Industry Canada
Research Publications

CANADA IN THE 21ST CENTURY

I. SCENE SETTING

GLOBAL TRENDS:

1980-2015 AND BEYOND

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I. SCENE SETTING

GLOBAL TRENDS:

1980-2015 AND BEYOND

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PREFACE

AS A NEW MILLENNIUM APPROACHES, Canadians are going through a time of dramatic economic change. Markets are becoming global, and economic activity across nations is becoming increasingly integrated. Revolutionary developments in computer and communications technology are facilitating globalization, and are also altering a great deal the workplace and the lifestyles of Canadians. At the same time, largely as a consequence of the information revolution, knowledge-based activities are becoming increasingly important within the Canadian economy and the economies of other industrialized nations.

These and related major transformations of the economic environment invite a comparison with the Industrial Revolution of the 1800s. As in the earlier time, major structural changes are giving rise to uncertainties. Firms and workers are struggling to find their place in the new economic order. Canadians collectively face the question of whether their nation's physical, human and institutional resources will provide a firm foundation for continued prosperity. Many see Canada's prospects as being much less secure than in earlier years, when the country's rich natural resources played a major role in shaping the Canadian economy.

To examine fully the medium to longer-term opportunities and challenges of these developments, the Micro-Economic Policy Analysis Branch of Industry Canada asked a group of experts to provide their "vision" for Canada in the 21st Century on a number of important issues. Each author was required to undertake two formidable tasks: first, to identify major historical trends and develop scenarios to illustrate how developments in his/her respective area might unfold over the next ten to fifteen years; and second, to examine the medium-term consequences of these developments for the Canadian economy.

The papers coming out of this exercise are now being published under the general heading of "Canada in the 21st Century". This series consists of eleven papers on different aspects of Canada's medium-term outlook. The papers are divided into three major sections. The first section, *Scene Setting*, focuses on important developments that are going to shape the medium-term economic environment in Canada. The second section, *Resources and Technology*, looks at trends among some important components of Canada's wealth creation and considers the actions needed to ensure that these factors provide a firm foundation for continued prosperity. The last section, *Responding to the Challenges*, explores individual, corporate and government responses to the medium-term challenges and offers some options for an appropriate course of action.

As part of the *Scene Setting* section, this paper by Professor Bradford De Long, of University of California at Berkeley, highlights the influence of two major trends on the course of global economic development: globalization and the worldwide productivity slowdown that began in the mid-1970s. According to Professor De Long, globalization is likely to lead to three developments: the decline of countries' ability to manage their own macroeconomies to meet domestic objectives, the re-appearance of large-scale international capital flows with their attendant benefits and risks, and a reduction in the influence and power of national union movements. Here are some of the consequences of the worldwide productivity slowdown: it now takes some 72 years for standards of living to double, as compared with 24 years before the slowdown; semi-stagnant incomes and increased income inequality have fomented distrust of governments; and a reversal of the social welfare system.

Foreword

My look at the possible futures of the international economy was written before the blossoming of the East Asian financial crisis — before it became clear that Japan's recession was seriously impeding recovery, before the fall of the reformers in Moscow and Russia's default, before the financial crisis threatened to spread to Brazil. A natural question is: how does the growth and spread of East Asia's financial crisis change forecasts?

The quick answer is that it doesn't change them: the underlying forces pushing for greater international economic integration are still there, and one additional major — even global — financial crisis will not be enough to diminish their strenght.

The longer answer is that the world economy has been undergoing about one major economic and financial crisis a decade since the end of the 1960s. The 1970s saw the acceleration of inflation in the industrial core and the eight-fold increase in world oil prices. The 1980s saw the Latin American debt crisis. The 1990s has seen two localized crises — the collapse of the western European exchange rate mechanism in 1992 and the Mexican crisis of 1995 — and a third crisis initially restricted to East Asia that has now begun to spread. The crises of the 1970s and 1980s did not create any significant political or economic forces for a reversal of globalization. It is hard to believe that the crisis of the 1990s will have different results.

What the crisis of the 1990s has done — especially as the Japanese economy continues to fall deeper into recession — has been to noticeably lower the odds that East Asia will become the core of the first world in the twenty-first century. Japan, at the core of East Asia, has effectively lost a decade's worth of economic growth. And it is economic stagnation in Japan that is at the heart of much of the financial crisis in the rest of East Asia.

What the crisis of the 1990s has also done has been to focus attention on the fact that the international institutions that are supposed to help cushion shocks and manage the international financial system are underfunded, and on the fact that there is no broad consensus on how the international monetary system should be run. As a result, it is now clear that the globalized international economy of the next generation is unlikely to be as stable as the world economy of the Bretton Woods period. Instead, its pattern seems more likely to be that of the pre-World War I era: large booms and deep slumps superimposed on long-run growth.

SUMMARY

TWO GLOBAL FORCES HAVE DOMINATED THE DEVELOPMENT of the world economy for the past two decades, and promise to dominate the future economic development of the world for at least the next two decades. The first is the increasing integration of the world economy — what is often termed "globalization". The second is the worldwide productivity slowdown that struck the industrial economies in the mid-1970s, and that ended the "Great Keynesian Boom" of the first post-World War II generation.

There are additional factors that have also greatly changed the world economy in the past twenty years: growing concerns about ecology; the fall of the Soviet Union; and the extraordinarily rapid industrialization of East Asia. Many others could be named. All have an impact on the future of Canada as well. Yet they all take a secondary place relative to the ongoing integration of the world economy on the one hand, and the global slowdown in aggregate productivity growth on the other.

What *might* the future bring? What impact will future economic changes have on Canada, a highly-open, resource-rich, wealthy industrialized economy with a strong social democratic tradition?

The best forecasts extrapolate the impact of these two primary factors, because to date at least there are no signs that they have exhausted their force. The growing integration of the world economy is in some respects a very old story, for the world economy has been "globalized" before. In the decades before 1914, indices of international economic integration such as the share of total world economic product shipped across oceans or the proportion of investment directed across national borders were all as high as or higher than they are today. Canada flourished under the pre-World War I gold standard during the world economy's last experience with "globalization": capital from abroad financed infrastructure and industry, especially the food- and resource-processing industry; British and European markets were willing to pay high prices for a growing flow of Canada's exports. Pre-World War I globalization provided Canada with a golden age of growth.

Today's "globalization" is different in important respects: it is a "high bandwidth" rather than a "low bandwidth" global economy. Before 1914 you could buy foreign securities — but not exercise corporate control across national boundaries. Before 1914 you could import foreign commodities — but not use your own knowledge of production processes and consumer demand to lower the costs and improve the quality of the goods made by your foreign suppliers. Before 1914 you could transmit information with the speed of light — but only the most important pieces of information, not the surrounding context and certainly not the details that today increasingly weld the world into one culture.

Thus new "globalization" will be different from old "globalization"; however, we do not yet know how the differences will matter. Nonetheless, it can

safely be forecast that the return of the integrated world economy will see the return of four processes that are very familiar in the context of economic history:

- *The decline of macroeconomic autonomy*: countries are by and large losing the ability to manage their own macroeconomies to attain domestic goals alone. Highly-open economies like Canada have had relatively limited degrees of macroeconomic autonomy since the end of the 1950s and the return of full currency convertibility around the globe. Even limited autonomy has proved a powerful tool for governments to use to manage their economies. And that limited autonomy is fast shrinking. Increasing integration diminishes the ability of fiscal policy to affect demand for domestic products, and forces monetary policy into the role of avoiding large exchange rate fluctuations.
- *The re-appearance of large-scale international capital flows*: this makes it possible for countries following prudent economic policies to grow rapidly as they attract international investment (and for countries following imprudent economic policies to stagnate). Canada was a major beneficiary of pre-World War I large-scale capital flows (relative to the much smaller world economy of that day). It promises to be a major beneficiary of the future's capital flows as well in the event of a general rise in the prices of natural resources that causes Canada's resource-extraction industries to boom. However, the re-appearance of large-scale international capital flows also increases the frequency and potential destructive consequences of international financial crises.
- *The crisis of the world labor movement*: the movement faces its greatest historical challenge as industries distributed across countries call for international-scale organizing efforts in the same way that pre-World War II industries distributed across provinces called for national-scale organizing efforts. The union movement may or may not meet this challenge: if it does not, or meets it with great difficulty, we can look forward to a future in which the distribution of income is more unequal in industrial countries — but in which the economy may possess greater static efficiency. The Canadian tradition of social democracy is thus likely to come under at least potential threat over the next generation.

The worldwide slowdown in productivity growth that began in the mid-1970s slowed productivity in the industrial core, in Canada as well as in Europe, the United States, and Japan, from an official growth rate of 3 percent a year to about 1 percent per year. It used to take 24 years or so for standards of living in the industrial core of the world economy to double; now it will take some 72 years or more for standards of living to double. Thus perhaps half of the economic growth that the current generation could reasonably have anticipated has vanished.

The causes of this slowdown in productivity growth are still in dispute. Most likely they consist of a number of small, unrelated independent factors.

Even though each of the likely causes is barely noticeable, taken together they have had major consequences. Following are a few examples:

- Semi-stagnant incomes generate distrust of *all* governments. Politics acquires a nastier edge.
- The age of diminished expectations means the end of the expansion of the social welfare system, and thus the near end of social democracy as a political force.
- Social democratic promises that assumed the continuation of a 3 percent per year productivity growth can no longer be kept.

The first of these effects makes it much more difficult to find solutions to the oncoming fiscal crisis of the social insurance state. The second may well mean the end of what has been the major political movement in industrial democracies for virtually the entire century. And the last of these requires bold and decisive action by the rudderless and distrusted governments of industrial democracies.

Considering the two major trends of globalization and the reverberations of the productivity slowdown that are likely to have the largest impact, and other factors whose importance is difficult to determine at this stage, the second half of this essay briefly sketches three possible scenarios: three futures that *might* come to be.

In one scenario, East Asia comes to dominate the world economy in short order. In a second, the end of the Cold War and rising inequality lead to the end of the free-trade system. In a third scenario, international financial crises grow in virulence and frequency, and there are larger and more damaging recessions and depressions.

In the first scenario, problems of structural adjustment become urgent as the world economy must adjust to East Asia's pace. The evolution of the old industrial core from manufacturing-centered toward service-export and information-centered economies is accelerating. Yet in recent decades the governments of industrial democracies have not covered themselves with glory in managing the tasks of structural adaptation and labor force reallocation.

In the second scenario, a different set of structural adjustment problems emerge and become urgent. The retreat of the world's economies away from free trade requires a shrinkage of each economy's export industries and an expansion of each country's import-competing industries. National governments must strive to limit the damage done by a declining international division of labor: in the 1920s and 1930s governments facing similar situations by and large failed.

In the third scenario, the long-term health of the world economy hinges on the ability of central banks and finance ministries to work together, and not at cross-purposes, to keep fear of the consequences of future financial crises from limiting investment and economic growth.

INTRODUCTION

TWO GLOBAL FORCES — "globalization" and a persistent slowdown in aggregate productivity growth — have dominated the economic history of the industrial world for the past two decades. The same two forces promise to continue to dominate the future economic development of the industrial world — Canada, as well as Europe, the United States, and Japan — for at least the next generation.

"Globalization" is the increasing integration of the international economy. In some respects it is a new phenomenon; in others it is old, a return to a pattern of international economic interdependence that was accepted as normal before World War I. At that time, it was a pattern of international economic interdependence that provided pre-World War I Canada with a golden age of economic growth.

Globalization is still more of a forecast of the future than a reality of the present. Relative to the size of their economies, Ontario still trades seven times as much with British Columbia as with the state of Washington. National boundaries — even national boundaries unaccompanied by language barriers — still act as significant impediments to commerce. However, they are smaller impediments than they were a generation ago. And in another generation they will be smaller still.

The second force, a large global slowdown in productivity growth, struck the entire industrial world in the mid-1970s. This included Canada as well as Australia, Japan, Britain, the United States and Italy. This slowdown has continued through the present, and promises to continue into the indefinite future.

To date the sources of this productivity slowdown and the resulting sharp change in the world economic climate — away from the fast-growing "Great Keynesian Boom" of the first post-World War II generation — remain largely a mystery. The slowdown in growth has been smaller in Canada than in Europe, where the backlog of World War II destruction and unimplemented technology helped spur western European supergrowth in the following generation.

However, there is no good or immediate reason to expect that the productivity growth slowdown will come to an end in the near future. This worldwide slowdown creates economic and political problems management that are more intractable and daunting than those faced during the fast-growth years of the generation after World War II.

There are additional factors, less important yet worth noting that have also greatly changed the world economy in the past two decades.

Consider the rising concern over the ecological impact of the human race and human economic activity; the diversion of several percentage points of world gross economic product to the tasks of environmental cleanup; and the uncertain yet quite possibly enormous future threats of global warming and ozone depletion. Canada's resource-extraction industries will be among the sectors affected by any debate over the world's ecology. Furthermore, Canada's population and wildlife are among those most at risk should the Montreal protocols turn out to be insufficient to halt the growth of polar "holes" in the ozone layer. Conversely, Canada's economy is one of the relatively few that might experience a significant boost from a small increase in the mean global temperature and a resulting extension of the growing season and the outdoor-construction season.

Consider further the rapid collapse of the Soviet Union and its consequences: the end of the Cold War, and the potential at least for very rapid economic growth east of what used to be called the Iron Curtain. Continued economic chaos in Russia and its new neighbors could significantly crimp the world's supply of many natural resources over the next generation. In this case, Canada would likely benefit from heightened prices for its natural resource exports. On the other hand, successor states desperate for hard currency might be willing to exhaust their resource stocks in a generation at any price, putting downward pressure on natural resource earnings by Canadians.

Consider also the astonishing pace of industrialization in East Asia; the continued slow evolution of occupations and industries toward a "post-industrial" pattern; and the continued slow evolution of the global pattern of comparative advantage.

Notwithstanding the importance of all these factors, they still take a secondary place relative to the past and potential future impact of the continuing integration of the world economy on the one hand, and the consequences of the global slowdown in productivity growth on the other.

What the future of the world economy *will* generate for Canada — a resource-rich, highly-open, wealthy and industrialized country with a strong social democratic tradition — is unknown.

What the future *might* bring can be projected in two ways: first, by extrapolating the likely consequences of the two most important factors, the world-wide productivity slowdown and "globalization;" and second, by glancing at three possible scenarios in which still other factors gain importance. In one of the scenarios to be examined in this essay, the East Asian economies in aggregate grow even more rapidly in the future than they have in the past. East Asia soon becomes the economically dominant region in the world in a process analogous to the industrial succession by which first technological, then industrial, followed by financial leadership shifted from London to New York in the first half of the twentieth century.

In a second scenario to be examined, the end of the Cold War along with increasing domestic political strife within nations, largely fueled by slower growth and rising inequality, leads to the end of the free-trade order. This order has characterized international economic relations since the 1944 Bretton Woods Conference that laid the foundations for the post-World War II international economy. In a process parallel to the 1920s and 1930s, national economies are pushed back in the direction of self-sufficiency as world trade falls relative to the size of the world economy. Export industries shrink;

import-competing industries expand. And governments must manage the process of resource re-deployment and structural adjustment in such a way as to minimize the damaging consequences of the move away from free trade as a principle for organizing world economic relations.

In yet a third scenario, the failure of international institutions and leaders to cope with the stresses of the international financial system leads to financial crises of increasing virulence, and to larger and more damaging recessions and depressions. In such a scenario national governments would be faced with a very difficult policy choice: either 1) to continue the integration of their capital markets with the world capital market as a whole, and reap the benefits of international financial integration at the cost of larger business cycles and greater vulnerability to world financial crises; or 2) to impose capital controls of one form or another, sacrificing the benefits of international financial integration for the hope of moderating the overall business cycle.

Most likely none of the three factors that drive these scenarios — East Asian industrialization, the return of protectionist ideology, or a growing virulence of international financial crises — will rise to the same prominence as the productivity slowdown and “globalization.” The three scenarios are nonetheless useful indicators of the range of possibilities that the future might hold in store.

Recent Economic History

Much of what will happen to the Canadian and the world economy in the next twenty years has been already set in stone. Much of how the evolving world economy will affect Canada in the next two decades is readily forseeable.

This is because much of what will occur in the next 20 years is a continuation and extrapolation of important trends of the recent past. Some of these trends are of relatively recent origin. For example, the rapid industrialization not of Japan alone but of the entire western rim of the Pacific Ocean is little more than fifteen years old. Other important trends had their origin somewhat earlier. For example, the worldwide slowdown in productivity growth in industrial economies dates back to the early 1970s. Still other factors follow cycles of much longer duration. These include the cycles of trade liberalization and the expansion in the share of world GDP traded across national borders. World trade relative to world GDP reached the peak of one such cycle in 1913 on the eve of World War I. It may reach the peak of another such cycle in the near future. From these examples, it becomes clear that certain trends and factors are visible in a short economic history of 15 and even five years. Others entail a longer perspective.

It therefore makes little sense to focus on a year-by-year look at the economic history of the past fifteen to twenty years in order to gauge what trends are likely to influence the future in important ways. Instead, a more selective and elastic approach is needed to determine how major trends and factors of the recent and more distant past are to be projected into the future.

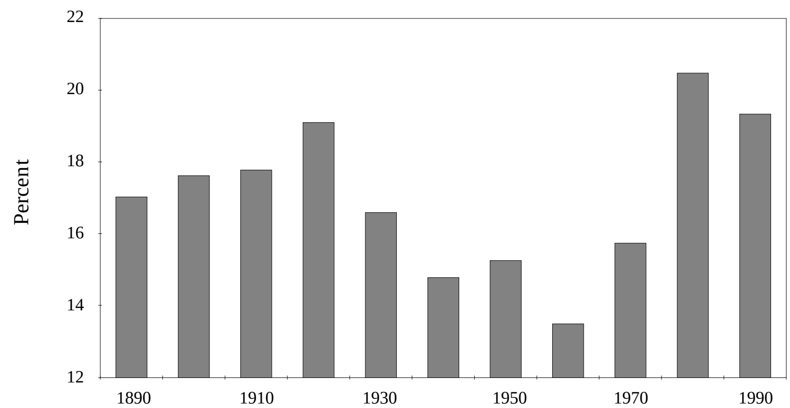
"Globalization": New and Old

The world economy has been "globalized" once before. In the decades before 1914, the standard indices of international economic integration, such as the share of total world economic product shipped across oceans, or the proportion of investment directed across national borders, were in same range that they are today. They were higher as a proportion of marketed national product, because a sizable share of the agricultural production included in national product was then produced on family farms for home consumption and hence never saw the marketplace.

Canada flourished under that earlier episode of international economic globalization. The close integration of the pre-World War I world economy provided by free trade, the gold standard, the steamship and the submarine telegraph was very good for the Canadian economy and Canadians. Capital imports from Britain, made possible by the stability of and confidence in the international payments system, financed Canadian infrastructure investment and investment in Canada's industries, especially in natural resource processing. The steamship led to a steep decline in the price of carrying Canada's exports

FIGURE 1

EXPORTS/GDP AS AN INDEX OF GLOBALIZATION:
ARITHMETIC AVERAGE OF US, UK, CANADA AND JAPAN



across the Atlantic. Free trade ensured that the exports received a friendly reception. Strong demand from a rapidly-growing European economy gave Canada high export prices and advantageous terms of trade for much of the pre-World War I era. The half century leading up to World War I saw Canada first equal and then surpass Great Britain in GDP per capita.

Then came World War I. International linkages were interrupted: the economies at the "periphery" of the world economy — Argentina, Brazil, Australia, to a large degree Canada, and many others — that had relied on British industry as their source of manufactures found that British industrial capacity was almost entirely devoted to the war against Germany. For the duration of World War I they could no longer trade their food, lumber, and minerals for British-made manufactures. In addition, they could no longer borrow from European financial centers to finance their own industrialization. International capital flows dropped to a trickle as belligerents tapped their national flows of private savings to finance the overwhelming expense of total war and near-total mobilization.

Things did not significantly improve after the end of World War I, for the end of the war saw the beginnings of mass unemployment. Tariff walls went up, in some cases to avoid dealing with the international economic consequences of wartime inflation, and in other cases to try to export unemployment by shifting demand to boost domestic production and employment. International capital flows remained low. Post-World War I financial instability raised investors' fears of devaluation and depreciation, and choked off the pre-World War I large-scale flow of capital from the industrial center to the industrializing periphery.

Then came World War II, an economic disaster for Europe and Asia, yet a boost to production (albeit not to civilian consumption) in the Americas.

After World War II, restoring the integrated world economy of free trade and expanding international investment was a priority — but not the highest priority. Only in the 1980s did the world economy return to anything like the degree of openness that it had seen before World War I, as measured by tariff barriers, trade flows as a percentage of world product, and international investment flows as a percentage of total investment.

From this particular perspective, the globalized economy is not exactly new. Instead it is something very old that became largely forgotten in the wake of the political and economic disasters of the middle of this century. Thus to some degree the consequences of life in the new, globalized economy can be anticipated by looking back at how the world economy worked before World War I.

Predictable Consequences of "Globalization"

The Decline of Macroeconomic Autonomy

A first consequence of globalization is a sharp decline in the ability of governments to control their own macroeconomic destinies. This is not new: before World War I international financial relations were dominated by the "rules of the game" of the gold standard, and the potential of nations to follow independent monetary or other macroeconomic policies was strictly limited. Governments that did seek to promote domestic macroeconomic goals by deviating from the policies prescribed by gold-standard orthodoxy found themselves paying relatively heavy economic penalties for little if any gain.

For example, the United States before the turn of the twentieth century was swept by the "free silver" movement, which sought rapid expansion of the money supply by the free coinage of silver in order to reduce interest rates and raise nominal product prices. It was aimed to erase some of the redistribution of income and wealth away from western farmers to eastern bankers that had taken place as a result of the slow deflation during the previous generation. However, even consideration of the free coinage of silver triggered substantial capital flight and high interest rates — and a relatively severe depression in the United States.

Milton Friedman and Anna J. Schwartz's *Monetary History of the United States* evaluated the consequences of the "free silver" movement, and concluded that the United States failed to gain *any* benefits that might have flowed from a less deflationary late nineteenth-century monetary policy, and also (temporarily) lost many of the benefits of stability and commitment that usually flowed from obedience to gold standard norms.

From the end of World War II to roughly the beginning of the 1980s, by contrast, countries possessed a substantial degree of power to determine their own macroeconomic policies. They could choose whether or not to conform to the dominant international monetary policy regime without suffering substantial penalties in terms of capital flight and diminished trade if they did not conform. Propensities to import were relatively low: much of any given demand expansion remained at home to boost the domestic economy. Moreover, degrees of capital mobility were low, both because of formal and informal capital controls and because of investors' lack of confidence in the persistent liquidity of investments across national borders.

Thus national governments' decisions to take strong actions to manage their economies were not immediately undone by large-scale capital outflows or inflows. Countries could follow more expansionary macroeconomic policies more or less as their governments wished; they could trade off somewhat higher employment and production in the present in exchange for somewhat higher inflation in the future.

Even relatively open economies in countries like Canada — where imports plus exports together amount to more than 50 percent of national product — had substantial freedom of action to manage their own macroeconomies in their own interests in the first post-World War II generation. Capital controls, and the fear of capital controls, kept capital flight from becoming an important consideration in first-world economies. Canada's economy was subject to large shocks from the business cycle in the United States. Still, it was readily possible for Canada to run stabilizing fiscal policies, with no more than one-third of the boost to total aggregate demand leaking over the border to the south. There was substantial freedom of action over monetary policy to alter domestic interest rates without generating sizeable pressure on the exchange rate.

Since the late 1970s or early 1980s, things have been very different. The first large-scale example of how increasing economic integration has eroded national governments' ability to pursue idiosyncratic policies costlessly can be seen with the election of François Mitterrand in France in 1981. Mitterrand's expressed policy was one of fiscal expansion and economic growth: nationalize some pieces of the private economy to enhance the government's control and influence over the financial sector; increase access to capital by persuading the Bank of France to ease monetary policy; boost the government's budget deficit by expanding the social welfare state; and so reduce unemployment.

This was a common recipe that had worked in many industrial economies in the generation after World War II, even highly open economies albeit sometimes at the cost of building higher inflation into the economy.

Nevertheless the consequences of Mitterrand's "dash for social democracy" were unexpected. The value of the franc fell abruptly, and sharply rising prices of imported goods in France fueled domestic inflation. The trade balance turned negative as investors increased the risk premium they demanded for holding franc-denominated assets. The Bank of France soon found itself raising, rather than lowering, interest rates in France. Private investment collapsed and spending was reduced by more than the promised fiscal stimulus. The "dash for social democracy" had generated some inflation, recession and currency depreciation.

Mitterrand's policies were reversed within six months.

Many macroeconomists want to dismiss this lesson, arguing that continental Europe was unique — a set of economies in which capital markets were much more integrated and governments more vulnerable to currency depreciations than elsewhere in the industrial world. They further argue that outside of continental Europe governments still did have the choice to follow expansionary or inflation-fighting economic policies.

But by the early 1990s the dominant impact of the global capital market was plain even in the largest and the least open of the industrial economies, the United States. Consider, for example, the situation facing the newly elected Clinton administration in early 1993. At the start of 1993 the pattern of short and long-term interest rates — the term structure of interest rates — was very steep: investors were anticipating very sharp rises in short-term interest rates.

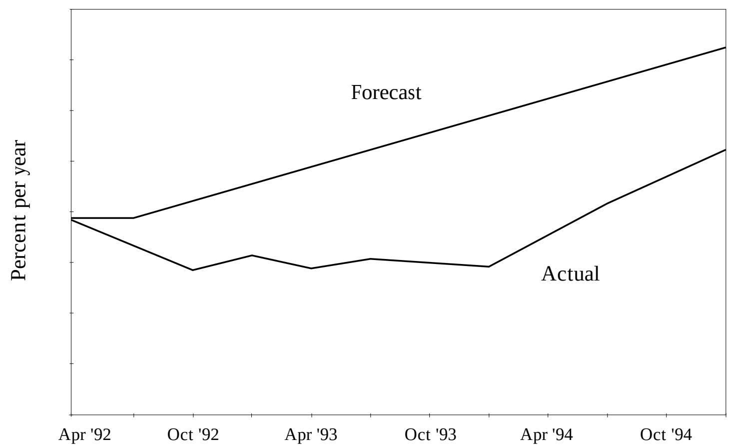
The conventional interpretation is that international investors appeared unwilling to continue to finance the U.S. government's budget deficit at low interest rates, and did not expect any significant action to reduce the U.S. deficit. Economists of the Clinton administration early in 1993 could look forward to a future of sharply rising interest rates (unless major steps were taken to reduce the government's budget deficit) that would reduce investment and create a danger of renewed recession. In addition they could look forward to a sharply falling currency leading to higher inflation as well.

Some feared in early 1993 that substantial action to reduce the budget deficit would reduce total spending and renew the just-finished recession. Others hoped that such action would be rewarded by falls in the risk premium that international investors charged on U.S. assets, and by a resulting boost to investment. They hoped that this would reduce or diminish the chance of renewed recession from a shift toward what would in previous decades have been seen as a "contractionary" economic policy. The hopes were more than fulfilled, as former Federal Reserve Vice Chairman Alan Blinder recently observed:

> ...the remarkable decline in (U.S.) long-term interest rates from the fall of 1992 to the fall of 1993... kick-started a previously lackluster economic recovery into sustained growth....(R)emember... that the bond market rallied with no change in monetary policy. Does anyone seriously doubt that the Clinton administration's large, credible, deficit-reduction plan of 1993 was the driving force behind the lower long-term interest rates?

FIGURE 2

ACTUAL U.S. SHORT-TERM INTEREST RATES, AND SPRING 1992 FORECASTS FROM THE TERM STRUCTURE



Therefore, even in the United States, the largest and least affected by international trade and finance of all the industrial nations, the macroeconomic consequences of international economic integration were such as to all but completely override the conventional expectations of the impact of government macroeconomic policy. How much greater must the potential impact of the international economy be on other, more open industrial powers, like Canada? The real, though limited macroeconomic autonomy that highly-open industrial economies used to possess is gone.

This end of macroeconomic autonomy is not the only consequence of international economic integration. However, it should be noted that international economic integration, even though accompanied by a loss of control over domestic economic outcomes, is not a bad thing.

It would be false to say that international economic integration was bad for France in the early 1980s, or for the United States in the mid-1990s. France benefited enormously from its access to world trade and the ability to fill its particular niche in the international division of labor. The United States benefited immensely from its access to international capital markets: such access allowed the U.S. to finance its 1980s' deficits largely from abroad without severe reductions in domestic investment. Access to international capital markets on a large scale essentially transformed the deficits of the 1980s from an economic policy catastrophe to an economic policy problem. Canada's standard of living has been significantly increased by its ability to trade its resource-based and manufacturing products for those of other economies.

But as seen, the benefits of international economic integration do not come without a price. And the price is a loss of much of the autonomy to make domestic macroeconomic policy that governments had begun to take for granted after a period of half a century from 1920 to 1970.

The Return of Large-Scale International Capital Flows

A second predictable consequence of globalization is the renewal of large-scale capital flows across the world economy. Before 1914 non-industrialized economies with abundant natural resources, skilled labor and bright growth prospects could finance their industrialization by borrowing capital on a very large scale from Britain or France. After 1919, large-scale capital flows were cut off to a great extent: industrializing economies had to rely on their own domestic savings resources to finance development and industrialization.

This shifted in the 1980s with the emergence once again of large-scale international capital flows. The United States was the first recipient when perhaps two-thirds of the financing necessary to accommodate the swelling U.S. government budget deficit was obtained from investors in other countries. This flow of capital prevented the policy mistakes of the 1980s from becoming true disasters for the U.S. economy, at the price of severe regional unemployment in export-producing regions like the U.S. midwest.

The 1990s have seen a continuation and broadening of this pattern. More and more economies have appeared able to run substantial trade deficits or surpluses, and an average of $150 billion net U.S. dollars a year has been invested by inhabitants of the industrial core in the industrializing periphery. Canada has participated as a net recipient of international capital flows to finance private and public debt. The share of net issues of Canadian securities purchased by foreigners has risen from 10 percent in the 1960s to some 60 percent in the 1990s. Capital markets that were largely closed are now very open. Thirty years ago the terms on which the Canadian government (and Canadian companies) could borrow were set by the supply and demand of finance in Toronto. Now they are set by the supply and demand of finance in London, Frankfurt, New York, and Tokyo.

With this restoration of the pre-World War I pattern, industrializing countries judged by international investors to have bright economic growth prospects have the potential to boost their growth even more. They would be able to use international capital markets to leverage their bright prospects into high investment well in excess of domestic savings.

Conversely, industrializing (and industrial) economies that lose the confidence of international investors have the negative economic consequences amplified by the possibility of large-scale capital flight, as the world has seen three times so far in the 1990s. The international debt crisis of the 1980s was the first sign of this possibility. The second was the loss of confidence in European exchange rate stability in the fall of 1992. And the Mexican peso crisis of 1994-1995 was the third sign. It is now clear that international investors' opinions about the desirability of investment in different economies can change very far very fast, and when they do, domestic economies and attempts to stabilize exchange rates are placed at substantial risk.

Globalization and the Union Movement

A third consequence of globalization is the diminishing effectiveness of national union movements. The return to a more highly integrated international economy weakens the influence and power that the union movement can exercise on a national level.

In the late nineteenth century it became apparent to union organizers that industries had to be organized either all at once or not at all: unless the bulk of firms in an individual industry could be organized, competitive pressures were likely to undermine rapidly any gains made by one particular bargaining unit.

However, in the pre-1914 globalized economy, international trade had relatively little impact on the union movement. Trade as a proportion of world GDP was comparatively large, but for the most part trade followed the standard patterns predicted by David Ricardo or by Eli Heckscher and Bertil Ohlin: countries with abundant land and natural resources exported metals, grain, and animal products. Countries that were among the first wave of industrializers exported manufactured goods. Colonial economies exported unique or near-unique agricultural products, such as tea, rubber, coffee, cotton, and sugar.

A very important factor affecting the success of the union movement was whether a particular product could be made by competitors in the next city. This made organization on a regional or national scale necessary for any successful union drive. The possibility of competition from abroad was a much less important factor, because the pattern of pre-World War I international trade was such that only in exceptional circumstances was a domestic industry subject to large-scale competitive threat.

Today's globalized economy is different. Most trade is not Ricardian trade, that is to say trade between economies with very different factor endowments and comparative advantages; instead, most trade is between similar economies with similar factor endowments, in which comparative advantage at any one point in time is a product of history, luck, and skill.

This means that the long-term future of organizations like the United Auto Workers in North America hinges on the continued unionization of the European auto industry, the continued ability of Japan's company auto worker unions to maintain comparatively high wages in Japan's manufacturing sector, and the success of organizing drives in potential future producers of automobiles like Mexico. To date, the ability of the modern labor movement to organize successfully across national boundaries has been relatively limited, and certainly much more constrained than the ability of labor movements in the past to organize across province or state lines.

For the Canadian economy, the consequences for the labor movement are brought closer in time by the rise of anti-union sentiment (and non-union employers) in the United States, and by the North American Free Trade Agreement (NAFTA). Some analysts believe that with NAFTA, agricultural, regulatory and labor policies will inevitably be "harmonized" as governments react to the threatened and actual movements of industries to regions in the NAFTA area where the policy environment is most to their liking. Pessimists see the "harmonization" as likely to be downward, a movement to the lowest common denominator; optimists see the "harmonization" as more likely to be upward, with workers in areas where industries are growing pointing to the protections and advantages enjoyed by others in the NAFTA area.

Policies toward unionization, and the strength of the union movement, have not yet become bones of contention within the NAFTA area. Agricultural policies have: a wide number of political observers believe that part of the NAFTA obligations that the United States is most likely to fail to meet in the next two decades concerns trade in agricultural products produced in Canada. But policies toward "labor standards" will become important sources of political friction in the future as governments face union-side pressure to "level up" labor standards while unions face corporate-side pressure to become more competitive.

It is reasonable to have at least two views on the likely weakening of the world's labor movement owing to the surge of international economic integration. On the one hand, successful labor movements induce firms in a unionized industry to restrict output below the competitive level, and thus diminish productive efficiency. To some degree economies with strong union movements may be setting the stage for slower economic growth in the future.

On the other hand, successful labor movements — and, perhaps more important, the impact of the threat of organization on the wage policies of non-union firms — have been a powerful force tending to level the distribution of income in industrial economies over the past century. The premium wages bargained for by unions and, more important, the premium wages paid by firms that have felt themselves under threat of unionization have significantly compressed the wage distributions of advanced industrial economies over the past century. Advanced industrial economies have thus purchased a considerable amount of income equalization at the price of generating some static economic inefficiency in the allocation of labor and in the capital intensity of production.

Is the loss of static efficiency worth the gain, in terms of a more equal income distribution? This is ultimately a political question.

The most important point is not whether a stronger labor movement is a good thing or not a very good thing for a modern industrial economy. It is that the labor movement is losing much of its freedom of maneuver as intra-industry trade continues to grow. Unions *can* still be effective and powerful. But the potential consequences — for the industry, for the country's competitive position, and for the members themselves — of any union or business misjudgment of its true relative bargaining strength are much worse than they used to be for the industry's world market share. And this potential effect of globalization is likely to be of near-immediate concern for Canada as the economic consequences of the NAFTA work themselves out over the next two decades.

UNPREDICTABLE CONSEQUENCES OF GLOBALIZATION

FROM A SECOND PERSPECTIVE, however, today's globalization is indeed something very new.

The internationalized economy that we now see is in some ways profoundly different from the internationalized economy that existed before World War I. The following contrast and analogy best summarize this difference: the pre-World War I globalized economy was a "low bandwidth" international economy; today's globalized economy is a "high bandwidth" international economy.

Take for example the transmission of information and entertainment across the world. In the late nineteenth century you could send short telegraph messages around the world, or at least to places reached by international telegraph cables. You could send letters within weeks or months. You could also send books in a matter of weeks or months. And you could send bad-quality phonograph recordings. If people in, say, San Francisco wanted to hear the singer Enrico Caruso, they had to wait for him to come through town on a tour — as he did just as the 1906 earthquake struck the city.

Today, by contrast, sound, images, video and text can be sent around the globe in minutes if not seconds. A century ago only the most important facts and messages could be transmitted rapidly. Today even the relatively unimportant can be sent round the globe quickly and cheaply. Not only key pieces of data can be rapidly transferred across nations; the entire context can be transmitted. In the past it was possible to send isolated pieces of information around the globe nearly instantaneously. Now it is possible to send entire pieces of culture around the globe almost instantaneously.

Consider investors as another example. Investors in Britain in the late nineteenth century could buy the bonds and stocks of America's railroads. However, if they tried to be more than passive investors, such as using their voting power to change the management of the Erie Railroad, they quickly found that differences of time, distance, and culture got in their way. Letters and proxies would go astray. They would not hear the detailed news about the corporation until it was too late to interpret and influence events. The courts of New York and Pennsylvania and Illinois would behave very differently than they expected.

Investment was feasible across national boundaries in the last globalized economy, but active participation in management or corporate control across boundaries was not. Similarly, you could import commodities — cheaply, due to the falling price of ocean shipping — but you had only a slim chance of influencing the process by which the goods were made, or of altering the design to suit your purposes.

Today's global economy is one of greater involvement. Important messages as well as general conversation and entertainment are quickly carried to other continents. Today's global economy is one in which people can invest in other countries' economies as well as monitor their investments and control those who manage the firms whose equity they hold. Today's global economy enables a person to buy what is made in foreign countries as well as to control the design and production process. This may be done to a sufficient degree that the functioning and quality can be changed to suit the buyer's requirements.

The extent to which this new form of globalization will be different from the old, turn-of-the-twentieth century version is not yet clear. Nevertheless the differences will matter. The influence of certain factors are telling signs of the "high bandwidth" potency of the new globalization.

One important and uncertain factor arises out of the rapid collapse of the Soviet Union and its consequences: the end of the Cold War, and the potential for very rapid economic growth or for economic collapse and chaos east of what used to be called the Iron Curtain.

Continued economic chaos in Russia and its new neighbors could significantly crimp the world's supply of many natural resources over the next generation. In this case, Canada could benefit from heightened prices for its natural resource exports. Conversely, successor states desperate for hard currency might be willing to exhaust their resource stocks in a generation at any price, putting downward pressure on natural resource earnings by Canadians. The impact can be significant, considering that natural resources and natural resource-derived exports amount to a full quarter of Canadian exports. And about 7 percent of Canadian national product arises out of resource-intensive sectors, the largest such ratio (save Norway) among the North Atlantic economies.

The Age of Diminished Expectations

Increasing international economic integration may well dominate trends in growth and distribution over the next several decades. But to date increasing world trade has played only a minor role in generating trends in the growth of productivity and the distribution of income. Most shifts in growth and income distribution have been generated by similar forces at work *within* each of the industrial market economies.

Consider the pace of long-run economic growth, which is the most important factor affecting the world's political economy. The slowdown in productivity growth that took place in all the advanced industrial market economies beginning in the mid-1970s and continuing through the present day has surely had the largest impact on how the world economy has developed in the past two decades.

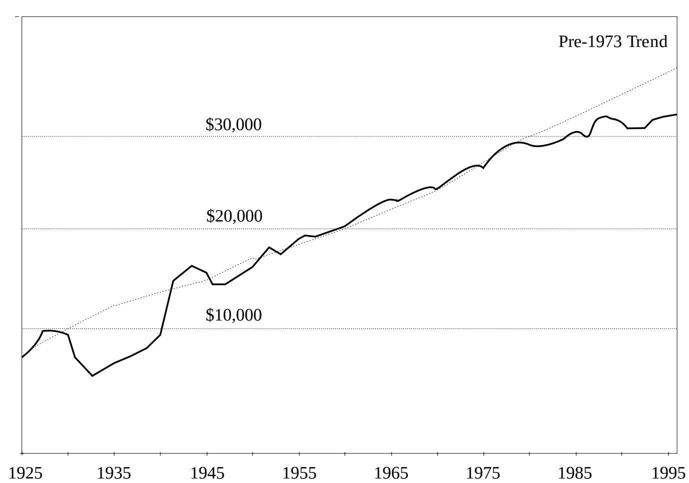
The worldwide slowdown in productivity has carried labor productivity in the industrial core from a growth rate of perhaps 4 percent a year (official economic statistics suggest 3 percent per year, but taking into account all the biases in the measurement of technological change and in the making of index numbers adds another full percentage point or so to the growth rate) to something like 2 percent per year (1 percent per year on an official-statistics basis).

It used to take about 18 years for standards of living in the industrial core of the world economy to double. Now it will take some 36 years or more for standards of living to double. More than half of the economic growth that the current generation could reasonably have anticipated seeing in its lifetime has vanished as a result of the productivity slowdown. In Canada nearly a quarter of the real GDP per worker that would have been produced if post-1973 growth had followed pre-1973 trends has vanished, or rather never appeared.

At first the productivity slowdown was seen as a short hiccup in growth, and was attributed by many to the tripling of the world price of petroleum that took place in the immediate aftermath of the Arab-Israeli War of 1973. In the aftermath of the oil price increase, economies all over the world went into recession. Moreover, production in the mid-1970s recession fell by much more than standard models would have predicted given the rise in unemployment. And production in the recovery period of the late-1970s rose by much less than standard models would have predicted given the speed with which unemployment fell and employment grew.

FIGURE 3

THE POST-1973 PRODUCTIVITY SLOWDOWN IN CANADA
REAL GDP PER WORKER, 1980 DOLLARS



Those who believed that the productivity growth slowdown would be short-lived, and would be followed by a resumption of productivity and real income growth at the pre-1973 pace, pointed to the fact that worldwide economic growth before 1973 had been very lavish in its use of energy. Because energy and power were cheap, it made sense for factories and businesses to adopt a style of technology that economized on energy instead.

A lot of engineering skill and investment that before 1973 had gone into improving overall productivity was, instead, being diverted into improving energy efficiency. Nonetheless, argue the pundits for a short-lived productivity slowdown, within half a decade or so the transition to a more energy-efficient style of technology would be largely complete, and engineering talent and investment would be shifted back toward improving overall productivity.

Yet the economic history of the 1980s and 1990s has not been kind to this hope. The period of rapidly increasing prices in real oil, energy, and power came to an end; however, productivity growth did not re-accelerate to its pre-1973 pace. The fall in the price of oil in 1996 carried the inflation-adjusted price of oil back to its pre-1973 level; yet productivity growth did not re-accelerate to its pre-1973 pace.

Today it is clear that the hope that the productivity slowdown would be short-lived was a completely false hope. The causes of the slowdown in productivity growth are still in dispute. Nevertheless the most likely scenario appears to be the coincidence of a number of the following different, independent factors; each small and relatively unrelated to the others, yet mutually reinforcing:

- The coming to the end of a substantial backlog of unused and underutilized technologies and innovations that had originally built up during the Great Depression and World War II — although this cause applies to western Europe only;
- The beginning of large-scale expenditures on pollution reduction and control, which lowered *measured* productivity growth though not necessarily the true growth of economic welfare;
- The associated shift of managerial attention from the goal of increasing productivity (in the context of a strong union movement that to some extent has a set share of productivity gains) to that of reducing labor costs and increasing the profit share;
- A possible decline in the intensity and skill with which work is performed, as the labor market commits less and less to long-term employment and firms lose interest in developing the skills of employees;
- A shift in productivity growth from goods-producing industries, where Departments of Industry, Commerce, or Trade can do a relatively good job of measuring productivity growth, to service industries, where they

are much less efficient in measuring productivity growth. This often results in a larger share of true increases in productivity being missed by official statisticians; and

- A growing mismatch between the skills and educational level of the workplace on the one hand, and the increasing educational and skill requirements of modern technology on the other: there is a failure of educational systems to keep up with the skill and training requirements of modern technology. These trends have been operating across the entire Organization of Economic Co-operation and Development (OECD) countries — they have not been confined to any single nation or continent.

Perhaps the best speculation for understanding the overall productivity growth slowdown *in Canada* is that it is two-thirds real and one-third misleading due to errors in measurement and in how official statistics are calculated. Official statistics are not very effective at tracking rising service sector productivity. They fail to include in GDP the "output" in the form of enhanced environmental quality produced by the enormous investments in pollution controls.

It can be conjectured that the two-thirds of the Canadian productivity slowdown that is real is due to a large number of independent causes. These include declining investment in firm-specific human capital; growing skill mismatch; the decline in unionization; and other factors — each is small when considered on its own and each is at most tenuously related to the others. Though each of the likely causes is barely noticeable, their confluence has had a major effect on how fast industrial economies have grown. Furthermore, the slowdown in productivity growth has had two important consequences for the political economy of industrial nations in the past fifteen years:

First, semi-stagnant incomes (and the rising inequality and unemployment that have been associated with them) have generated distrust of *all* governments, whether right or left, whether accountable or innocent. No matter which political party is at the helm, a government implicitly or explicitly promises rapidly rising real incomes and economic welfare. During elections, parties continually make such promises to increase their chances. And parties in power continue to break such campaign promises, for they have no effective levers of power and little notion about how to boost the rate of growth of real incomes significantly. Moreover, the deficits that emerge amidst slowly growing revenue and rapidly growing expenditures (because of promises and plans made before the mid-1970s, the beginning of the age of diminished expectations) drain the pool of capital available for investment and further retard growth.

Second, politics has acquired a nastier edge — on all sides — where income growth has been relatively slow and economic discontent relatively great. Citizens of the industrial powers appear to become less tolerant as income growth slows. In Europe some indicators of this are the growth of nationalist and separatist right-wing parties, such as the Northern League in Italy, or the National Front in France. In North America the degree of threatened political polarization has been significantly less — at least so far. Canada has, however, seen a degree of instability in party representation in the legislature that is extremely unusual for a first-past-the post political system. And the United States has seen a significant decline in party cohesion and party loyalty.

Perhaps most important of all, the age of diminished expectations has meant the end of the expansion of the social welfare system *throughout* the OECD. It has also meant the near end of social democracy as a political force, because social democracy presumes a more-or-less continual expansion of the range of government programs as national wealth mounts. Canadian general government expenditures reached some 35 percent of national product on the eve of the 1973 oil shock. Since then expanding transfers and debt interest coupled with slower than anticipated economic growth have boosted general government expenditures up to nearly half of national product.

Social democratic promises of sustained state expansion of social insurance were made under, and assumed, the continuation of a pre-slowdown economy in which labor productivity grew at 3 percent or more per year. This is no longer sustainable or fulfillable if the rate of productivity grows and will continue to grow at only about 1 percent per year.

Barring a sudden resumption of productivity growth at the pre-1973 pace, the aging population of the industrial west implies that governments will not be able to afford to keep the welfare-state promises they made in the 1960s and before.

Signs of this oncoming fiscal crisis were clearly visible by the early 1990s. Net public debt as a share of national product in the OECD countries rose from 20 percent in the mid-1970s to 40 percent by the mid-1990s.

Canada's net public debt as a share of national product rose farther and faster; from 10 percent of national product in the mid-1970s to nearly 60 percent by the mid-1990s, leading observers like the OECD secretariat to question the sustainability of Canadian fiscal policy even in the medium run. And in the long run of half a century or so, the aging of populations means that none of the Atlantic industrial economies currently has a sustainable fiscal policy.

The Economic Impact of Key Trends on Canada and the United States

Developments toward a new, tightly integrated international economy, and the long-term consequences of the worldwide slowdown in productivity growth, are the two major global economic trends that will most likely persist over the next 15 to 20 years. They are expected to have the biggest impact on the future of the OECD taken as a whole. The future of Canada may turn out to be very different from the future of the OECD as a whole, simply because of the close trading and technology link between Canada and the United States.

Anything that sends the economy of the United States into a significant depression will also have damaging consequences for the Canadian economy. And anything that causes the U.S. economy to boom is likely to boost Canadian exports to the United States, and lead to a boom in the Canadian economy as well.

What are the possible economic prospects for the United States? The most probable scenario is continued slow growth, punctuated by moderately severe recessions and accompanied by low inflation. The Federal Reserve, the United States oddly structured and substantially independent central bank, has sufficient authority and stature to resist pressures for policies its chair considers inflationary. The organization has sufficient skill to moderate recessions.

Continued fiscal gridlock will likely be generated by a three-cornered struggle in both the executive and the legislature between social democrats seeking spending increases, populists seeking tax cuts, and fiscal conservatives seeking a budget surplus. The expected resulting gridlock will keep U.S. national savings and productivity growth low.

There is virtually nothing that the Canadian government can do to lessen its exposure to a depression in the United States without incurring an unacceptably high cost in the loss of benefits from international trade.

Other Trends

The Industrialization of East Asia

While the coming of a truly global economy, the continuation of the productivity slowdown, and anything that materially affects the economic destiny of the United States are the three most important international factors that will influence the destiny of the Canadian economy over the next generation, they are not the only important factors.

Three additional representative forces are at work. One is the astonishing pace at which the industrial revolution is coming to East Asia. Another is the continuing slow evolution of the occupational and industrial distribution of the labor force away from an "industrial," toward a "post-industrial," pattern. A third trend is the continuing slow enlargement of the international distribution of comparative advantage.

Between 1820 and 1970 or so, the economies of East Asia with the exception of Japan, fell further and further behind the developed economies of the world's industrial core.

There was some economic growth and improvement in living standards and productivity levels in East Asia. In fact, there was enough improvement that, compared to any previous century or any other context, East Asia's economic growth from 1820 to 1970 would have been classified as an economic miracle. However, owing to the remarkably fast growth elsewhere in the world, including the original industrial core of northwest Europe and the European-

FIGURE 4

ASIAN GDP PER CAPITA AS A SHARE OF INDUSTRIAL CORE
PPP ESTIMATE

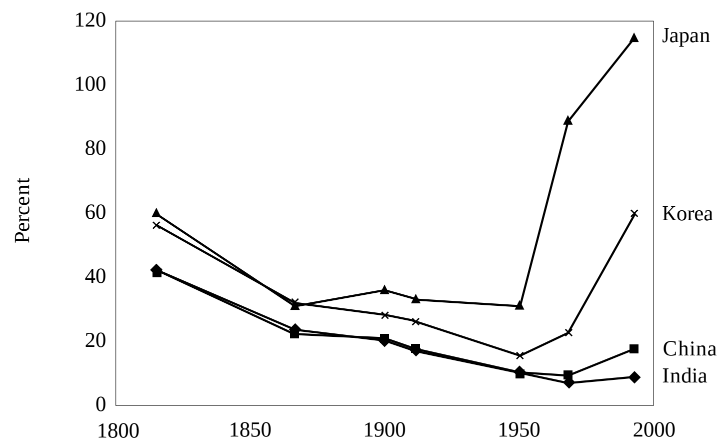
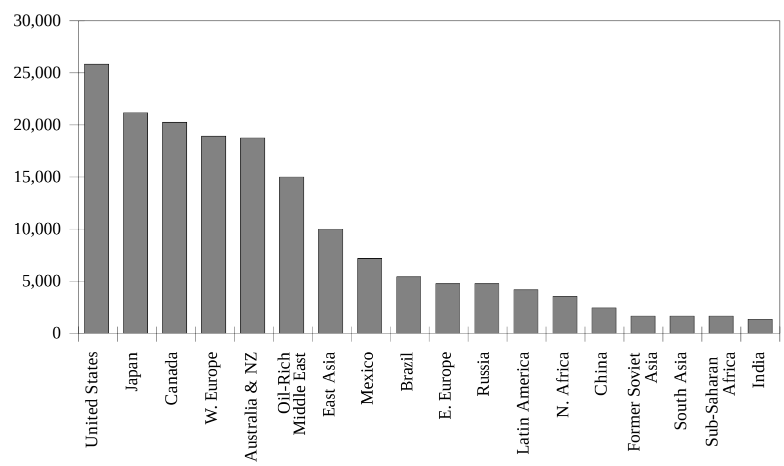


FIGURE 5

1994 GDP PER CAPITA LEVELS
U.S. DOLLARS



settled economies of North America and Australasia, East Asia and most of the other regions of the world were left far and falling further behind.

Starting in about 1970, East Asia began to catch up. Led by the rapidly growing Japanese economy, followed closely by the growing economies of the city-states of Hong Kong and Singapore, and of South Korea and Taiwan, the productivity gap vis-à-vis the world's industrial core began to close. Successful development and industrialization began to spread further to other neighboring East Asian economies.

Today Singapore has a higher GDP per capita level than Great Britain. Japan, along with South Korea, Taiwan, Hong Kong, and Singapore are, or soon will be, advanced industrial economies. Prospects for economic growth in Malaysia, Thailand, Indonesia, and even the Philippines look very bright.

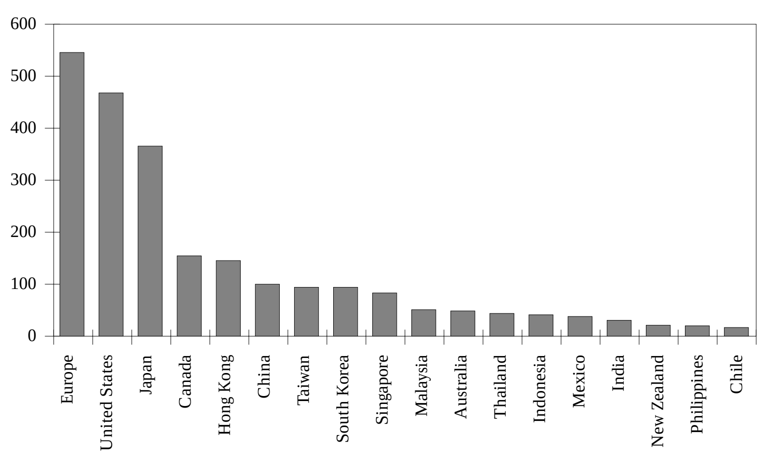
China remains an enigma. There is a very high political risk that the decay of the Chinese communist party will trigger civil war or some other disaster in China. Remarkably little is known about what is going on in China's interior, far from the coast.

This notwithstanding, there is no doubt that large chunks of the Chinese economy have become Newly Industrializing Economies (NIEs) on their own, and in the absence of political disaster, the Chinese economy can be expected to grow very rapidly in the future.

The center of gravity of the world trading economy has already shifted from the Atlantic to the Pacific. And as East Asia continues to grow, the

FIGURE 6

ECONOMIES RANKED BY TOTAL EXPORTS
BILLION OF DOLLARS PER YEAR



Canadian economy will shift further to the west as well in international trade. Ocean trade will increasingly flow through Vancouver rather than through the St. Lawrence.

The Distribution of the Labor Force

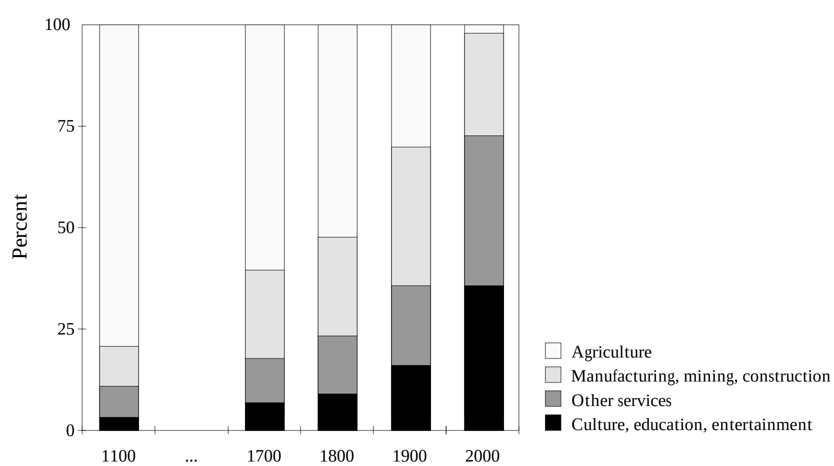
From 1700 to 1900, in what are now the advanced industrial economies, the share of the labor force engaged in agriculture dropped from approximately 70 percent to about 30 percent. Since 1900, the agricultural share has dropped from 30 percent or so to less than 5 percent. In the United States today, there are more gardeners, groundskeepers and lawn trimmers than there are farmers and farm laborers. This decline in the agricultural labor force has not meant a decline in food production. Far from it. Food production is at an all-time high and agriculture has become one of the most industrialized and most productive economic sectors.

Furthermore, the decline in the agricultural labor force has not even meant an especially large decline in the share of the final consumer budget that goes, explicitly and implicitly, to agricultural products. In other words, the decline has *not* been associated with a "decline in food." The fall in the number of farmers has been balanced by a rise in the number of cooks.

The industrial economies today have enormous food processing, food distribution and food service industries. Far more real inflation-adjusted economic

FIGURE 7

APPROXIMATE OCCUPATIONAL DISTRIBUTION OF THE LABOUR FORCE



value is present in the production, preparation and distribution of food than ever before.

What goes on behind the farm gate is a smaller proportion of the final value to the consumer than ever before. The most significant pieces of the value chain are now downstream from the farm, in food processing and food service.

The evolution of the agricultural sector over the past 200 years gives us important clues to the evolution of the manufacturing sector in the future. The share of the labor force in manufacturing has been declining for some time as the advance of technology has made it possible to automate more and more of what used to be repetitive assembly-line jobs. The absolute number of workers engaged in manufacturing in advanced industrial economies has been stagnant or falling since the mid-1970s.

At the same time, the decline in the relative share of the manufacturing labor force has not been associated with any decline in the relative share of manufactured goods in final demand. As in the case of agriculture, a larger and larger component of final value to the consumer and of labor embodied in the final product is being added off the factory floor: in areas including design engineering, the multiplication of models and versions to fit every consumer taste, marketing and distribution.

There is every reason to think that these trends will continue. More and more of the labor force will be engaged in designing better products, and in making it possible and easy for consumers to find and select the particular version best suited to their requirement. A lower and lower share of the labor force will remain in the traditional "blue collar" occupations. Already Canadian employment in manufacturing is less than 14 percent of the labor force: this process is already far advanced.

This trend is unlikely to proceed as far as it has in agriculture. The share of the labor force engaged in manufacturing will in all probability never drop below 10 percent. Nevertheless, the continued shift in the occupational distribution of the labor force away from the factory floor toward other components of the value chain will continue and will be a major force over the next 15 to 20 years.

The International Division of Labor

In certain respects, the world division of labor has shifted remarkably little in the past 15 or 20 years. For example, the economies of North America import no higher a share of their GDP from relatively poor, newly industrializing economies today than they did 15 or 20 years ago. Although they import from a different group of newly industrializing economies, imports from this class as a whole have not grown.

In other respects there have been significant shifts. Entire industries including consumer electronics and many portions of semiconductors, which used to be "high technology" areas produced in the industrial core, have been farmed out to lower-wage economies. Furthermore, the industrial core now imports from a different set of low-wage economies: 20 years ago Italy and Spain were low-wage economies; 30 years ago Japan was a low-wage economy; today Mauritius, Malaysia and Indonesia are the low-wage economies from which the industrial core imports manufactures.

The relative positions of individual countries in the international division of labor have changed. Individual industries have shifted from "high technology" to "routine manufacture." Still, the pattern that persisted 20 years ago remains today. Labor-intensive manufacturing has flowed and will continue to flow to poor, less-developed, newly industrializing economies that are supported by their government's policy, investment, and technology. In the recent past, labor-intensive manufacturing has been joined by labor-intensive information processing (data entry and so forth) as an available niche of comparative advantage for relatively low-wage newly industrializing economies. Capital- and skill-intensive manufacturing and services continue to be invented and flow to the rich economies of the industrial core.

There are still other important factors at work. One that is worth at least a brief mention is the forthcoming impact of ecological concerns on the world economy. In the mid-1970s the right-wing libertarian futurist Herman Kahn predicted that the world would face two very serious and possibly very damaging environmental problems: global warming and ozone depletion. He was sanguine

FIGURE 8

NON-OIL IMPORTS FROM LOW-WAGE COUNTRIES,
* AS A SHARE OF NORTH AMERICAN GDP

* Countries with wage levels less than half of North American levels.

about the rest of the broad set of ecological issues. As he saw it, the economies of the industrial core had finally grown rich enough to want to do something about environmental protection: large clouds of smoke that darkened the sun at midday were no longer seen as sources of employment and material wealth but as bad signs; the wilds of nature were no longer seen as unused resources that could boost human incomes but as global treasures; the preservation of species had become an issue that people began to worry about.

In Herman Kahn's view, the normal operation of democratic politics would produce about the "right" amount of investment in ecology and in the environment. Voters would reject politicians who failed to protect the environment. Voters would also reject politicians who placed too great a value on environmental goals, and who sacrificed too much employment and income for environmental gains.

The past 15 to 20 years have demonstrated that if Herman Kahn was wrong, he was not far wrong. Democratic politics has generated significant environmental cleanup. Of course, we can wish that environmental cleanup were conducted with more attention to cost-effectiveness (or that environmental cleanup were conducted with more attention to the long-term goal of creating an ethic of sustainable use). We can also wish that the public paid more attention to environmental goals (or that the public had a better understanding of the long-term growth cost of environmental cleanup). Nonetheless, some significant environmental activity has taken place.

Outside democratic circles, in the third world and in the former communist bloc, things have been far worse. "Ecocide" in the former Soviet Union, and resource depletion for the benefit of the cousin of the Minister of Finance are much more the rule than the exception. And things are not likely to get much better until democratic politics take hold, and until democratic politics plus increasing material prosperity begin to generate a strong popular demand for environmental cleanup.

Most prescient of all were Herman Kahn's fears that global warming and ozone depletion would be among the most serious challenges facing the human race.

Both require far-sighted, coordinated international action. Both pose world-wide dangers, but the consequences of non-cooperation by any one country are relatively small and fall mostly on other countries. The human race does not have a good track record on organizing coordinated international action. Yet it may turn out, 50 years hence, that the welfare of the human species will depend on our collective ability to generate such action.

World Economic Prospects

How will all of these trends — and others that emerge — play themselves out over the next 15 to 20 years? The three scenarios to follow are relatively narrow in scope; however, they do suggest the range of possibilities. In the first scheme, East Asia grows even more rapidly than expected, to become the economically dominant region of the world in a short time. In the second scenario, the end of the Cold War plus increasing political strife fueled by slower growth and rising inequality lead to the end of the free-trade order that has characterized international economic relations since 1944 and Bretton Woods. In the third, the failure of international institutions and leaders to cope with the stresses of the international financial system leads to financial crises of increasing virulence and to more severe recessions and depressions. In an attempt to add immediacy to these scenarios, they are presented in retrospect as though they already happened : as though policy analysts in 2015 are trying to look back and account for what happened to the world economy.

These particular scenes as such are unlikely to come to pass. However, they serve as useful indicators that other forces besides the dominant trends cited earlier — perhaps along the lines of these scenarios — will shape our future as well.

Background Assumptions

The three scenarios in this section all share the following common background assumptions.

First is the assumption that there will be no truly large-scale political disasters in the next 15 to 20 years. There will be no global wars, and no widespread use of weapons of mass destruction. This assumption may well be wrong. Would anyone in 1900 have predicted that within a decade and a half an assassination in Sarajevo would lead Germany to launch a total war on France? Probably not. World Wars I and II, the Cold War, Mao's Cultural Revolution, Stalin's Great Purge, and the rise of Adolf Hitler were all unforeseeable 15 years in advance. The next 15 years may well hold a political disaster of equal magnitude — in which case all bets are off and all the proposed scenarios are seriously flawed.

The second background assumption is that we have not yet seen the high tide of the current cycle of democracy: the next 15 years will see more and more stable democracies. People can look forward to a continuing decline in rulers who do not accept peace and prosperity as overriding goals and consent of the governed as the dominant political principle.

At some point in the future the tide of democracy may ebb. Democracy collapsed in Europe between 1920 and 1940. It collapsed in Italy at the end of the fifteenth century. And the growth of modern democracy from its origins in sixteenth-century Holland has been very slow and uneven. This notwithstanding, there is no good reason to conclude that the tide of democracy that has been running for the past 50 years is at its highest today.

The third assumption is that an ecological catastrophe is much more than 15 years away, should it occur at all. An ecological catastrophe may or may not happen in the long run, as the international order is or is not able to cope with ozone depletion and global warming. In turn these issues may or may not be the most dire challenges facing the human race in the twenty-first century. Based on geophysical projections, whatever might occur in the course of natural phenomenon in the next 15 years will not be a crisis. We will be lucky if in the next couple of decades we learn enough to understand and assess the true seriousness of the problem. All these issues appear to entail longer-term processes than the time scope of this paper allows.

Scenario I: East Asia's Rise to Economic Dominance

It was apparent to some that East Asia was about to become the economically dominant area of the world as early as 1990. Projections of future relative productivity levels, such as those suggested by Charles Jones of Stanford, pointed to a large number of East Asian economies as ranking above the most prosperous and productive in the world well before the middle of the twenty-first century. The remarkable growth of the Japanese economy in the 1970s and 1980s, coupled with the financial power given by the high value of the yen in the late 1980s, gave the world economy for the first time a taste of what it might mean to have the center of world capital flows and the most prosperous economy in the world be situated on the western shore of the Pacific, rather than the eastern shore.

The period of Japanese prosperity in the late 1980s was, however, followed by a significant stock market crash — the end of the "bubble economy" — and by a surprisingly prolonged growth recession that lasted for nearly half a decade. Nonetheless the underlying forces supporting Japanese economic growth continued to work: investment remained very high, education continued, and the technological competence and creativity of Japan's firms grew. More important perhaps, the economies of other East Asian countries continued to grow even more rapidly than they had in the 1980s, and much more rapidly than Japan in the 1960s and 1970s.

Shortly after the year 2000 it was clear to all that East Asia's industrial revolution had become the most important factor in the world economy. Much of East Asia had joined the "first world," marking the first truly significant increase in the size of the world economy's industrial core in nearly a century.

Within a few more years it further became clear that East Asia had in fact not joined the first world industrial core. It had not "converged" to North Atlantic living standards and productivity levels; it had actually surpassed the North Atlantic industrial core in much the same way that North America had outstripped Britain in productivity, industry, and technology a century earlier at the turn of the twentieth century.

At the end of the nineteenth century, the North American economies of Canada and the United States, which had been somewhtat poorer and much less industrialized than Great Britain, caught up to Great Britain in levels of aggregate productivity. By World War I, the continent was as industrialized as Great Britain. And by the end of the 1920s, levels of prosperity and productivity in both North American economies were significantly higher than in Great Britain.

The emergence of a large gap between North America and northwest Europe, through the fact that the North American economies did not just catch up to but overtook and surpassed the economies of Britain, Holland, and Belgium had enormous political consequences. Leaders elsewhere in the world began sending their children to the United States rather than to Britain to be educated. The United States rather than Britain began to be viewed as the country that was the best mirror for what the future might be: “the furnace where the future is being forged.” Economic power soon transformed itself through numerous subtle and not so subtle channels into international political influence.

By 2010 it was clear that this scenario had been repeated once again. Growth rates in East Asia had not declined; they had instead accelerated beyond their 1990 pace. Already in 1996 the East Asian economies had become the largest export bloc in the world (if intra-European Community trade were omitted). By 2010 East Asian exports were more than double those of all the countries of North America, and far surpassed those of the European Union.

The consequences of the sudden economic rise of East Asia for North American consumers in the United States and Canada were extremely pleasant: not only consumer electronics and automobiles, but virtually the entire array of high-quality manufactured consumer goods could be imported and purchased cheaply. And the enormous savings pools of East Asia could be tapped by borrowing at surprisingly easy terms for purchasing the manufactures of East Asia.

The consequences for export and import-competing businesses in Ontario were much less pleasant: they had to compete with the higher-quality, lower-cost industries of East Asia. Canadian unemployment had reached a stubborn high of nearly 10 percent before the rapid expansion of East Asian manufacturing. There were also signs that Canada was catching the European unemployment disease in which unemployment would rise with ease, but fall only slowly. The shift in international comparative advantage brought Canadian unemployment well into the double digits.

The North Atlantic industrial economies could have held onto market share for their manufacturing industries by allowing their exchange rates to decline unimpeded, offsetting the East Asian productivity and quality advantages with a cost advantage derived from devaluation.

But few governments of industrial economies were willing to take this road, although it was advocated by a plurality of international economists. Central bankers feared that allowing devaluation would import inflation. Treasury ministers feared that declining currencies would be taken as an indication of their incompetence. Others saw that declining currencies meant higher prices for imports. Most important, however, national governments and business firms owed large debts to East Asia, and these debts were overwhelmingly denominated in *yen*. Devaluation thus meant a substantial increase in the home-currency value of one's foreign debt, and was to be avoided.

So most industrial economy governments preferred to attempt to maintain overvalued currencies, supported through *ad hoc* import restrictions, relatively high domestic interest rates, and in some cases restrictions on capital outflows. The governments of the old industrial core thus found themselves faced with the same problems of "structural adjustment" that the British government had faced in the 1900s and 1920s. A very large portion of the world's manufacture of labor-intensive manufactures had moved to China and to other relatively low-wage regions of central Asia. In addition, a large chunk of the skill-intensive and high-technology industries that formed the core competitive position of industrial economies moved to Japan as well as to Korea, Taiwan, the hinterland of Hong Kong and Singapore, and other regions in East Asia.

The former industrial core found, increasingly, that its comparative advantage lay in luxury manufactures for which East Asian consumers were willing to pay a very high price because American, Canadian and European brand names still carried prestige. This included luxury items in travel and tourism, and in international business service and entertainment industries, although there were signs in 2010 that English-language dominance in legal services, investment banking, and advertising services was beginning to ebb.

Other than scattered sectors and industries, North America's comparative export advantage in 2010 did *not* lie in high-tech or mass-production manufacturing, just as northwestern Europe had no comparative advantage in high-tech or mass-production manufacturing in the 1920s or 1930s.

The industrial and occupational shifts that this transformation in comparative advantage forced upon the economies of Canada, the United States, and Europe were marginal from the perspective of their economies as a whole. There was a fall in the share of the labor force employed in manufacturing from 20 to 16 percent or so; and a rise in the share of the labor force employed in travel, tourism and other export services by two or three percentage points.

However, these "marginal" shifts bankrupted many of the largest, oldest and most established businesses. And this "marginal" shift led to painful problems of "structural unemployment": factory assembly-line workers and refrigerator design engineers did not like to be retrained as tour bus guides in the parks of western North America. And they were not very good at the jobs for which they were retrained. Some 4 or 5 percent of the potential labor force continued to sit at home idle, waiting for the manufacturing sector to revive. By contrast, the profits of export service firms and luxury manufacturing firms boomed, as did the wages of their most highly skilled and educated workers.

By 2010 it was clear that on the whole the economies of the North Atlantic were benefiting very substantially from the industrial revolution in East Asia: their living standards were higher than ever before. Nevertheless this increase in living standards had come at the price of the emergence of a much larger structural unemployment problem than had been seen anywhere since the end of the Great Depression. Many economists feared that governments' desire to maintain currencies overvalued against the yen would slow North America's long-run rate of economic growth, and leave it even further behind the richest nations of East Asia in relative terms by the middle of the twenty-first century.

Scenario II: The End of the Free-Trade Era

The 20 years from 1975 to 1995 saw the degree of income inequality in the North Atlantic industrial core of the world economy move back about halfway between the relatively egalitarian post-World War II distribution in a social democracy and the levels of inequality that occurred around the turn of the twentieth century.

The reasons for this trend toward greater inequality were not clear at the time. Moreover the trend continued. By 2010, the distribution of income in Canada, the United States, and Europe had become further skewed, and was approaching levels of income and wealth inequality that were last seen at the end of the Gilded Age. Right-wing governments talked of how the market distribution of income existed for a reason and was efficient. Left-wing governments talked of how income redistribution to offset the rising inequality would be a good thing, yet the steps taken when in power were all minor and had no impact on income trends.

The first and most important consequence of this was the increasing class polarization of politics. The center of political gravity did not shift either to the left or to the right between the mid-1990s and 2010. There were additional pressures for redistribution generated by demands for services, benefits, and "fairness" from the bottom half of the income group. These pressures were in part offset by an increase in political apathy among the poor, the newly-poor, and those who felt that they were poor, even though their real incomes had risen, because the gap between their incomes and those of the merchant princes had become so large. At the same time, the demand of modern politics for money continued to increase. Political parties that wished to have a presence and a voice in the mass media needed strong support from at least some moneyed groups.

While the center of political gravity did not shift, the temperature of political strife rose sharply. The left attacked the right as being cynical and callous plutocrats who had no concern for the pain and distress of real people. The right attacked the left as being ex-Marxists who wanted to destroy economic growth and hobble opportunity in the pursuit of a chimerical ideal of "equality of result." The center stayed obscure, seeking with little success ways to satisfy the strongest appetites of both left and right and so lower the temperature of political strife.

In an image used by the former chair of the U.S. Council of Economic Advisers, Herbert Stein, politicians of the center were like a Russian traveling party on a sleigh, fleeing through the woods at night with the wolves howling behind: every once in a while they would throw something (or someone) back in the hope of distracting the wolves long enough for them to escape.

One of the first things thrown over the side, after the year 2000, was the free-trade order that had been in place since 1945. There were some signs that this was coming. Over the previous several decades, opposition to free trade had turned out to be a surprisingly powerful populist mobilizer of political energy — never mind that freer trade had played at most a minor role in widening income inequality; never mind that free trade appeared to have a leveling effect on the distribution of consumption in industrial economies by lowering the prices of relatively cheap staples. Attacks on foreigners and the goods they made as sources of unemployment had turned out to be surprisingly powerful political tools whether made by a nativist right or by a populist left.

Moreover, the end of the Cold War and of the need to hold the industrial West together against the Soviet Union removed a principal cement of the free-trade coalition. Before the end of the Cold War, domestic protectionist interests had always had to fight the national security establishments of the North Atlantic powers as well as the liberal internationalist establishment in order to win victories against free trade. Now that the connection between trade liberalization and national security had been broken, the national security establishments were neutral.

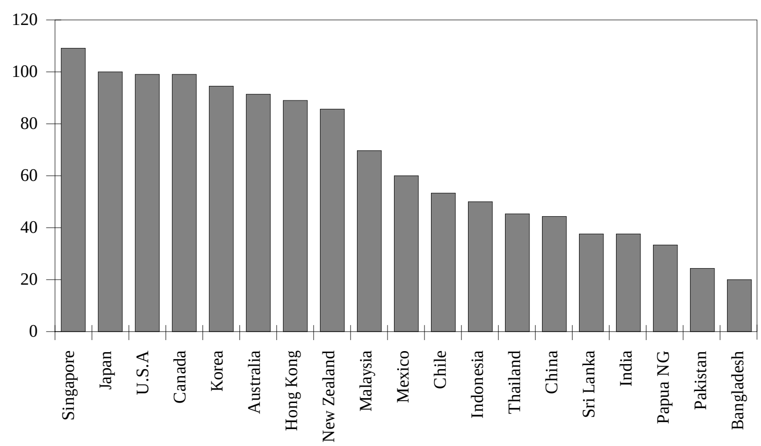
To those with a long historical memory, the collapse of the World Trade Organization (WTO) in the economic sphere in the decade of the 2000s was eerily similar to the collapse of the League of Nations in the political sphere in the decade of the 1930s. First, individual nations announced that they would boycott certain WTO proceedings: the United States began the trend, denying that the WTO had any jurisdiction over U.S. economic sanctions imposed on those doing business in Cuba because it was a matter of "national security."

Second, individual nation-states announced that the WTO was biased against their interests, and that they would not long remain in the system unless the decisions of its mediators and judges were more in tune with their national concerns.

In response, the negotiators and judges did buckle somewhat: decisions appeared to lean more favorably to those who yelled the loudest about the

FIGURE 9

MID-21ST CENTURY GDP PER CAPITA LEVELS
PREDICTED RELATIVE GDP PER CAPITA (2040), U.S.= 100



unfairness of the WTO in election campaigns. Nevertheless, the concessions did not appease the opponents. Once it became conventional wisdom that WTO decisions could be affected by pressure, the amount of pressure from all sides increased: governments began to threaten that they would withdraw from the WTO if certain key decisions went against their interests and policies.

When the first withdrawals from the WTO did occur, they proved to be very, very popular among domestic political audiences: finally the governments were taking back their national autonomy from the faceless bureaucrats of Geneva. The first wave was followed by a second wave and after a country withdrew, it applied every single trade restriction and tariff that any domestic political interest had demanded. Post-withdrawal rounds of negotiations did not reduce such barriers by much because such negotiations were bilateral only. It took enormous amounts of negotiating effort to make even small progress toward mutual and balanced trade barrier reduction.

The newly industrializing economies of East Asia were horrified because trade was their life's blood. They attempted to replace their lost trade with Europe and North America by intensifying trade with Japan, without much success. The first recession struck the new economies of East Asia, including China. China's pro-economic expansion and pro-market economy government fell as a result. Its new governments, whose principal officers were largely unknown, began to press for a restoration of Chinese culture and for military expansion to give China the armed forces and the international political weight appropriate for a Great Power.

The NAFTA and European Community (EC) held together, largely because proponents were successful at winning "mercantilist" arguments that a large market and a large region in which to locate production were essential for success in the post-WTO struggle for international trade. Apart from those trading blocks, world trade fell by a quarter in the decade leading up to 2010: a very sharp change from the 30 percent or more per decade growth in world trade before the year 2000.

Producers of commodities that were imported were ecstatic about the fall in world trade. Demand switched from imports to their products remarkably fast. Central banks lowered interest rates hoping, successfully, to keep the decline in international trade from causing a recession. Stock market values of import-competing firms boomed. Thus a very large and powerful economic interest group emerged; one which faced the prospect of substantial losses should new pressures for free trade re-appear.

Producers of exports on the other hand faced enormous losses. Factories closed, workers were laid off and there were even bankruptcies as a result of the fall in world trade. Somewhat paradoxically, this led to increasing pressure for further trade restrictions: after all went the argument, *foreign* trade restrictions were destroying *our* exports, hence foreigners should be made to pay a higher price.

The reduction in the volume of world trade reduced total world real income by a couple of percentage points, and reduced the rate of growth of the world economy by a few tenths of a percentage point per year. Nevertheless this loss in aggregate real incomes and slowdown in growth was not enough to lead to a rejection of mercantilist policies and a restoration of the WTO, or to cause wide economic distress in the industrial world. The decade of the 2010s moved ahead with little prospect for the restoration of the free-trade order, and with industry after industry undertaking the sometimes painful, sometimes exuberant task of adjusting to the reduced international division of labor.

Scenario III: The Increasing Virulence of International Financial Crises

In the first few decades after World War II economists and policy-makers congratulated themselves on ending the business cycle. Keynesian demand management techniques had, it was thought, permanently ended the phenomenon of mass unemployment. The Bretton Woods framework combined the advantages of the stable gold standard with the advantages of a managed international monetary system while promising to avoid the disadvantages of both. The business cycle was licked: so much so that in the 1960s the U.S. Department of Commerce changed the name of its *Business Cycle Digest* to the *Business Conditions Digest*.

As time went on, however, it became clear that the business cycle was not gone.

In late 1994, for example, the Mexican government stepped over the line with monetary expansion in the wake of a presidential election. Its mistake of combining an over-expansionary monetary policy with an attempted fixed exchange rate was relatively small. Yet it did not take long for a full-fledged financial panic to develop. The key factor was not Mexican economic growth fundamentals taking a turn for the worse; but rather investors preparing to liquidate their investments in Mexico and pull their capital out of the country first. The process of liquidation would itself bring on the depression and financial crisis that investors wanted to avoid by pulling their money out of Mexico.

It seemed at the time, in early 1995, that anyone willing to invest in Mexico on a sufficiently large scale to ease Mexico's liquidity problems stood to make large, but risky profits. The "anyone" turned out to be the International Monetary Fund (IMF) and the U.S. Treasury, which loaned Mexico tens of billions of short-term dollars on very good security, and did indeed make significant profits on the deal.

At the same time, a closer look behind the scenes shows that the Mexican financial crisis of early 1995 was in fact a harbinger of further trouble ahead. At first glance, the Mexican crisis was a classic example of the kind of international liquidity crisis for which the IMF was designed, and that economists know how to resolve. Yet taking the steps internationally to contain the crisis was much more of a near miss than was generally recognized at the time: the U.S. Congress refused to authorize loan guarantees and some industrial governments with substantial voting shares in the IMF claimed that the Mexican crisis was not a "systemic problem." Britain and Germany signaled their disapproval by abstaining from voting at the IMF Board meeting held to ratify the IMF Executive's decision to commit resources in support of Mexico.

In retrospect it became clear that the Mexican peso support program was the last episode of international policy coordination to stem financial crisis. No U.S. administration has since been willing to follow the Clinton administration's example and to run the risk of committing the U.S. Treasury in the absence of Congressional authorization. Furthermore, Congressional authorization has not been forthcoming. The IMF Executive did not have the resources to handle even Mexico 1995 by itself, was not given the resources subsequently, and proved unwilling to run in front of the G-7 consensus thereafter. No G-7 consensus has been formed in a timely fashion since.

The world was moving in such a way that a typical developing country might face a substantial chance of financial crisis in any given year. There might be one chance in 20 that international investors would grow skittish and pull their money out; that the IMF would stand by; and that a collapse in the currency would carry with it high inflation and a deep recession. With every year that another such crisis occured, the likelihood of further crises increased as investors became more and more sensitized to their occurrence.

Few financial crises in modern times threaten to spread beyond the periphery of a newly industrializing economy to the industrial core. Should this happen, it is not at all clear that the G-7 nations will respond any better than their counterparts did to previous financial crises in past eras. One previous crisis with the most damaging long-run consequences was the Credit-Anstalt crisis of 1930-31, when French Premier Pierre Laval blocked the proposed international support package following the collapse of Austria's largest bank, the Credit-Anstalt.

According to economic historian Barry Eichengreen's, in his history of the interwar period, *Golden Fetters*, Laval insisted on substantial Austrian political concessions, including a sharp distancing of Austria's relations with Germany, as the price of French support. When the Austrian government refused, Laval withdrew the French contribution to the Bank for International Settlements that led the attempt to provide Austria with the resources to fight the run on its currency. As a result of this move, the support package collapsed. The Austrian financial crisis was followed by a German financial crisis when investors pulled out capital, worried that their German securities would be as shaky as their Austrian investments had been. Germany suspended convertibility. The wave of bear speculation then focused on Britain, the heart of the world economy, which devalued late in 1931. The Credit-Anstalt crisis of 1931 turned what had been a moderate global recession into the Great Depression.

International financial crises strike every decade or so. Whether they have an important impact on the international economy depends on how well they are handled. When handled truly badly — as in the Great Depression — the consequences can be very damaging. When handled well, few remember for long.

CONCLUSIONS

THE FUTURE *MIGHT* BRING ANY OF THE ELEMENTS OUTLINED in the three scenarios. They might or might not have important effects on the Canadian economy.

East Asia might grow even more rapidly than expected to become the economically dominant region of the world in a very short time. This would set in motion mammoth problems of structural adjustment for the currently advanced industrial economies. The end of the Cold War coupled with slower growth and rising inequality might generate political pressures that lead to the end of free trade, and to a sharp contraction in world trade. International institutions and leaders might fail to cope with the stresses of the international financial system, and as a result financial crises could occur with greater frequency. In turn, recessions and depressions could be more damaging.

More likely, none of these scenarios will come to pass. There are many different worlds that might come into being over the course of the next 15 to 20 years, and it cannot be accurately predicted which of these might occur. It is a good bet that none of the details of the three scenarios in this study will come to pass. It is also a good bet that events will diverge from what appears to be the most plausible path to new, unexpected scenarios: schemes with at least as much novelty and disruption as the ones described.

Nevertheless it is possible to make relatively safe predictions when taking into consideration the two global trends that have dominated the recent economic history of the industrial world, and promise with near certainty to continue to influence greatly the economies of the industrial world. The first trend, the increasing integration of the international economy was a benefit to Canadians and the Canadian economy the last time it was operating, before World War I. It may or may not benefit Canada in the future.

Nevertheless this trend will proceed — unless stopped by political events that disrupt the international economic order that has been built up, gradually, since World War II.

The second major trend, described in this paper as the productivity slowdown that struck the industrial world in the mid-1970s, continues through the present. It promises to persist indefinitely into the future. It creates problems of economic and political management that are more daunting than the challenges of the fast-growth years of the generation after World War II. These problems are less severe in Canada than in most of Europe. They are certainly no less severe in Canada than in the United States; however, they are serious enough to be very worrisome.

In the wake of these two trends the following can be expected:

- Canadian governments will lose their residual ability to manage Canada's macroeconomy in their own or in the country's interest.

- Large-scale international capital flows will make it possible for countries following prudent economic policies to attract investment and grow rapidly.
- Large-scale international capital flows will also make it next to impossible for governments of countries like Canada to follow policies that do not have the confidence of the international community of financial speculators.
- The world labor movement will face the enormous challenge of organizing industries across national borders, and might grow or shrink depending on how well this challenge is handled.
- Semi-stagnant incomes as a result of the productivity slowdown will continue to generate distrust of all governments.
- Slow productivity growth will mean the end of the expansion of the social welfare system — and will lead to a crisis of social democracy when political leaders tell voters that social-democratic promises, made on the assumption that 3 percent per year productivity growth would continue forever, cannot be kept.

Projections of the future cannot go far wrong when the two key global trends and their likely consequences are recognized.

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