

A Glimpse of 2020

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To help get our bearings in a complex and ever-changing world, it is useful to ask what the world will look like in a decade or two. Forecasting the future accurately is of course impossible. And of course we cannot forecast surprises, by definition. But by projecting known trends and tendencies, it is possible to say a remarkable amount about the broad outlines of the world one to two decades from now. In particular, we can identify with high confidence four factors, which we hardly notice from year to year, but which accumulate relentlessly over time, such that by 2020 they will have profoundly transformed the world as we now know it. The four factors are population growth, growth in per capita income, increasing international mobility among national firms and individuals, made possible and driven by both technological changes in transportation and communication, and the aging of existing political leaders (as well as everyone else).

For concreteness, I will focus below on the year 2020. The year should not be taken literally, but as the rough mid-point of one to two decades from now. That looks beyond the immediate issues of today, and allows the cumulation of small annual changes in the trends mentioned above. But it is also a comprehensible distance into the future, the same distance as the year 1988, which many adults can remember, is into the past.

A Celebration of the Past Half Century

But before turning to the future, I want to make some celebratory remarks about the past, the last half of the 20th century. Our daily newspaper and TV fare gives the impression that we lurch from one crisis to another, whether it be Kosovo or North Korea or Argentina or Iraq. From mid-1997 the world experienced a series of financial crises, from Thailand through Malaysia and Indonesia and Korea, then Russia and Brazil in 1998 and early 1999, Argentina in late 2001. Japan experienced its

first serious post-1945 economic recessions.

It is therefore worthwhile from time to time to stand back from the immediate, pressing issues of the day to appraise how far the world has come since, say, 1950. The overall economic performance during the past half century has been nothing short of fantastic, in the literal sense: if someone had forecast in 1950 where the world economy actually was in 2000, he would have been dismissed by his contemporaries as living in a world of fantasy (Cooper, 2004).

The immediate antecedents to 1950 were the Great Depression of the 1930s and the Second World War from 1939 (1937 in the Pacific) to 1945, followed by painful recovery in Europe, Russia, China, and Japan. Those disasters reflected in part a failure to construct a cooperative world following the First World War. The Anglo-American planners of the 1940s determined to do better. With help from representatives from other countries they created the United Nations, with its Security Council, plus a collection of economic institutions including the International Monetary Fund (IMF) and the World Bank, and laid the philosophical basis in the General Agreement on Tariffs and Trade (GATT) for what in 1995 became the World Trade Organization (WTO).

The basic philosophy underlying the United Nations is that threats to the peace anywhere in the world are of legitimate interest to all nations, and that collective action could be undertaken to preserve or restore peace. The basic philosophy of economic arrangements, against the background of the catastrophic Great Depression, was that national governments should take responsibility for stabilizing national economies and for ensuring high employment (something that was seen to be possible in light of the Keynesian revolution in economic thinking, with its emphasis on the potential of fiscal policy for economic stabilization); and that countries should avoid beggaring their neighbors through restrictions on international trade. Thus procedures were put in place, in the form of the IMF and the GATT, to eschew many forms of trade and payments restrictions, and to reduce over time the restrictions on imports that many countries inherited from the 1930s.

Stabilization of national economies and liberalization of trade together have resulted in

outstanding economic performance, both in the rich (mainly northwestern Europe and North America) countries and in the initially poor (developing) countries. World per capita income increased by 2.1 percent a year from 1950 to 2001, much higher than in any previous period, including the rapid industrializing period of the late 19th century (see Table 1). The average world citizen had an income nearly three times larger in 2000 than it was in 1950. What many forget -- or never knew -- is that several of today's rich countries were poor 50 years ago -- Japan, Italy, Spain, to name three large ones. South Korea was considered economically hopeless. As these examples illustrate, economic development has occurred with economic growth, not only in these countries, but in many others as well.

Table 1
Growth in Per Capita Income
(percent per annum)

1820-1870	0.6
1870-1913	1.3
1913-1929	1.0
1950-2001	2.1

Source: calculated from Maddison (2001)

Maddison, Angus, 2001, *The World Economy: A Millen*

During this period other measures of human well-being also improved: the spread of contagious diseases was brought under better control; infant mortality dropped dramatically; longevity increased. Health and nutrition improved in most places. Smallpox, once the scourge of mankind, was banished entirely.

Partly for these reasons, world population grew during this period more rapidly than ever before, more than doubling in fifty years (2.5 to 6.1 billion). Prices also rose substantially, attributed by

some to the uncritical adoption of Keynesian economic policies. In the United States the consumer price level was over six times higher in 2000 than it was in 1950 (4 percent a year, on average), and most other countries experienced even greater increases.

International trade outpaced the growth in economic output, growing more than 6 percent annually, partly a result of a cumulatively dramatic, but temporally gradual, drop in import protection over the period following eight rounds of multilateral tariff reductions. By 1995 tariffs on manufactured goods into the rich countries were only about ten percent of the levels they were in 1947, the year of the first multilateral round; the eighth was the Uruguay Round, concluded in 1994. A ninth round, the Doha round, was launched in 2002, and remains in its preliminary stages, mired in disagreement, as many earlier rounds were at a comparable stage.

International capital movements, stifled by the defaults of the 1930s and the disruptions of the Second World War, recovered more slowly, but by the 1990s extensive trans-border investment also occurred.

It is often pointed out that this growth was very uneven, and that while many people are better off, many people are also poorer. The first proposition is true, the second false, or at best deeply misleading, if "many" means a substantial portion of the world's population. The Indian economist Surjit Bhalla (2002, p.148) has calculated world poverty rates since 1950, using the World Bank's definition of poverty as US\$1.00 a day in 1985, in purchasing power parity terms. He finds that the fraction of people in developing countries living below this poverty line fell from 63 percent in 1950 to 43 percent in 1980 and further to 13 percent in 2000. The absolute number of people living below poverty fell from 1223 million to 647 million, despite a more than doubling of the world's population. That much remains to be done should not lead us to ignore this great accomplishment.

The dominant economic characteristic of the late 20th century is that technical change, which has been occurring at a significant pace for two centuries, has been institutionalized. Processes and incentives have been established in the world's rich countries to ensure the search for new, useful ideas,

even in the absence of a particular focused objective. This institutionalization ensures a constant flow of new practical ideas, many of which, once introduced, are irresistible. Consider how rapidly the fax machine spread; for those who have now become accustomed to it, life without fax is hard to imagine (although even the venerable fax is being replaced in many uses by email). But that is only one of thousands of new ideas, embodied in products and processes, which have been introduced over the past few decades.

These new technological ideas, combined with social order and the trained human beings who generate and apply them, are the basis for modern economic prosperity. Territory, resources, raw manpower, and military might play a much smaller role than they did in earlier, less successful eras.

The competitive system in which these new ideas are generated and introduced is one of controlled chaos: chaos because no one is in charge -- tens of thousands of people are making decisions that will over time affect billions of people; controlled in the sense that they operate within a defined social, economic, and legal order, and the results of their collective behavior within that framework create a comprehensible if somewhat turbulent environment.

Forecasting the future accurately is impossible. It is possible, however, to identify some factors which we hardly notice from year to year, but which accumulate relentlessly over time, such that by the end of two decades will have profoundly transformed the world as we now know it. We turn now to population growth, growth in per capita income, and improvements in computation and communication that will increase international mobility among national firms and individuals, reducing economic and ultimately cultural differences among different parts of the globe.

Population Growth

Between 1960 and 2000 the world's population grew by 3.1 billion persons, or about 1.8 percent a year. Some slowdown in population growth occurred toward the end of this period, especially in China and in a number of middle-income countries, such as South Korea, as well as in the industrialized countries. But China was a major exception among low income countries. Population

growth normally accelerates at first after a country begins to experience increases in per capita income, as longevity increases, as child-bearing ages are lengthened, and especially as infant mortality rates fall with better nutrition and medical care. A slowdown in population growth usually occurs only after per capita income reaches around US\$1000.00, when modes of production change, parents realize that their children are likely to survive beyond infancy, and parents become better informed about family planning techniques. Outside China, there are still over one billion persons living in countries with average per capita incomes below US\$1000.00, mostly in Africa and South Asia. Even if global population growth slows substantially, to 0.9 percent a year, the world population would still reach 7.5 billion by the year 2020, an increase of 1.5 billion from 2000.

More people mean more demand for energy -- for warmth, food preparation, illumination, motive power, and production processes; more demand for food; more demand for fresh water; and more demand for housing and other forms of capital. It would take extraordinary efforts of a nature and magnitude not generally contemplated to alter this demographic projection significantly, since most of the future mothers have already been born, although more efforts now could have significant effects beyond 2020.

Almost all this population increase will be in relatively low income countries. And most of the growth will occur in cities. Indeed, during the next decade the world will switch from having a majority of rural dwellers to having a majority of urban dwellers, with implications for housing and other urban infrastructure, and with concentrations of people that make political action easier.

Demographic trends in Europe, Japan, and Russia, in contrast, suggest slow or even negative growth and a marked aging of those societies, with profound implications for the fiscal sustainability of the government entitlements that have been conferred on their publics. (China too will age on the basis of its current population policies, but only later, after adding another 200 million people because of the large number of women still in child-bearing age, before declining after 2040.) Before 2010 over 20 percent of the population will be 65 or older in Italy, Japan, and Germany, somewhat later in France

and Britain. Indeed, thanks both to increased longevity and to declining natality in all the rich countries, the ratio of working age population to those over 65 will decline from 5.0 in 1990 to 3.5 by 2015. Projections further out, to 2050, on the basis of these trends suggest an absolute decline in the populations of Germany, Italy, and Spain. Japan's population is projected to drop to 100 million, 21 percent below the 127 million of 2000. Even greater percentage declines are projected for Russia and Ukraine. By this time also China and some other developing countries will be experiencing a decline in population. Peacetime declines in population are way outside our range of experience since the beginning of the industrial revolution around 1800; it is unclear how these societies will adjust to both the aging and to the decline in total population. Demand for schools and new housing will decline, and land will become more readily available; caring for the aged will become more demanding.

Like Europe and Japan, the United States and Canada have also experienced a decline in natural population growth, albeit more moderate, but over the years they have been far more receptive to immigration and thus can replenish their young adult population with willing immigrants from countries with more rapidly growing population.

Higher Per Capita Income

The second dominant feature of the world economy is the all-but-universal aspiration for higher standards of living in all but the richest parts of the world. In this respect the world has been westernized; it has absorbed both the notion and the expectation of material progress. So in future there will not only be more people, but more people wanting higher standards of living. And we now know how, in principal, to achieve higher standards of living: install a stable social system with incentives for effort and risk-taking, and engage with the world economy. Most of the world does not need to generate new technology or even savings to grow -- increasingly those can be borrowed from the rest of the world. But it does require extensive investment in both physical and human capital; of the two, the latter is both more important and more difficult. Thus the state continues to play a key role in economic development, in providing for social order, proper incentives for effort, saving, and risk-

taking, and widespread education. But it does not have to play the role of entrepreneur, investor, and manager as well. Indeed, in these roles, widely espoused in many countries in the 1960s, it is likely to inhibit development.

Economic growth everywhere implies economic and social change, and change almost invariably involves some losers even in an environment in which change is being generated by economic growth. Change involves stress and even duress. Established enterprises have extensive investment in existing ways of doing things -- in their machines, their people, and their organizational hierarchy. It is much easier simply to carry on in established patterns than to change, and that is what most organizations, including business enterprises, prefer. Yet in western societies these business enterprises are, paradoxically, the principal instruments of economic change. They change because they feel compelled to do so by competition, by fear of losing their customers to other firms. The more far-sighted ones change on their own, to stay ahead of their actual or potential competitors. But for many firms and individuals change is disagreeable. Individuals can find that once-promising careers are now dead-ends, that once-learned skills are now obsolete. Some individuals adapt well, others do not. This is the essence of what Austrian-turned-American economist Joseph Schumpeter called creative destruction, and it is a process that, over time, has made the average individual in western countries unbelievably well off when viewed from the perspective of forebears only three or four generations earlier.

This lesson is being learned in former communist countries, where it runs against the strong apparent preference of many people for stability throughout one's life. It is also being learned in many developing countries, where it carries the possibility of social upheaval, since it is not possible to modernize economic activity and norms without also altering both norms and expectations in other areas as well, as Chinese leaders have discovered but to which they are only slowly becoming reconciled.

Can the earth feed an additional billion people? The answer is certainly affirmative. The scope for further extensive agriculture -- adding cultivated land -- is limited; but yields can continue to increase

on existing cultivated land. Average yields are far below best practice, and best practice is continually improving, as we learn more about what nutrients plants need at each stage of their life cycle. Irrigation can be extended, where water is readily available. (Water scarcity in some regions of the world, however, will limit the scope for intensifying agriculture in those regions, such as the Middle East and northern China.) Moreover, growing knowledge about genetic engineering will permit more disease-resistant and insect-resistant plants, and even drought-resistant plants. The efficiency of livestock feeding can be further increased. While we are reaching the practical limits of harvesting native fish from the oceans, aquaculture can be extended to increase yields from the sea.

Historically, economic growth is associated with an enormous growth in demand for commercial primary energy. In the two strong decades following 1950 the demand for primary energy in the 24 now rich countries of the Organization for Economic Cooperation and Development (OECD) more than doubled; and in the two decades following 1965 the demand for primary energy in the developing countries trebled.

Modern economies are still based heavily on energy, even though the efficiency with which it is used is improving steadily and is vastly greater than it was 30 years ago, before the 1973 oil shock. Developing countries, in particular, rely increasingly on fossil fuels as they move from subsistence to manufacturing economies. Oil is still the unmatched fuel for transportation, and with modernization the demand for transportation increases more than proportionately. (Synthetic oil can be made from coal and from natural gas, but it remains uncompetitive with petroleum in cost. Fuel cells may well supplant gasoline in the more distant future, but their impact will be modest in the next 15 years.)

Assuming a world growth rate of three percent over two decades (real gross world product would be 81 percent higher in 2020 than it was in 2000), the US Department of Energy projects the world demand for oil to grow by 33 million barrels a day (mbd) between 2001 and 2020, or by 43 percent. Of this increase in demand, less than 10 mbd are projected to take place in today's rich countries of Europe, Japan, and North America; the remaining 23 mbd increase will arise in today's

relatively poor countries, over half in Asia (excluding Japan). China alone will import seven mbd in 2020, up from two mbd in 2001.

The world will not, perhaps surprisingly, have difficulty supplying this increase in demand for oil. Technological developments have greatly improved the prospects and reduced the costs of exploring for and developing new oil wells, both on land and under sea. But the most economical oil remains in the Persian Gulf region, and if the countries of that region are willing to undertake the necessary investments in exploration and development, this great increase in demand can be satisfied at only modest increases in price. (The DoE reference case projection assumes a price, in 2002 dollars, of \$26 a barrel in 2020; other forecasters assume an even lower price.)

On these price and investment assumptions oil production outside of OPEC will grow modestly by 2020. Within OPEC, only Venezuela outside the Persian Gulf region can be expected to be a significant contributor, leaving most of the increase to come incrementally from the Persian Gulf countries. If these projections are realized, world oil production coming from the Persian Gulf will rise from 30 percent in 2001 to nearly 40 percent in 2020. Demand for oil tankers will also rise sharply.

We know from the experiences of 1973-74 and 1979-80 that a several-fold rise in oil prices, generated by an actual or an anticipated shortage of oil (world oil production did not fall in 1979, following the Iranian revolution and a decline in Iran's output, but anticipation of shortages led to extensive build-up of stocks), can play havoc with the macroeconomics of countries around the world, being largely responsible for the "stagflation" (deep recession combined with inflation) of the 1970s and the developing country debt crisis of the 1980s. So the damage from disruption in the flow of oil can be severe.

Higher growth will also affect the environment. The effect will be mainly unfavorable in low income countries, with their priority on raising incomes. It will be mainly favorable in higher income countries, as publics protest the foul air or water they must endure, and revenues are increasingly devoted to improving local environmental conditions. Greatly increased use of fossil fuels will of course

increase emissions of carbon dioxide, thus contributing to future global climate change, but such change will be hardly noticeable during the next decade.

Continuing Advances in Information Technology

The third driving factor for the world economy will be the continuing revolution in computation and communication. Two decades from now the costs of computation and long-distance communication will once again have fallen by more than 90 percent, making them nearly "free" by today's standards. This will lead to much greater integration of the world economy, in the specific sense that business enterprises will increasingly take, and will be driven by competition to take, a more-than-regional or national perspective in framing their business decisions. This has been true of markets for produced output and sources of supply for a long time, and of sources of capital for the past two decades. But it will be increasingly so also for the location of production and the related issue of labor force. The secular decline in transportation costs, especially of air freight and bulk carriage, implies they are no longer a decisive factor for location of production of many goods. Not only Persian Gulf oil but also South African coal and Liberian iron ore can be moved long distances to market. Cheap long distance communication means that the 'back room' activities of financial and other businesses can take place at great distance from headquarters, e.g.: in Ireland or India when the front office is in New York or San Francisco. Under these circumstances many industries in principle become footloose, able to locate at a variety of convenient places. They seek an inexpensive labor force able to meet the required skill qualifications, social stability, and a tax and regulatory environment favorable to low production costs. Offshore outsourcing, exaggerated recently in journalistic and political circles, will become more important over time, a natural outcome and benefit from advances in information technology and investment. These developments taken together imply that a country far out of line in one dimension that is not adequately compensated in some other dimension will lose those economic activities that do not require close proximity to markets.

Most importantly, information of all kinds will flow more cheaply and more quickly around the

world than has ever been the case. This is true not only for scientific, financial, and political information, but also for technological, marketing, and cultural information. It will be ever more difficult for governments to insulate determined publics from obtaining information from abroad, even when the information is detrimental or even threatening to the governments in question.

The influence of higher mobility should not be exaggerated. The managers of many enterprises still have strong ties of loyalty to their home society and culture, they have useful but specialized knowledge about how best to operate in a familiar political environment, and they are subject to the inertial forces that attend most human action. Linguistic barriers remain. Recent research has shown that even so-called multinational firms undertake two-thirds of their investment in the home country. But the trend is clear: competitive pressures are eroding these factors, and more and more firms are moving some of their activities away from their historical bases. As always in economics, it is decisions at the margin, not the typical firm, that determine many outcomes.

Political Succession

One other factor can be predicted confidently over the passage of sufficient time: the death of today's political leaders. For many countries this will make little difference. Most democracies have well-established processes of succession and deeply rooted political traditions that result in smooth political transitions and substantial continuity in policy, especially foreign policy. Monarchies too have well-established patterns of succession, generally accepted by subject populations, whether by passage to the deceased monarch's eldest son (or, occasionally, to a daughter) or to a crown prince selected by members of the royal family. But personal dictatorships rarely have an accepted pattern of succession; death of the leader results in a power struggle among would-be successors, sometimes even to civil war. By 2020 several of today's autocrats will be gone, e.g.: Castro of Cuba, Qaddafi of Libya, Mugabe of Zimbabwe. These countries have highly uncertain political futures. Suharto of Indonesia is already gone, as a result of the Asian financial crisis, leaving a still uncertain political future for Indonesia, although the interim has been smoother than many imagined. Iraq after Saddam Hussein remains a large

question mark. While the evolution of the regime in North Korea is highly uncertain, continuation of current arrangements to 2020 is highly unlikely.

Implications of the Identified Trends

What are the implications of these various developments? The first is that there will be many more "South Koreas" in the future, that is, developing economies that grow rapidly, democratize and gradually join the ranks of rich countries. The Asian financial crises will be seen by some countries from the perspective of 2020 as adolescent growing pains -- unpleasant when it occurred, but making possible a stronger mature body. The growth of these countries will create some turbulence for others, since their exports will be concentrated in certain industries, thus posing adjustment problems for those industries in more mature economies; but by the same token their incomes, expenditures, and imports will also grow rapidly, creating market opportunities for industries in mature economies that are poised to take advantage of them. On balance, the development of such economies will also permit even higher living standards in the already rich countries. Today's rich countries, however, will slowly decline in relative economics importance. That is especially true of Japan, whose low growth, aging population combined with inhospitality to immigration assures a substantial decline in relative economic importance over the next few decades.

Second, however, there will also be more "Iraqs" in the future, that is, countries whose leadership judges continued internal stability (at least of their leadership) to depend on aggressive activity toward their neighbors, to acquire resources, to protect ethnic minorities, or simply to keep neighboring countries or their own restless publics off guard. As national incomes rise, all governments will have greater scope for harvesting resources from their publics through taxation. Authoritarian governments can channel disproportionate amounts into military or other expenditures devoted to pursuing an aggressive foreign policy, and we can be reasonably confident that a number of countries will turn in that direction. Given the advance and spread of military technology, those adventures will be increasingly costly in human terms, and may threaten global peace. Other countries will therefore have

to remain sufficiently armed to cope with these potentially aggressive countries, preferably to deter them from going too far in the first place.

China will experience the benefits of the "demographic dividend," when persons of working age are increasing more rapidly than dependents, in China's case children. If China achieves a plausible but still outstanding annual growth of seven percent (higher than the 6.6 percent assumed by the World Bank in its report on China in 2020, to allow for some appreciation of the real exchange rate), China's Gross Domestic Product (GDP) would reach \$4.2 trillion (in 2000 dollars) in 2020, or about 24 percent of US GDP in that year, and roughly equal to US GDP in 1972. It would be larger than Germany, but still significantly smaller than Japan. Chinese per capita income would increase by a factor of 3.4 from 2000, making Chinese much richer than now, but still poor by world standards.

Under these circumstances, China's population will be vastly different from today, with greatly different attitudes, especially among the youth. The first individuals born under the one-child policy will be 40 years old in 2020, and everyone younger will have grown up in an environment of devoted parents, rapid economic growth, hope for the future, and awareness of both future economic and political possibilities. Those seared by the Cultural Revolution will be above the age of 70, just retiring (on current practice) from the senior leadership of China. Many of those making up middle management will be drawn from the ranks of the Cultural Revolution's Red Guards, many of whom missed at least parts of their education and now regret the severe harm of their collective actions then.

The high GDP would put the Chinese government in a position, if it can tax effectively, to be a major player on the world scene, in armaments, trade, and foreign aid, just as the USA was in the mid-1970s. But the focus of a development-oriented China would be concentrated on continuing requirements for infrastructure -- electric power; oil and gas; water for irrigation and for growing urban areas; roads, airports, and other transportation; urban housing; and heavy demands for higher quality education for everyone.

The aging in Europe will require a re-negotiation of the "social contract" that led to the creation

of the modern welfare state in the 1950s and 1960s. Even though Europe is much richer today than it was then, it created entitlements for its citizens, especially for its older citizens, that will be fiscally insupportable under the expected demographic conditions noted above. Publicly provided pensions and health care are generous, and largely on a pay-as-you-go basis. Unfunded pension liabilities are high in all rich countries, ranging (in 1990) from 113 percent of GDP in the United States through 162 percent of GDP in Japan to an extraordinary 242 percent in Italy (Roseveare et al, 1996). Yet continental European countries are near to the practical limits on taxation, around fifty percent of GDP. With the expected increase in the ratio of aged to working age people, existing entitlements will be unsustainable without severely squeezing normal public expenditures, such as those on defense, education, and research. Taking away perceived rights is difficult in any country, especially democracies. Re-negotiating the terms of the social contract will be a major pre-occupation of European nations in the coming decades. The re-negotiation is likely to succeed -- the alternatives are too unattractive -- and the Netherlands is leading the way; but the process will be an agonizing one.

As incomes rise in developing countries, and as publics become better educated, they expect improvements in their well-being, and these days they expect governments to assure that. In rich countries, the initiatives for change will come from business firms, and increasingly also from non-governmental organizations. In developing countries, much investment will be needed in public infrastructure (roads, water and sewage, etc.) and in improved housing -- all intensive in the use of capital. If governments fail to provide adequately for the required physical infrastructure, and for social infrastructure such as an ordered society and improved education, people will become restless. They will engage in politically disruptive activities, or they will migrate.

We are likely to see the reassertion of religious, ethnic, and tribal differences as some states fail to live up to expectations in delivering economic development or public services, as external influences grow, and in some cases as governments are increasingly recognized as predatory. Again, increased migration is likely to eventuate as a consequence of population pressures, state failures, and information

from outside the country.

What are the implications of increased interdependence for government economic policy? Individual countries cannot impose stiff regulations and expect to retain the economic activities that are especially hard hit, unless for one reason or another the activities are immobile, or unless the firms in question see an offsetting benefit to themselves flowing from the stiff regulations. Over time, the economic activity will shift to lower cost locations. With increasingly mobile production, there will be growing conflict between each nation's exercise of its sovereign rights of regulation and its ability to retain the heavily regulated activity.

An analogous problem applies to taxation, especially taxation of corporate income or of interest, dividends, and capital gains on financial investments. Through their pricing on intra-corporate transactions, corporations can shift profits from regions with high corporate profit tax rates to those with low ones, thereby reducing or at least deferring their total taxes. With the internationalization of two-way communication and of securities trading, individuals can hold their financial investments in many parts of the world, in many names, and thereby avoid national taxation. Indeed, many countries today do not even attempt to levy taxes on the overseas financial earnings of their residents.

The same factors that increase the international mobility of legitimate businesses also increase the international mobility of non-profit non-governmental organizations (NGOs), of illegitimate business, and of political organizations relying on terrorist actions to gain publicity for their causes. Organized crime will increasingly operate across national boundaries to confound national police authorities. Criminal groups may even in effect capture a state, using it not to attack its neighbors but to provide a base for planning, a sanctuary, and a place of financial security. Some small states already advertise themselves as no-questions-asked places to bank funds from anywhere. And others (e.g. Panama under Noriega, North Korea under Kim Chong-il) have been accomplices in the international narcotics trade. Still others (e.g. Afghanistan under the Taliban) will wittingly or unwittingly play host to terrorist organizations such as al Qaeda, which in turn will be "globalized" in activity, recruitment, and finance.

NGOs will also operate increasingly on an international basis, reporting adversely on and even operating in countries that do not live up to their standards on human rights or the environment or animal rights. Some NGOs, as well as official international bodies, will be relied upon to perform locally some of the 20th century functions of government, such as distributing food in times of harvest failure or even providing police protection of sorts. Such activities may be highly regarded by the local populace, but of course they bring with them information and ideas from abroad as well as goods and services, and their very presence underlines the ineffectiveness of the host government.

Implications for governments

High mobility of business enterprise reduces the effectiveness of traditional nation-based regulation, taxation, and law enforcement. But of course governments are not oblivious to this trend. They attempt to cope with the increased mobility in a variety of ways: import prohibitions, extra-territorial reach, de-regulation. But they also increasingly recognize the need to cooperate with other like-minded governments, and even sometimes those that are not so like-minded. Cooperation is especially evident in the area of financial regulation, where traditionally domestic agencies, such as the Securities and Exchange Commission, increasingly collaborate with their counterparts to preserve the effectiveness of their (now collective) actions. Tax and law enforcement authorities, such as the Federal Bureau of Investigation (FBI), are also moving toward greater exchange of information (see Slaughter, 2004). So increased mobility of enterprises, and of organized crime, will also lead to new patterns of cooperation among national authorities, at least at the technical level, and at least among like-minded governments such as those in the G-7. By 2020 these practices in all likelihood will have become habitual.

Where national governments have manifestly "failed," or where they abuse their citizens grossly, or where they provide sanctuary or even encouragement to international terrorism or organized crime, there is likely to be increased external interference in their so-called internal affairs. Such a development raises a whole host of practical and legal questions which the international community is only beginning

to recognize, and which it is reluctant to face squarely since the principal interlocutors in such a discussion are the representatives of states (see Bildt, 2004; and Slaughter, 2004). But as it occurs, as it must, the role of the United Nations and other international organizations will increase, and these developments will mark the beginning of the end of the Westphalian state system.

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