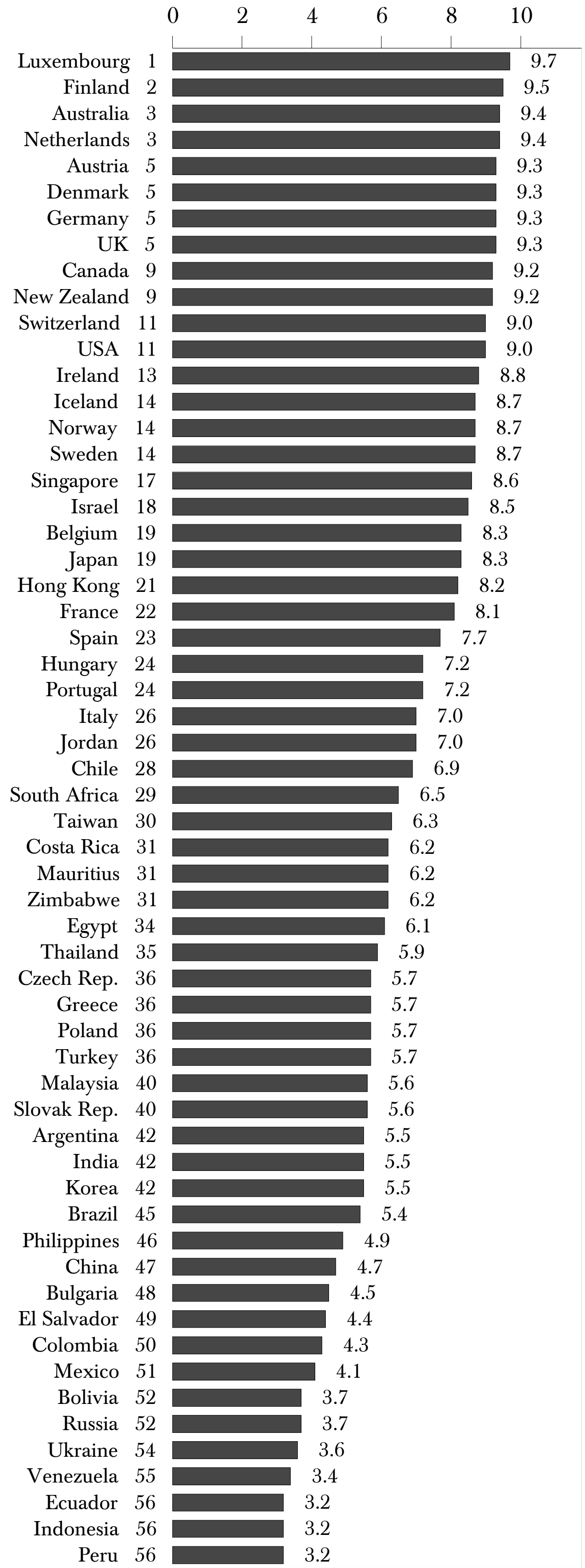


Exhibit 2-2: Area II, Legal Structure



of inflation and avoid regulations that limit the use of alternative currencies should citizens want to use them. On the other hand, countries adopting policies that result in high and volatile rates of inflation, restrict the convertibility of the domestic currency, and place limitations on the use of alternative currencies are given a low rating.

Table 2-3 of the Appendix presents the component rating for the sound money area and Exhibit 2-3 presents the monetary area ratings. The ratings in the monetary area are exceedingly high: 27 of the 58 countries received a rating of 9.5 or higher and 34 had ratings of 9.0 or better. These high ratings reflect the fact that there has been a rather dramatic shift in monetary policy and institutions during the last two decades. In contrast with the 1970s, the focus of monetary policy in many, if not most, countries is now on the achievement of price stability.

During the last five years, only a few countries have followed the path of monetary expansion. Russia, Brazil, Ukraine, Turkey, Bulgaria, Venezuela, Zimbabwe, Ecuador and Colombia fall into this category. Even among this group, several countries have already adopted changes that promise to improve the situation in the future. For example, Bulgaria moved to a currency board in 1997 and Ecuador adopted the US dollar as its official currency in 2000. Perhaps future ratings in this area will be even higher.

Area IV: Freedom to Trade with Foreigners

Box 4: Area IV, Freedom to Trade 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 Non-tariff regulatory trade barriers.
  - **i Hidden import barriers: no barriers other than published tariffs and quotas (GCR-9.02).**
  - **ii Customs administration: customs administration does not hinder the efficient transit of goods (WCY-3.33).**
- **c Costs of importing: the combined effect of import tariffs, licence fees, bank fees, and the time required for administrative red-tape raises costs of importing equipment by (10 = 10% or less; 0 = more than 50%) (GCR-9.01).**
- d Actual size of trade sector compared to expected size.
- e Difference between official exchange rate and black market rate.

Note: **Bold-face type** indicates the variable is not in the current *Economic Freedom of the World* Index.
GCR = *Global Competitiveness Report*; WCY = *World Competitiveness Yearbook*.

In our modern world of high technology and low communication and transportation costs, 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. Despite the overwhelming evidence that international exchange promotes economic progress, the freedom to trade with foreigners remains controversial. The protest demonstrations accompanying recent meetings of the World Trade Organization illustrate this point.

Responding to protectionist critics and special-interest politics, countries have adopted trade restrictions of various types. Tariffs and quotas are obvious examples of roadblocks that limit international trade. Because they reduce the convertibility of currencies, exchange-rate controls also retard international trade.[8] 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.

As Box 4 shows, the index components in this area are designed to measure a wide variety of restraints, including tariffs, quotas, hidden administrative restraints, and exchange rate controls. In order to get a high rating in this area, a country must have low tariffs, a large trade sector, efficient administration of customs, and a freely convertible currency. Table 2-4 of the appendix presents the component ratings for each of the 58 countries. The component ratings are averaged and used to derive the area rating. Exhibit 2-4 presents the international trade rating for each of the 58 countries ranked from high to low.

By a substantial margin, Singapore and Hong Kong have the highest ratings in the international trade area. Ireland, Belgium, the Netherlands, Sweden, Finland, Luxembourg, Austria, and Malaysia round out the "top ten." The lowest ratings are earned by Russia, India, Ecuador, Colombia, Brazil, Argentina and Venezuela. Most OECD countries had relatively high ratings. Japan was an exception: there are only 10 countries with a lower rating than the 6.6 score of Japan.

Area V: Regulation of Capital and Financial Markets

Box 5: Area V–Regulation of Capital and Financial Markets

- a Ownership of banks: percentage of deposits held in privately owned banks.
- **b Competition: domestic banks face competition from foreign banks** (GCR-8.03).
- c Extension of credit: percentage of credit extended to private sector.
- d Avoidance of interest rate controls and regulations that lead to negative real interest rates.
- **e Interest rate gap: gap between interest rates for bank loans and interest rates for deposits compared to international norms** (GCR-8.09).
- **f Interest rate controls: interest rate controls on bank deposits and/or loans are freely determined by the market** (GCR-8.08).
- g Restrictions on the freedom of citizens to engage in capital transactions with foreigners.
- **h Access to foreign capital markets: citizens are free to invest in stocks and bonds and to open bank accounts in other countries** (GCR-9.08).
- **i Foreign access to capital markets: foreigners may invest in stocks and bonds** (GCR-9.09).
- **j Index of capital controls: number of capital market restrictions among 13 IMF categories (0 = restrictions in all 13 categories; 10 = no restrictions in any of the 13 categories)**.

Note: **Bold-face type** indicates the variable is not in the current *Economic Freedom of the World* Index.

The last three areas of the index focus on regulatory actions that reduce economic freedom. Because of the difficulties involved in developing objective measures of regulatory restraints, more of the components in these three areas are based on survey data. Area V focuses on banking, finance, and capital-market regulations that restrict the freedom to compete or reduce freedom of exchange.

Exhibit 2-3: Area III, Sound Money

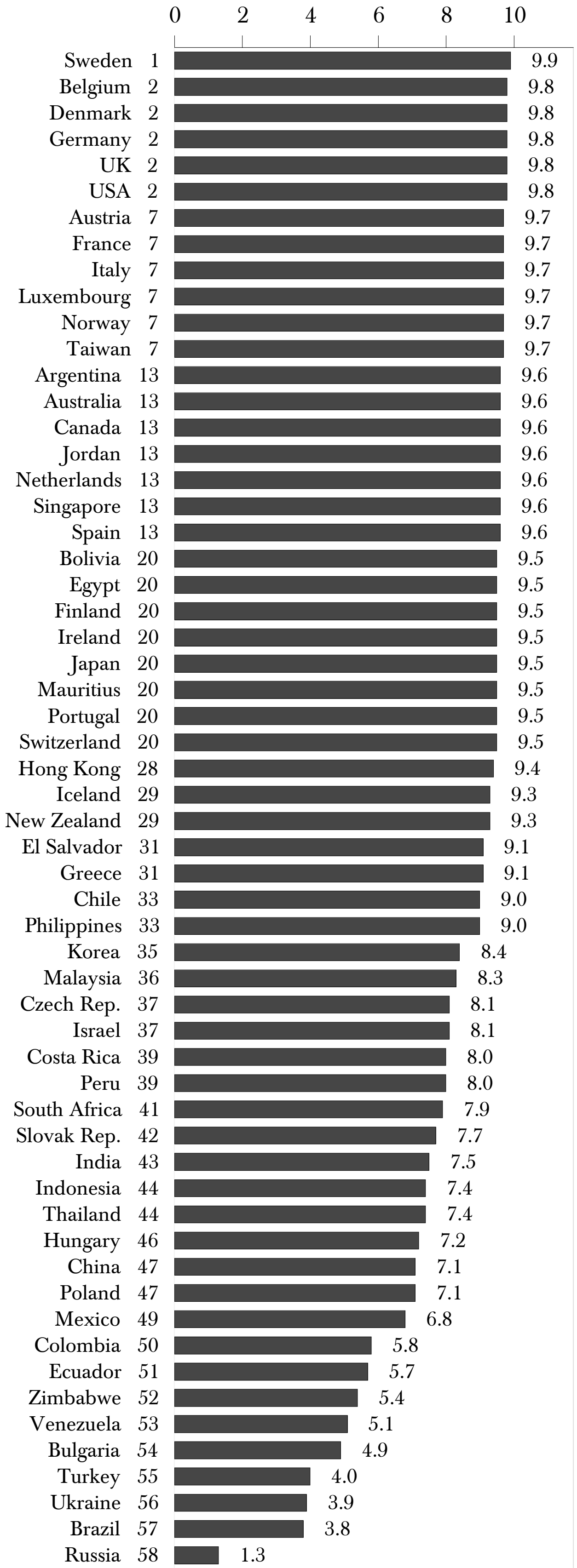
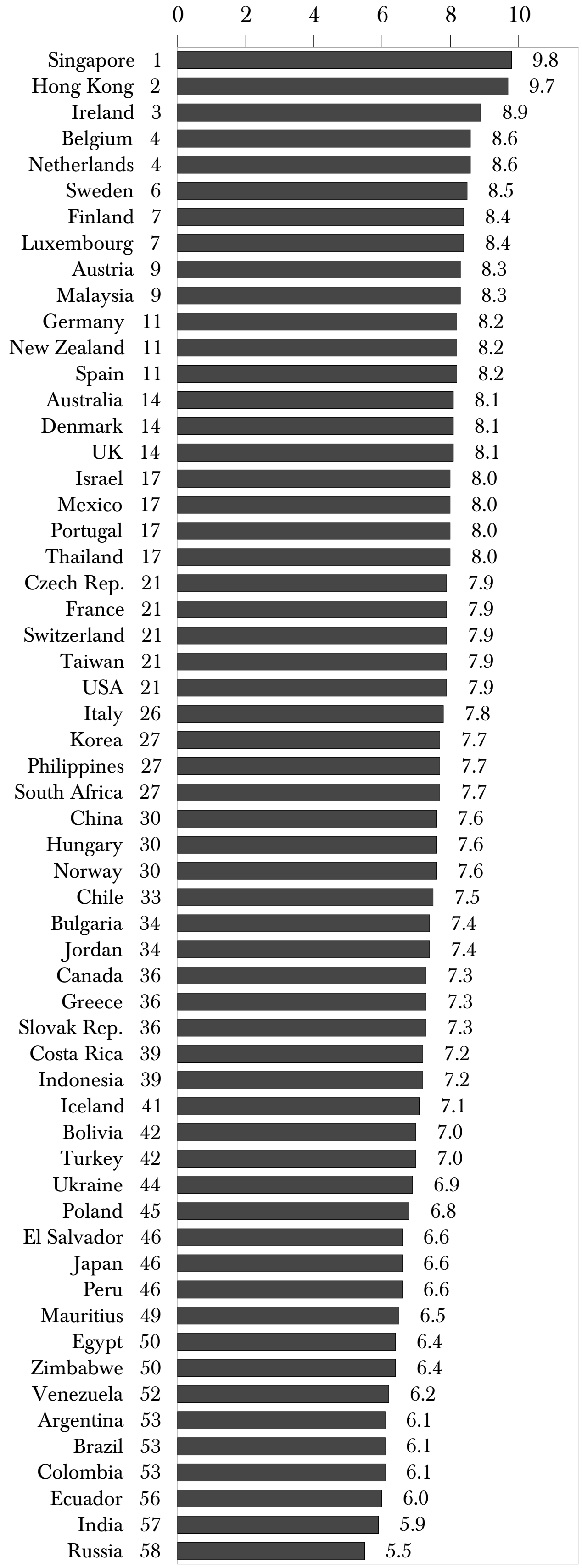


Exhibit 2-4: Area IV, International Trade



There are 10 components of the index in this area. The first two 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. Components (c), (d), (e), and (f) indicate the extent to which credit is supplied to the private sector and whether interest rate controls interfere with credit market operations. The four other components focus on the extent to which capital market regulations interfere with the freedom of citizens to engage in capital market transactions with foreigners. In order to receive a high rating in this area, a country must use a largely private banking system to allocate credit to private parties and refrain from the use of both interest rate and capital market controls.

The component ratings for Area V are presented in Table 2-5 of the Appendix; Exhibit 2-5 indicates the area ratings. Luxembourg, Netherlands, United Kingdom, Denmark, Hong Kong, New Zealand, Switzerland, and the United States head the list of countries receiving the highest ratings in the capital market area. Almost all of the world's high income countries had high ratings. Among the long-time OECD members, only Iceland and Greece had a rating below the median. Russia, India, Ukraine, China, Zimbabwe, Poland, Indonesia, and Brazil had the lowest ratings in this area among the 58 countries of the study.

Area VI: Regulation of Labor Markets

Box 6: Area VI, Regulation of Labor Markets

- a **Impact of minimum wage: the minimum wage, set by law, has little impact on wages because it is too low or not obeyed (GCR-6.03).**
- b **Hiring and firing practices: hiring and firing practices of companies are determined by employers (GCR-6.06).**
- c **Share of labor force whose wages are set by centralized collective bargaining.**
- d Top marginal tax rate (and income threshold at which it applies).
- e **Unemployment insurance: the unemployment insurance program strikes a good balance between social protection and preserving the incentive to work (GCR-6.08).**
- f Use of conscripts to obtain military personnel.

Note: **Bold-face type** indicates the variable is not in the current *Economic Freedom of the World* Index.

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, high marginal tax rates, and conscription.[9] As Box 6 shows, the components in this area are designed to measure the extent to which these restraints upon economic freedom are present across countries.[10]

To receive a high rating in this area, a country must allow market forces to determine wages and establish the conditions of dismissal, avoid high marginal tax rates and unemployment benefits that undermine incentives to work, and refrain from the use of conscription. Table 2-6 in the appendix presents the ratings for each of the components in this area.

Exhibit 2-6 shows the labor market area rating for each of the 58 countries, ranked from highest to lowest. Hong Kong, Jordan, Malaysia, Thailand, Costa Rica, Bolivia, United States, Philippines, New Zealand, and Singapore are the highest-rated countries. Western European countries with extensive labor market regulations, centralized wage setting structures, and lucrative unemployment compensation systems are heavily represented among those with the lowest ratings. Germany, France, Sweden, Finland, and Italy make up the bottom five. In fact, the 10 lowest rated countries are all Western European nations. Israel, China, and several of the former socialist countries of Eastern Europe also have heavily regulated labor markets.

While high marginal tax rates and conscription reduce economic freedom, their impact on the flexibility of labor markets is relatively minor. Minimum wages, dismissal regulations, centralized wage setting, and generous unemployment benefits exert a more direct impact on the flexibility of wages and operation of labor markets. Researchers interested only in labor market flexibility, might want to focus on these factors. Thus, we also calculated a cross-country labor market flexibility index that is based only on components (a), (b), (c), and (e) of Area VI. This rating is presented in the Appendix (Exhibit 2-10). While we do not believe this recalculated rating is a superior measure of economic freedom, it may well be a more reliable indicator of regulations that undermine the efficient operation of labor markets.

The labor market flexibility index indicates that Area VI overstates the labor market flexibility of several countries. The ratings of Argentina, Costa Rica, India, Luxembourg, and Mauritius are between 1.2 and 2.0 lower when based only on components (a), (b), (c), and (e). The rankings of these countries would also be affected substantially. If the labor rating were based on only the four labor market flexibility components, Argentina's ranking would fall from 13 to 32; Costa Rica's would plummet from 5 to 25; India's from 14 to 35; Luxembourg's from 37 to 48; and that of Mauritius from 14 to 41 (see Appendix, Exhibit 2-10). This indicates that the labor markets of these countries are not as flexible as the ratings of Area VI imply.

At the same time, Area VI understates the labor market flexibility of other countries. When only components (a), (b), (c), and (e) are included in the index, the ratings of Bulgaria, Chile, China, Egypt, Korea, Russia, and Ukraine were pushed upward by 1.2 or more. The rankings of these countries in the labor market flexibility index were at least 10 positions higher than for the entire Area VI index. These ratings and rankings indicate that the labor markets of these countries are more flexible than the ratings of Area VI imply.

Area VII: Freedom to Operate and Compete in Business

Box 7: Area VII–Freedom to Operate and Compete in Business

- a **Administrative conditions and new businesses: administrative procedures are not an important obstacle to starting a new business (GCR-10.07).**
- b **Time with government bureaucracy: senior management spends very little of its time dealing with government bureaucracy (GCR-4.02).**
- c **Starting a new business: starting a new business is generally easy (GCR-10.04).**
- d **Local competition: competition in local markets is intense and market shares fluctuate constantly (GCR-10.01).**
- e **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 (GCR-4.03).**
- f **Bank credit for business: extent to which credit flows from banks to business (WCY-4.04).**

Note: **Bold-face type** indicates the variable is not in the current *Economic Freedom of the World* Index.

The freedom to start and operate a business is an integral component of economic freedom and a vital source of prosperity. Like capital and labor market regulations, the regulation of business activities may inhibit economic freedom. Box 7 indicates the index components in this area. The

Exhibit 2-5: Area V, Financial Markets

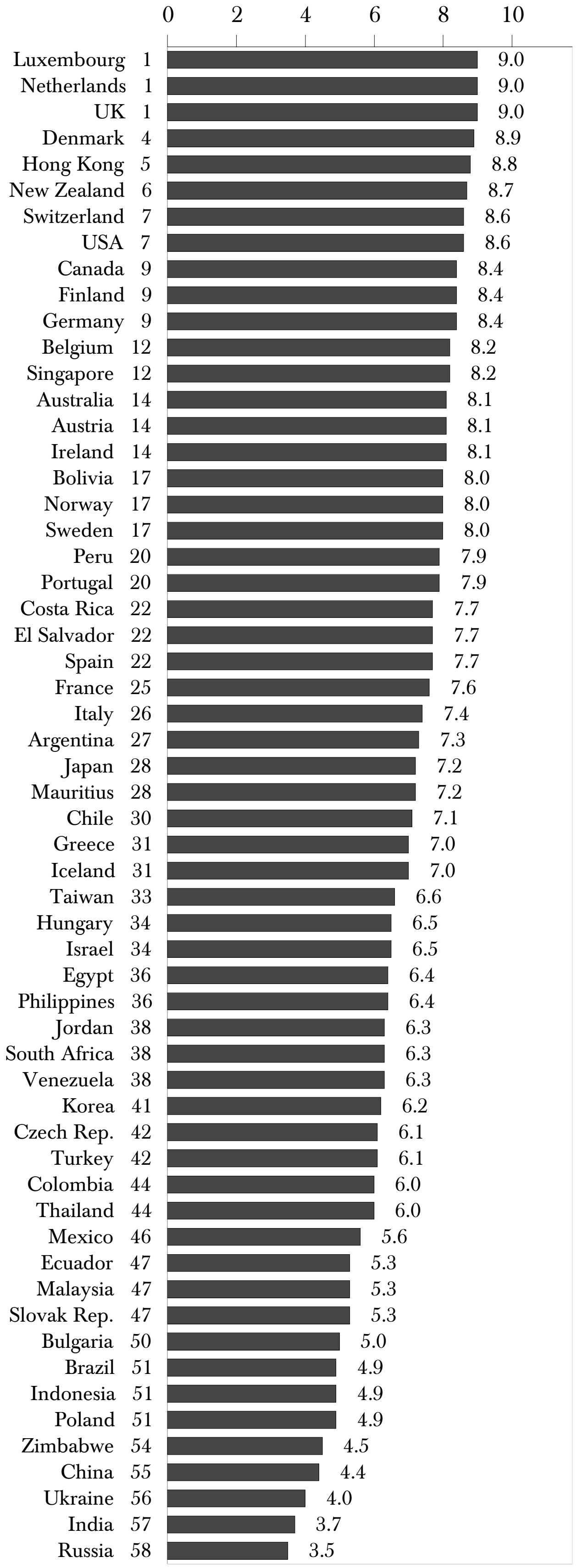
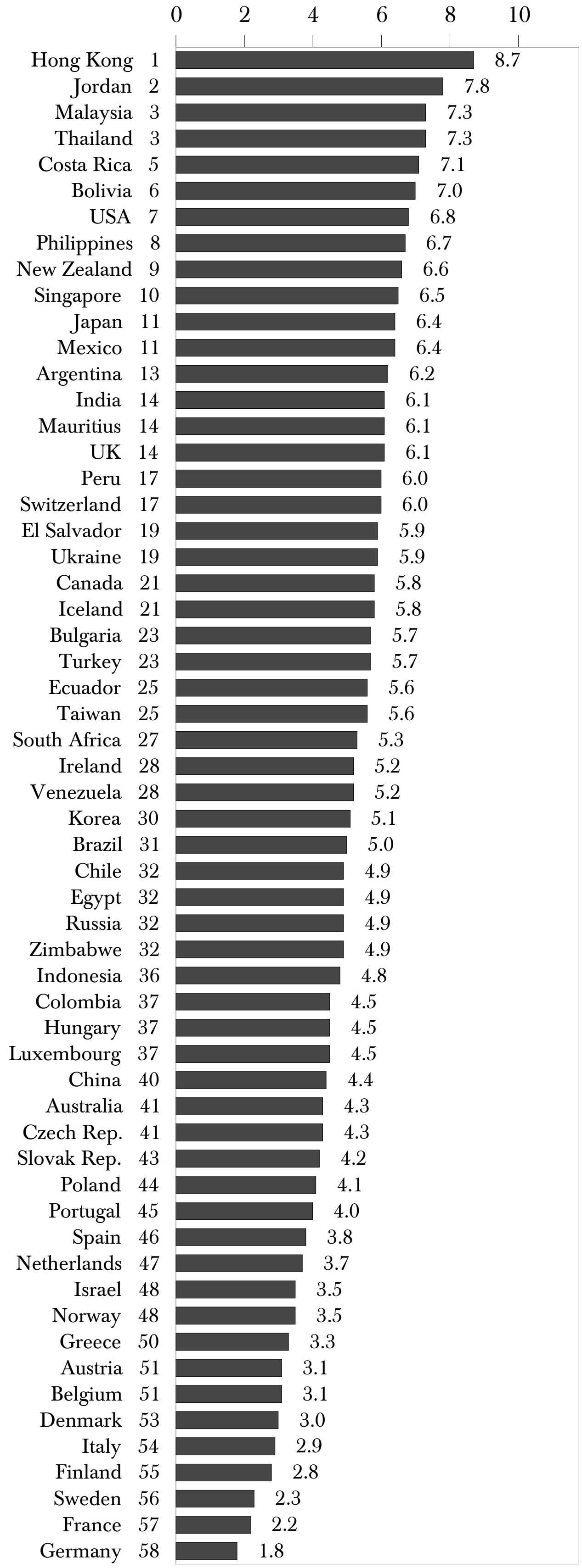


Exhibit 2-6: Area VI, Labor Markets



components are designed to identify the extent to which regulatory restraints and bureaucratic procedures limit competition and shift resources away from productive activities. In order to score high in this area, countries must refrain from regulatory activities that retard market entry and increase the cost of producing goods and services. They also must refrain from playing favorites–from using their power to extract financial payments and reward some businesses at the expense of others.

Table 2-7 of the Appendix provides the ratings for each component, while Exhibit 2-7 indicates the country rankings. Finland, Hong Kong, and the United States tied for the highest rating in this area. They were followed closely by Singapore, Iceland, Netherlands, Australia, Luxembourg, and the United Kingdom. At the other end of the scale, Russia, Venezuela, Ukraine, Mexico, Ecuador, and Bulgaria registered the lowest scores. Bolivia, Indonesia, Argentina, and Colombia also received low ratings in this area.

Interestingly, the Northern European countries–particularly those in the Scandinavian region–scored substantially better than southern European countries. For example, the ratings of Finland, Netherlands, Iceland, United Kingdom, Denmark, Sweden, and Norway were all well above those of France, Greece, and Italy. Perhaps surprising to some, this implies that while the government spending of northern European countries is high, their regulatory climate is not particularly antagonistic toward private business and competitive markets.

The Summary Ratings of the More Comprehensive Index

The ratings from the seven areas were averaged and used to derive a summary rating. Table 2-8 of the Appendix presents both the area and summary ratings for each of the 58 countries. Table 2-9 of the Appendix presents the area and summary rankings. Exhibit 2-8 presents the summary ratings for each of the countries ranked from high to low.

As in the regular *Economic Freedom of the World* Index, Hong Kong ranked first in this more comprehensive index. Hong Kong's 8.8 score was a half-point better than the 8.3 rating of Singapore. Hong Kong's rating was 8.2 or better in each of the seven areas. Among the 58 countries in this study, Hong Kong ranked in the "top five" in five of the seven areas covered by this index. The only blemishes on its record were rankings of 21 for its legal system (Area II) and 28 for access to sound money (Area III).

Singapore was the highest-rated country with regard to trade liberalization (Area IV). Its rankings were persistently high in each of the seven areas. In fact, Singapore's lowest ranking was its rank of 17 for legal system and security of property rights. Even though its 6.5 rating placed it at 10 in the labor regulation area, this was well below Hong Kong's score of 8.7. Basically, the gap in this area accounts for the difference between the ratings of Hong Kong and Singapore.

The United States ranked 3; its area rankings were consistently high. It ranked 11 or better in every area but one. Its ranking slipped to 21 in international trade (Area IV). The United States tied with Finland and Hong Kong for the highest rating in the freedom of business activity (Area VII). It tied for 2 in the sound money area (III) and placed at 7 in the size of government, financial market, and labor market areas.

New Zealand and the United Kingdom ranked at 4 and 5 respectively. Ireland placed at 6; Canada and Switzerland tied for 7, followed by Australia, Luxembourg, and the Netherlands (tied for 9). Interestingly, eight of the 11 highest ranked countries inherited their institutional framework from the British. This suggests that British common law and other English institutions are highly supportive of economic freedom.

At the other end of the spectrum, the 10 lowest-ranked countries were Russia, Ukraine, Venezuela, Brazil, Zimbabwe, China, Bulgaria, Ecuador, the Slovak Republic, Poland, and Colombia (the latter two were tied for 48). Six of the 11 lowest-rated countries were either socialist or former socialist countries. The ratings of the former socialist countries were generally low. Among this group, the rankings of Hungary (tied for 38) and the Czech Republic (44) were highest, while those of Bulgaria and

Exhibit 2-7: Area VII, Business Sector

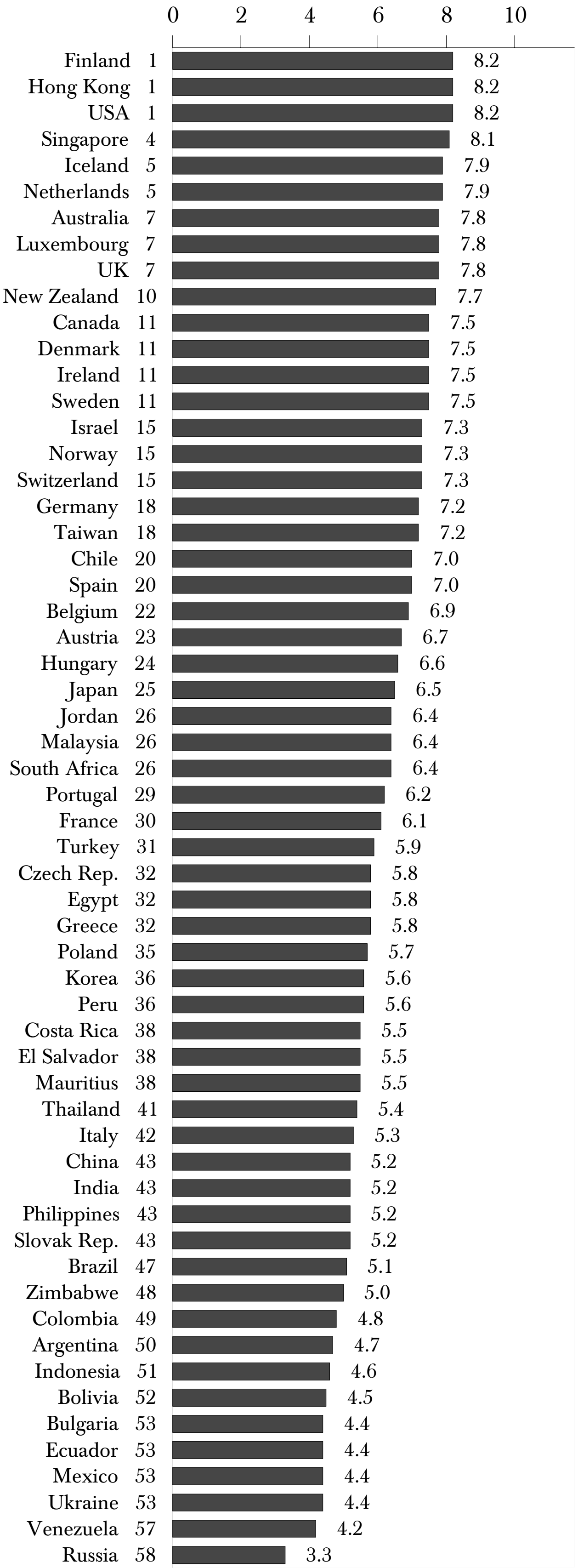
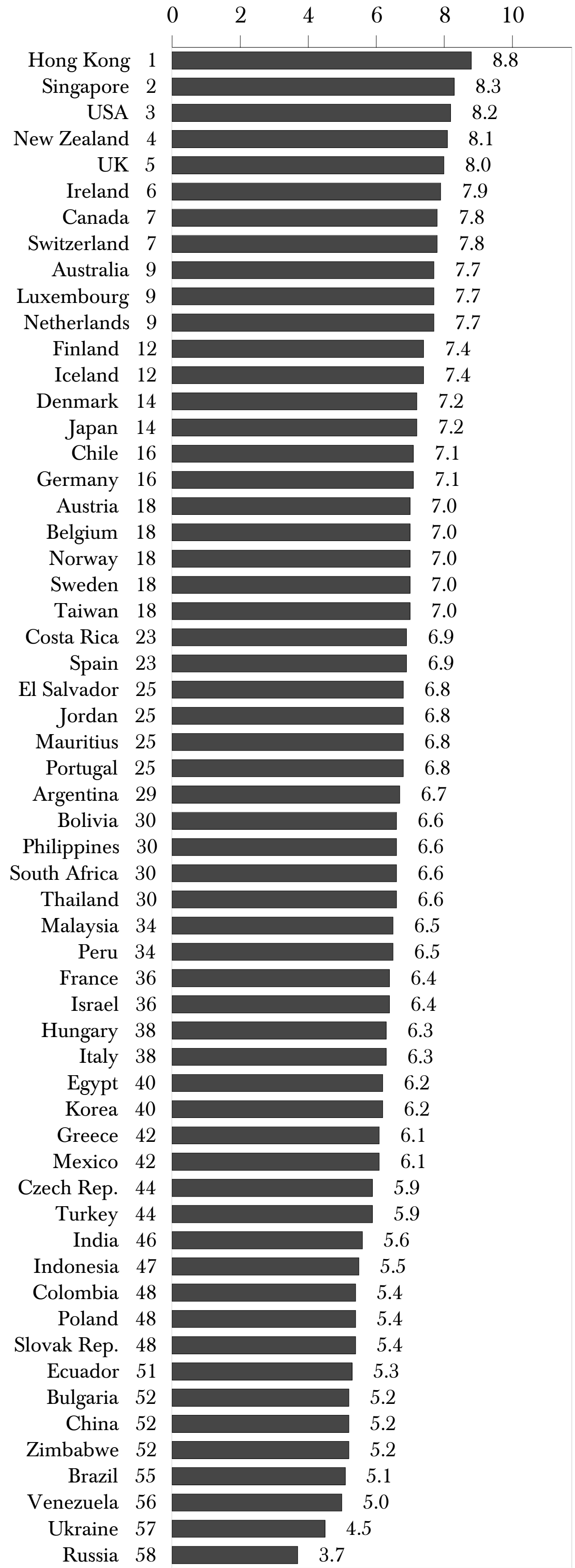


Exhibit 2-8: Summary Index



China (tied for 52), Ukraine (57), and Russia (58) were lowest. The development of economic freedom is an evolutionary process. The low scores of the former socialist countries illustrate that this evolutionary process is time-consuming and difficult.

Regional Rankings

It is interesting to consider the ratings of countries within regions. Among the Western European countries, the United Kingdom (5), Ireland (6),and Switzerland (tied for 7) were ranked highest; France (tied for 36), Italy (tied for 38) and Greece (tied for 42) were ranked lowest.

Of course, the rankings of Hong Kong and Singapore were the best in Asia. Japan (14) and Taiwan (18) were the next best in this region; India (46), Indonesia (47), and China (52) ranked lowest among the Asian nations.

In Central and South America, Chile (16), Costa Rica (23) and El Salvador (tied for 25) ranked highest, while Colombia (tied for 48), Ecuador (51), Brazil (55) and Venezuela (56) ranked lowest. Only three sub-Saharan African countries were included in the study. Mauritius tied with three other countries for 25; South Africa ranked 30 (tied with three other countries); and Zimbabwe tied with Bulgaria and China for 52.

Rating Patterns

Several interesting patterns emerge from analysis of the area ratings. The high-income industrial countries of Europe generally scored well in all categories except two: size of government (Area I) and regulation of labor markets (Area VI). Among the 58 countries of this study, Belgium, France, Austria, Sweden, Norway, Denmark, Italy, and Spain all ranked in the "bottom twenty" in the size of government area. Ireland and Iceland were the only Western European countries to make the "top twenty" in the size of government area.

The situation was similar in the labor market regulation area. Germany and France received the lowest scores in this area. The ratings of Sweden, Finland, and Italy were only slightly higher. Denmark, Belgium, Austria, Greece, and Norway also ranked in the "bottom 10" in the area of labor market regulation. The United Kingdom, Switzerland, Iceland, and Ireland were the only Western European countries with labor markets meriting an above-median rating.

Comparing the Comprehensive and Regular Indexes

Approximately half of the 45 component ratings of the more comprehensive index are based on survey data. As we discussed earlier, the survey data primarily concern differences in regulatory activities, particularly those that affect labor markets and business operation. They are also an indicator of the even-handedness of the judiciary and similar factors related to the operation of the legal system. These factors are captured in Areas II, VI, and VII of the more comprehensive index. As a result, most of the components in these three areas are included only in the more comprehensive index. In contrast, most of the components in the other four areas are from the regular *Economic Freedom of the World* Index. Put another way, the regular index can be expected to register cross-country differences with regard to size of government, sound money, international trade, and capital market operations accurately. As currently constituted, however, it does not reflect the impact of labor and business regulation and the quality of the legal system adequately.

How do differences between the two indexes influence country ratings and rankings? Exhibit 2.9 arrays the countries on the basis of their ranking in the more comprehensive index and presents the parallel ratings and rankings from the two indexes. In this exhibit, the rankings from the regular index are based on the inclusion of only the 58 countries analyzed here.

Clearly, the two indexes are closely related. For example, the six highest-ranked countries in the two indexes are identical—Hong Kong, Singapore, United States, New Zealand, the United Kingdom, and Iceland—with only a slight variation in their order. Other top-ranking nations in both indexes include Australia, Luxembourg, Netherlands, and Switzerland.

The situation was much the same at the bottom end of the scale. Russia and Ukraine rank 58 and 57 respectively in both indexes. Both scales place Venezuela, Brazil, Zimbabwe, China, Bulgaria, Poland, and Colombia in positions between 48 and 56.

As column 5 of Exhibit 2-9 shows, there were only a few cases where a country's ranking in one index is more than eight positions different from its ranking in the other index. The comprehensive index ranked four countries–, Taiwan, Thailand, Jordan, and India–substantially higher than the regular index. Closer inspection reveals why these countries did better in the more comprehensive index. Taiwan rates high in the regulation of business area, indicating that regulation is relatively light. This boosted its position in the comprehensive index. Thailand, Jordan, and India had higher ratings and rankings in labor market regulation than was true for other areas. This pushed their ranking upward in the comprehensive index.

The comprehensive index suggests that the regular index ranks Argentina, Bolivia, Italy, and Greece too high. While Argentina and Bolivia tied for 11 in the regular index, they were 29 and 30 in the more comprehensive index. Bolivia and Argentina rate poorly in legal systems and regulation of business, two areas that are under-represented in the regular index. Argentina's labor market is highly regulated (see Appendix, Table 2-10). Thus its low ratings for the four labor market flexibility components of Area VI are also a drag on its rating in the broad index. The performance of Greece and of Italy is also extremely poor in labor-market regulation. This pushes their rankings downward in the comprehensive index.

Despite these outliers, statistical analysis indicates that the two indexes are highly correlated. The rank correlation coefficient between the two indexes is 0.935. The ratings correlation coefficient between the two indexes is even higher, 0.947. The size of these correlation coefficients indicates that while the regular index can be improved, it is nonetheless a reasonably good measure of cross-country differences in economic freedom.

Conclusion

The index developed here provides a more comprehensive measure of economic freedom than has heretofore been available. It will help both policy makers and social scientists pinpoint both the strengths and weaknesses of institutions and policies more accurately. It should also be of value to researchers seeking to enhance our knowledge of the factors underlying economic growth and the process of development. With time, it is our hope that it will contribute to changes that will improve the rate of economic progress.

Exhibit 2-9: Comparison of Comprehensive and 2001 EFW Rankings and Ratings

	Comprehensive Index		2001 EFW Index		Difference between comprehensive and 2001 EFW Indexes[b] (5)
	Rank (1)	Rating (2)	Rank (3)	Rating (4)	
Hong Kong	1	8.8	1	9.4	0
Singapore	2	8.3	2	9.3	0
United States	3	8.2	5	8.7	+2
New Zealand	4	8.1	3	8.9	–1
United Kingdom	5	8.0	4	8.8	–1
Ireland	6	7.9	6	8.5	0
Canada	7	7.8	13	8.2	+6
Switzerland	7	7.8	6	8.5	–1
Australia	9	7.7	6	8.5	–3
Luxembourg	9	7.7	9	8.4	0
Netherlands	9	7.7	9	8.4	0
Finland	12	7.4	14	8.1	+2
Iceland	12	7.4	15	8.0	+3
Denmark	14	7.2	15	8.0	+1
Japan	14	7.2	20	7.9	+6
Chile	16	7.1	15	8.0	–1
Germany	16	7.1	15	8.0	–1
Austria	18	7.0	15	8.0	–3
Belgium	18	7.0	20	7.9	+2
Norway	18	7.0	24	7.8	+6
Sweden	18	7.0	20	7.9	+2
Taiwan[d]	18	7.0	33	7.3	+15
Costa Rica	23	6.9	24	7.8	+1
Spain	23	6.9	28	7.6	+5
El Salvador	25	6.8	20	7.9	–5
Jordan[d]	25	6.8	38	6.8	+13
Mauritius	25	6.8	32	7.4	+7
Portugal	25	6.8	24	7.8	–1
Argentina[c]	29	6.7	11	8.3	–18
Bolivia[c]	30	6.6	11	8.3	–19
Philippines	30	6.6	28	7.6	–2

	Comprehensive Index		2001 EFW Index		Difference between comprehensive and 2001 EFW Indexes[b] (5)
	Rank (1)	Rating (2)	Rank (3)	Rating (4)	
South Africa	30	6.6	37	7.0	+7
Thailand[d]	30	6.6	38	6.8	+8
Malaysia	34	6.5	41	6.7	+7
Peru	34	6.5	28	7.6	–6
France	36	6.4	31	7.5	–5
Israel	36	6.4	41	6.7	+5
Hungary	38	6.3	35	7.1	–3
Italy[c]	38	6.3	24	7.8	–14
Egypt	40	6.2	38	6.8	–2
South Korea	40	6.2	35	7.1	–5
Greece[c]	42	6.1	33	7.3	–9
Mexico	42	6.1	44	6.5	+2
Czech Rep.	44	5.9	43	6.6	–1
Turkey	44	5.9	47	6.2	+3
India[d]	46	5.6	55	5.3	+9
Indonesia	47	5.5	47	6.2	0
Colombia	48	5.4	51	5.8	+3
Poland	48	5.4	53	5.7	+5
Slovak Republic	48	5.4	46	6.3	–2
Ecuador	51	5.3	45	6.4	–6
Bulgaria	52	5.2	50	5.9	–2
China	52	5.2	51	5.8	–1
Zimbabwe	52	5.2	54	5.4	+2
Brazil	55	5.1	56	5.1	+1
Venezuela, Rep.	56	5.0	49	6.1	–7
Ukraine	57	4.5	57	4.6	0
Russia	58	3.7	58	3.9	0

Note: The correlation coefficient between index ratings (columns 2 and 4) = 0.947; the rank correlation coefficient (columns 1 and 3) = 0.935.

(a) The mean value for the countries listed of the comprehensive index rating was 6.6 compared to 7.3 for the 2001 EFW index.

(b) 2001 EFW ranking minus comprehensive index ranking.

(c) Indicates that country's comprehensive index rank is at least 8 places higher than its 2001 EFW index rank.

(d) Indicates that country's comprehensive index rank is at least 8 places lower than its 2001 EFW index rank.

NOTES

(1) The ratings of the *Global Competitiveness Report* were based on a survey of more than 4,000 executives doing business in at least one of the 59 countries covered by the report. Of the 59 countries, all but Vietnam are also included in the *Economic Freedom of the World* Index. The original GCR ratings were scaled from 1 to 7. To make them comparable with other components, the following formula was used to convert them to a 0 to 10 scale: GCR rating minus 1, multiplied by 1.667. The *World Competitiveness Yearbook* contains information for 47 countries. The survey data are based on responses to a 110-item questionnaire by 3,263 top-level and mid-level executives representing both international and domestic companies. The original ratings of the yearbook are scaled from 0 to 10.

(2) Twenty-two of the 45 components are based on the survey data of the competitiveness reports. Because of its greater focus on institutional and regulatory issues, most (20 of the 22) of the survey variables are from the *Global Competitiveness Report*. Most of the other components of the index presented here are from the economic freedom index. The Appendix to Chapter 1 of this publication provides details on the derivation of the components used in *Economic Freedom of the World* and explains how the raw data were converted to a scale of 0 to 10.

(3) Freedom to own and lease housing and freedom to choose in the area of education are two major areas that are omitted. Eventually we hope to incorporate these two areas into a still more comprehensive index.

(4) The components of this area are like those of Areas I and II of our regular index.

(5) Total government expenditures include both on-budget and off-budget spending at all levels of government. Because this figure is unavailable for many countries, it was not included in the *Economic Freedom of the World* Index. However, we were able to obtain total government expenditures as a share of GDP (TGE) for most of the 58 countries here and integrate this component into the broader index. The following formula was used to convert the raw data to the scale of 0 to 10: 10 multiplied by (50 – TGE) / 40. The rating was restricted to values between 0 and 10. If total government spending was 10% or less of GDP, the rating would be 10. When government spending is equal to or greater than 50% of GDP, a rating of 0 is assigned.

(6) For evidence on this point, see James Gwartney, Robert Lawson, and Randall Holcombe, The Scope of Government and the Wealth of Nations, *Cato Journal*, 18, 2 (Fall 1998): 164–190.

(7) See the Appendix to Chapter 1 of this publication for details on precisely how the raw data for these two variables were converted to the rating scale from 0 to 10.

(8) Exchange-rate controls lead to black market exchange-rate premiums. A black market exchange-rate premium is both an obstacle to trade and an indicator of unsound money. Thus, it is included in both Areas III and IV.

(9) 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.

(10) The centralized wage-setting component (VI-E) is a new categorical variable. The following system was used to rate each country. 10 = wages are set by agreements between employers and employees (or their representative); an employee cannot be required to join a union as a condition of employment, and fewer than 40% of employees have their wages set by collective bargaining. 8 = wages are set by agreements between employers and employees (or their representative); employees are sometimes required to join a union as a condition of employment but fewer than 40% of employees have their wages set by collective bargaining. 5 = 40% to 60% of employees have their wages set by collective bargaining. 2 = collective bargaining generally covers entire industries and occupations; wages of 60% to 80% of employees are set centrally. 0 = collective bargaining generally covers entire industries and occupations; wages of more than 80% of employees are set centrally.

Appendix: Tables to Chapter 2