Part I

The Global Economy

Chapter 1

GLOBALIZATION: MEANING AND MEASUREMENT[1]

1. Rhetoric and Spin

Millions of words have been written, hundreds of conferences convened, and dozens of books published about globalization. Yet the subject remains clouded, if not obscured, by the rhetoric surrounding it.

The situation recalls a comment by an 18th century philosopher, sometimes referred to as the "first American." Said Benjamin Franklin (I paraphrase slightly): Where there is "a flood of words," there is usually only "a drop of reason."

Or, to cite an anonymous 17th century poet: "Where words most abound, much sense beneath is rarely found."

As a result of the rhetoric, media hype, and spin associated with globalization, as well as the occasionally violent demonstrations against it, globalization has become a convenient scapegoat for many things—indeed, for almost anything, and sometimes seemingly for everything. Globalization has been blamed for the Asian financial crisis of 1997–1998, the Russian economic plunge in 1999, global warming, hormone-treated beef, the spread of foot-and-mouth disease in Europe, and even piracy in the South China Sea!

A slightly edited version was published in ***Critical Review*** *on April 30, 2001 under the same title.*

[1] Based on a presentation originally made at the 3rd annual conference between RAND and the China Reform Forum, held in Beijing in November 2000, on *The Challenges of Globalization.*

The phenomenon recalls the role of the Vietnam war as an all-purpose scapegoat for anything that went wrong in the 1960s and 1970s: stagflation in the United States, the drug culture in the United States and Europe, even the sharp increase in teenage pregnancy in the United States.

Use of the term "scapegoat" doesn't mean that globalization has had no contributory responsibility for any of the untoward developments mentioned above. But in each case the predominant causes and responsibilities lie elsewhere. For example, the Asian financial crisis was mainly caused by misguided policies, especially by maturity mismatches between the terms on which funds were borrowed and those on which they were invested, rather than by anything properly attributable to globalization.

2. What Does It Mean?

The word has been used in so many different contexts, and with so many different connotations, that it recalls Humpty Dumpty's pronouncement: "When I use a word it means just what I choose it to mean—neither more nor less." Still, it would seem desirable to arrive at a reasonably clear definition of globalization before considering how to measure it.

At a simple, dictionary level, globalization is defined as "The act, process, or policy of making something worldwide in scope or application." Before dismissing this definition as too simplistic, it is worth recalling an observation by Ernest Rutherford that unless you can state a technical point in simple, non-technical language, you probably don't really understand it!

Other definitions include the following, more or less in order of increasing complexity:

> "[Globalization is] the intensification of worldwide social relations…in such a way that local happenings are shaped by events occurring many miles away." (Anthony Giddens, 1990)

> "Globalization reflects a more comprehensive level of interaction than in the past, something different from the word 'international.' It implies a diminishing importance of national borders and the

> strengthening of identities…beyond those rooted in a particular region or country." (Ford Foundation Report, 1997)

> "Globalization is the growing economic interdependence of countries worldwide through the increasing volume of cross-border transactions in goods and services and of international capital flows, and also through the more rapid and widespread diffusion of technology." (International Monetary Fund, 2000)

> "Globalization is not a policy option, but a fact…The emerging reality is that all nations' militaries are sharing essentially the same global commercial-defense industrial base." (Donald Hicks, Defense Science Board, 2000)

The first three of these quotations are representative of many generic definitions, while the fourth has a more distinctive, and perhaps slightly paradoxical, quality. The paradox is that, while proclaiming globalization as a "fact" and not a "policy option," its focus on the "emerging reality" of a "shared global commercial-defense industrial base," actually opens up a wide range of differing policy options: for example, easing or restricting controls on the export of military or dual-use technologies, procuring military equipment abroad or confining procurement to defense industry at home, and so on.

I suggest the following, somewhat syncretic definition, which will underlie much of what follows in this paper:

> "Globalization is the increased speed, frequency, and magnitude of access to national markets by non-national competitors."

In defining globalization this way, I intend it to encompass *all* markets: social, cultural, and recreational markets, including markets for intellectual property, literature, film, media, music, and sports, as well as those for merchandise and commercial services.

3. Measurement Issues and Applications

The preceding definition implies several tendencies in global and national markets, and the conditions we should expect to find or to impend as globalization proceeds. These conditions should, in turn,

affect the identification and design of appropriate indicators or metrics for globalization.

First, and most obviously, this definition implies that global markets have become and are becoming more integrated.

Second, increased access to national markets by non-national competitors suggests that disparities across countries in prices, wages, and real interest rates (after allowing for the costs of hedging against exchange-rate risks), should decrease.

Third, with the decline in price gaps among countries, price correlations between markets should increase, and divergences of output patterns across markets should rise due to enhanced opportunities for specialization and the effect of comparative advantage.

Fourth, differences between savings rates and investment rates *within countries* should increase (because investment rates will be less dependent on savings rates than has been true in the past).

Typically, measurement of globalization has focused on the magnitudes of trade transactions and capital flows, based on the premise that the larger these magnitudes, the greater the prevalence or expansion of globalization. Yet, the volume of trade and capital flows are at best imperfect indicators, because of various problems connected with them. For example, trade and capital transactions are subject to wide fluctuations, and the reliability and comparability of the underlying data are often questionable. Trade can be distorted through national policies—such as subsidies to raise exports and tariffs or non-tariff barriers to restrict imports. Consequently, such policies may obscure underlying globalization trends, or may sometimes even make such trends appear stronger than they in fact are.

Notwithstanding these problems, one frequently used indicator of globalization is exports as a proportion of gross domestic (or global) product. Table 1.1 summarizes the long-term trend in global exports as a percent of global product, from 1870 to 1999.

As the figures in Table 1.1 indicate, this ratio as an indicator of globalization isn't monotonic: it moves up and down over time. Indeed, in the 1990s—the period of what has typically been viewed as a relent-

Table 1.1

Exports as a Percentage of GDP, 1870–1999

Year						
1870	1913	1950	1973	1987	1995	1999
5.9	8.2	5.2	10.3	12.8	17.3	15.0

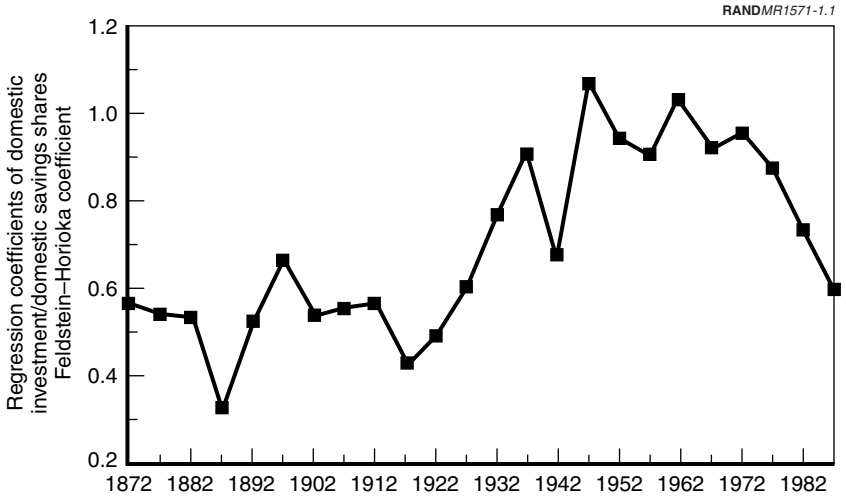
SOURCES: Kevin H. O'Rourke and Jeffrey G. Williamson, *Globalization and History,* MIT Press, 1999.; Department of Commerce, Bureau of Economic Analysis, 1995, 1999. Data for 1870–1987 cover only merchandise exports for OECD countries; data for 1995–1999 are global and cover *all* exports.

less move toward globalization—the ratio fell between 1995 and 1999.

The volume of international capital flows is another useful and relevant, although also imperfect, indicator of globalization. As with trade data, the data on capital flows are also subject to distortions of various sorts; for example, by tax policies, government-subsidized investment guarantees, and other measures designed to promote or impede such flows.

Interestingly, and contrary to some conventional wisdom, O'Rourke and Williamson (1999) have found that foreign capital flows relative to domestic savings were considerably larger at the start of the 20th century than at its end! However, whereas capital flows at the turn of the century were overwhelmingly in the form of loans, now they consist mainly of foreign direct investment and, to a lesser extent, of portfolio equity investment. One particular form of current capital flows that was virtually non-existent in bygone periods is foreign direct investment (FDI) associated with transborder mergers and acquisitions (M&A). For example, in 1999, FDI for M&A amounted to $800 billion, representing an increase of almost 50 percent from the prior year.

As noted earlier, we might expect on theoretical grounds that globalization should be associated with widening differences between domestic savings and investment rates as a result of greater integration of global capital markets. Figure 1.1 hows the varying correlations between domestic savings and investment rates from 1872 to 1987. While a lower coefficient (the vertical axis of Figure 1) implies a higher degree of integration of global capital markets, Figure 1 shows—once again contrary to much conventional wisdom—that



SOURCE: Kevin H. O'Rourke and Jeffrey G. Williamson. *Globalization and History*, MIT Press, 1999; A. M. Taylor, *International Capital Mobility in History: The Saving-Investment Relationship*, National Bureau of Economic Research, Cambridge, Mass., 1996.

NOTE: Lower correlation implies greater integration of capital markets. Data are for Atlantic economies.

Figure 1.1—Integration of Global Capital Markets: One Indicator

capital markets appear to have been more closely integrated before World War I than they currently are!

In an effort to develop new and improved measures of economic "openness"—an important aspect, if not synonym, of globalization—a recent RAND study devised three additional measures of the relative degree of market access (i.e., economic openness) in five countries: the United States, Germany (as a proxy for the European Union), China, Japan, and South Korea.[2] The three measures are:

[2]See Charles Wolf, Jr., Hugh Levaux, and Daochi Tong. *Economic Openness: Many Facets, Many Metrics*. RAND, MR-1072-SRF, Santa Monica, California, 1999.

- a survey questionnaire relating to the relative ease or difficulty of engaging in trade or investment business in the five countries, distributed to the top executives responsible for international operations in 500 multinational corporations;
- a detailed review of legal and administrative documents in each of the countries to assess the extent to which foreign business operations were restricted or prohibited;
- comparisons between the purchasing power parity (so-called "real") value of each country's currency, and its foreign exchange ("nominal") value. (The rationale underlying this measure is that, other things equal, the more "open" an economy, the closer should be the PPP and foreign exchange values of its currency, and conversely.)

The survey was conducted over a five-month period in late 1997 and early 1998 with a response rate of 60 percent. Respondents were asked to respond to a 10-page questionnaire, rating each of the five countries according to a six-point scale (from zero to five) as to the degree of restrictiveness prevailing in each of the countries. Table 1.2 shows the aggregate response means from the survey.

Table 1.3 shows the openness index resulting from the review of legal and administrative documents and regulations referred to above.

Table 1.2

Aggregate Response Means from Business Questionnaire

Country	Openness in Trade	Openness in Investment	Aggregate Openness[a]
United States	1.71	0.97	1.35
European Union	2.43	1.67	2.07
Japan	3.34	2.86	3.13
South Korea	3.21	3.42	3.30
China	3.41	3.94	3.64

[a]Aggregate index is based on the aggregate answers to 20 questions in the openness questionnaire: low index values signify less restriction, hence greater economic openness. The aggregate index is an unweighted average of the trade and investment indexes, subject to rounding.

Table 1.3

Aggregate Openness Index Based on Authors' Evaluations of Administrative and Legal Regulations

Country	Trade	Investment	Overall
United States	1.63	0.90	1.27
European Union	2.53	0.77	1.65
Japan	3.40	2.77	3.08
South Korea	3.77	3.00	3.38
China	3.83	3.77	3.80

Finally, Table 1.4 shows the results of the third metric, comparing the normalized differences between the five countries' purchasing power parities and foreign exchange currency values, during the 1991–1995 period.

The results shown in Table 1.4 diverge slightly from the close congruence between the rankings of openness displayed in Tables 1.2 and 1.3. Yet even this slight divergence (i.e., the shift in ranks between Germany and Korea) is readily attributable to two factors: the differing time periods covered in Table 1.4 compared to that in Tables 1.2 and 1.3; and the sharp impact of German reunification costs in the early and middle 1990s on the disparity between PPP and exchange rate values of the deutschmark. In any case, it is evident that the overall economic openness rankings shown in the three tables for the five countries is strikingly similar.[3]

Table 1.4

Normalized Differences Between Purchasing Power Parities (PPP) and Exchange Rates (XRs), 1991–1995 Averages

Country	Average PPP	Average XR	$\frac{\text{PPP–XR}}{\text{XR}}$	Openness Ranking
United States	1	1	0	1
Germany (DM/$)	2.14	1.58	0.35	3
Korea (won/$)	526	778	0.32	2
Japan (yen/$)	184	114	0.61	4
China (RMB/$)	1.43	7.0	0.81	5

[3]The probability that the rankings of economic openness shown in Tables 2, 3, and 4 for the five countries are random is less than 2 percent.

Although the metrics we have used may be helpful in calibrating globalization, they clearly fall short of providing an adequate measure of the phenomenon. However, if we can assume that these metrics for economic openness correspond more or less closely to the diffusion of globalization, it can be said that globalization has penetrated in descending order to the economies of the U.S. and the EU, with Japan, Korea, and China well below them, but grouped fairly closely to one another, for the time periods covered by the measurements.

4. Concluding Observations: How Much Globalization Is There, and How Much of It Is New?

There is no question that some aspects of globalization are genuinely new. These include developments in information technology, the unabated progress of Moore's Law (doubling of computer chip capacity every 18 months), the connectivity of the internet, e-mail, e-commerce, transborder M&A, and the scale of FDI. Nevertheless, there is a tendency toward exaggeration of the novelty as well as the magnitude of globalization, as a result of situational myopia, media hype, organized protest demonstrations (for example, against the World Trade Organization in Seattle in 1999, and against the American Free Trade Association in Quebec in 2001), and simple forgetfulness. Contrary to conventional beliefs, the data presented above show that trade as a share of GDP has reached higher levels in the past than recently, that correlations between domestic savings and investment rates were lower at intervals in the past than currently, and that globalization in the sense of foreign access to domestic markets still varies widely among countries.

In a notable recent study that tries to place current global trends in historical perspective rather than treating them as unusual, the authors characterized the global economy in 1914, immediately prior to the first World War, as one in which there was:

> "…hardly a village or town anywhere on the globe whose prices were not influenced by distant markets, whose infrastructure was not financed by foreign capital, whose engineering, manufacturing, and even business skills were not imported, whose labor markets

> were not influenced by the absence of those who had emigrated or the presence of strangers who had immigrated."[4]

So, while there is much that is new and distinctive about globalization currently, there is also much about the phenomenon that has abundant precedents.

Furthermore, it should (but doesn't) go without saying that globalization now, like its precedents in the past, is not a zero-sum game. Although there are losses and losers, as well as gains and winners, the aggregate of economic gains exceeds that of losses. While low wage labor in developing countries is "exploited" by the increased penetration of foreign business and investment in domestic markets, the process creates benefits and opportunities that the low wage labor would be denied without globalization.

It is also worth noting that the gains and losses, and their corresponding beneficiaries and victims occur within *both* the rich and poor countries. Increased access to national markets by non-national businesses disrupts high-cost, less-efficient enterprises in developed as well as developing countries. Indeed, most of the anti-globalization protest demonstrations that have occurred in recent years have been led by individuals and organizations from rich, developed countries, rather than poor developing ones.

Finally, experience to date suggests that globalization has been accompanied by, if not necessarily causing, increased income inequalities. Typically, average rates of income growth have, in the aggregate, been similar for the rich, poor, and the general population, resulting in widened income disparities (hence, increases in such inequality measures as Gini coefficients in both developed and developing countries). Whether and to what extent strenuous efforts should be made to redress these effects is a critical issue for policymakers—an issue that is likely to result in quite different choices in different countries.[5]

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[4]Kevin H. O'Rourke, and Jeffrey G. Williamson. *Globalization and History*. Cambridge: MIT Press, 1999.

[5]The choices are likely to be different as well difficult for many reasons. For example, recent econometric studies strongly suggest there is a significant positive relation between income inequality and economic growth, apparently resolving this long-

Postaudit

The analysis and main points seem to me as valid and relevant now as when they were written in 2000.

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standng controversy among economists. See Kristin J. Forbes. "A Reassessment of the Relationship Between Inequality and Growth." *American Economic Review,* September 2000.