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FRONTIER ECONOMICS:

Why Entrepreneurial Capitalism
Is Needed Now More Than Ever

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Two years and counting since the crash of 2008, there is simply no indication that some new, more government-centric model of economic policy is emerging to supplant the pragmatic neoliberal paradigm that has reigned for the past three decades.

Introduction

In the wake of 2008's great financial crash, pundits rushed to proclaim that a new era was at hand. "Another ideological god has failed," intoned Martin Wolf, longtime columnist for the *Financial Times*. "The assumptions that ruled policy and politics over three decades suddenly look as outdated as revolutionary socialism."¹ "The fall of Wall Street," said Nobel Prize-winning economist Joseph Stiglitz, "is for market fundamentalism what the fall of the Berlin Wall was for communism—it tells the world that this way of economic organization turns out not to be sustainable."² The *Washington Post* ran a big think piece with the headline, "The End of American Capitalism?"³ While the *Post* raised the question, *Newsweek* provided the answer in a cover story entitled, "We Are All Socialists Now."⁴

According to this line of thinking, the spectacular implosion of America's high-flying financial system signaled the beginning of a worldwide shift in political economy—away from the generation-long trend toward freer, more competitive markets and toward greater reliance on government mandates and controls. Just as the Great Depression supposedly discredited "laissez faire" and catalyzed the turn toward more interventionist government, so the Great Recession would do likewise and end the "neoliberal" era of market-oriented reforms. Soon after the 2008 presidential election, *Time* drew this parallel with the 1930s by putting Barack Obama on the cover dressed as FDR, complete with fedora, eyeglasses, and cigarette

in holder rising jauntily from a broad grin. "The New New Deal," the caption read.⁵

Suffice it to say that things look rather different today. In the United States, the political momentum for more activist government has been halted recently by a ferocious political backlash. Meanwhile, in the rest of the world, the most dramatic policy responses provoked by the Great Recession have been in the direction of scaling back government, not expanding it. Specifically, fiscal crises in Iceland, Greece, and Ireland—and worries about further shoes to drop in Spain, Portugal, and elsewhere—have precipitated a continent-wide austerity drive, cutting government salaries and curtailing social welfare benefits. A major retrenchment in the European welfare state seems unavoidable.

It is true that the financial panic did precipitate, in the United States and elsewhere, a wave of bailouts and countercyclical spending packages. Yet these were emergency measures, temporary expedients designed to address the exigencies of the crisis rather than establish some permanent redefinition of government's role. Two years and counting since the crash of 2008, there is simply no indication that some new, more government-centric model of economic policy is emerging to supplant the pragmatic neoliberal paradigm that has reigned for the past three decades.

So, what happened? Why did the crystal ball gazers get things so wrong? It turns out their predictions were based on a serious misunderstanding of what was going on. Yes, there was a spectacular failure in financial markets—that is, in one of the most

1. Martin Wolf, "Seeds of Its Own Destruction," *Financial Times*, March 8, 2009.

2. Nathan Gardels, "Stiglitz: The Fall of Wall Street Is to Market Fundamentalism What the Fall of the Berlin Wall Was to Communism," *Huffington Post*, September 16, 2008, http://www.huffingtonpost.com/nathan-gardels/stiglitz-the-fall-of-wall_b_126911.html.

3. Anthony Faiola, "The End of American Capitalism?," *Washington Post*, October 10, 2008.

4. *Newsweek*, February 16, 2009.

5. *Time*, November 24, 2008.

heavily regulated and politicized industries in the whole economy. Although bankers and other market players surely made terrible and costly mistakes, so, too, did regulators, politicians, and central bankers. While the party lasted, almost everybody in both the private and public sectors was confident that risks were being well managed and the system was fundamentally sound. It turns out, of course, that almost everybody was wrong.

With so much blame to go around, the facts just don't lend themselves to a simplistic morality play about greedy, short-sighted markets versus wise and beneficent public servants. However obvious it is now that new rules for the financial sector are needed, it's anything but clear that simply increasing government oversight authority will be a step in the right direction. What's needed isn't necessarily more rules or fewer rules, but better ones.

Meanwhile, it is a crude non sequitur to leap from woes in one sector to an indictment of economic policies across the board. Recent decades have seen sweeping liberalization of a whole host of markets besides finance—not only in America, but around the world, as well. Why would any of this be called into question because of the current crisis? Did the bursting of the housing bubble somehow demonstrate that U.S. airline deregulation was a mistake? How about the breakup of Ma Bell? Or the privatization of European steelmakers? Or the worldwide fall in import tariffs? Should Latin America have been content with chronic fiscal crises and inflation? Are the hundreds of millions liberated from poverty by the opening of China's economy just a mirage?

Over the past generation, the dominant movement in world economic policy has been in the direction of greater reliance on private-sector entrepreneurship⁶ and market competition. First, the grand ideological struggle between capitalism and socialism ended in decisive victory for the former. In the space of just a few years, the socialist model of comprehensive central planning—

once widely embraced as the path to a better, richer, fairer world—lost the vast majority of both its adherents and its subjects. Meanwhile, the large and varied house of capitalism has undergone extensive renovations that have made it, on the whole, considerably more market-oriented. To use the typology employed by William Baumol, Robert Litan, and Carl Schramm, the trend has been away from “state-guided,” “oligarchic,” and “big-firm” capitalism—think heavy-handed industrial policy, cronyism, and corporatism—and in the direction of “entrepreneurial” capitalism with robust competition and incessant “creative destruction”⁷ (See Figure 1).

Notwithstanding the tumultuous events of recent years, there are strong reasons for believing that this trend will continue into the foreseeable future. Powerful social forces are changing the very nature of economic growth, with the upshot being that growth now increasingly is dependent on new products, new production processes, new industries—and the new businesses that are the indispensable agents of such innovation. In other words, economic growth increasingly takes place at the *technological frontier*—that is, it results from the development of new ideas as opposed to the application of existing knowledge.

Here in the United States and around the world, we have entered what might be called the era of “frontier economics.” Older, easier sources of growth are drying up and, as a result, the prospects for continued dynamism and prosperity hinge more than ever before on the pioneering entrepreneurial upstarts that explore and extend the technological frontier. As a consequence, the political imperative to maintain satisfactory economic performance is putting national economies under ongoing pressure to free up markets and knock down artificial barriers to competition—in other words, to make their particular versions of capitalism more entrepreneurial. The purpose of this paper is to offer a general explanation of this trend and the social forces driving it.

6. A brief cautionary note on terminology: Not all entrepreneurship is created equal. What I am concerned with here is *productive* entrepreneurship, i.e., innovation and new firm formation. As William Baumol has noted, entrepreneurial activity can take unproductive forms, as well (e.g., rent-seeking and organized crime). Baumol argues that an important determinant of a country's growth prospects is the allocation of entrepreneurial activity between productive and unproductive pursuits, which government policies and institutions influence through affecting the relative payoffs. See, most recently, William J. Baumol, *The Microtheory of Innovative Entrepreneurship* (Princeton, N.J.: Princeton University Press, 2010), pp. 152–171.

7. See William J. Baumol, Robert E. Litan, and Carl J. Schramm, *Good Capitalism, Bad Capitalism, and the Economics of Growth and Prosperity* (New Haven: Yale University Press, 2007).

Uncertainty and Competition

Here is the basic hypothesis: There is a ratchet effect in the relationship between economic development and economic freedom. Specifically, the richer and more advanced a country gets, the more economic freedom it needs for growth to continue. Even at the most basic level, poor countries need to develop successful market economies to grow rich. But, once countries become rich, they find themselves ever more dependent on unpredictable entrepreneurial innovation—and, therefore, on a broader range of well-functioning, competitive markets—for continued prosperity. Consequently, as countries develop, they come under increasing pressure to liberalize their markets to stave off deteriorating economic performance.

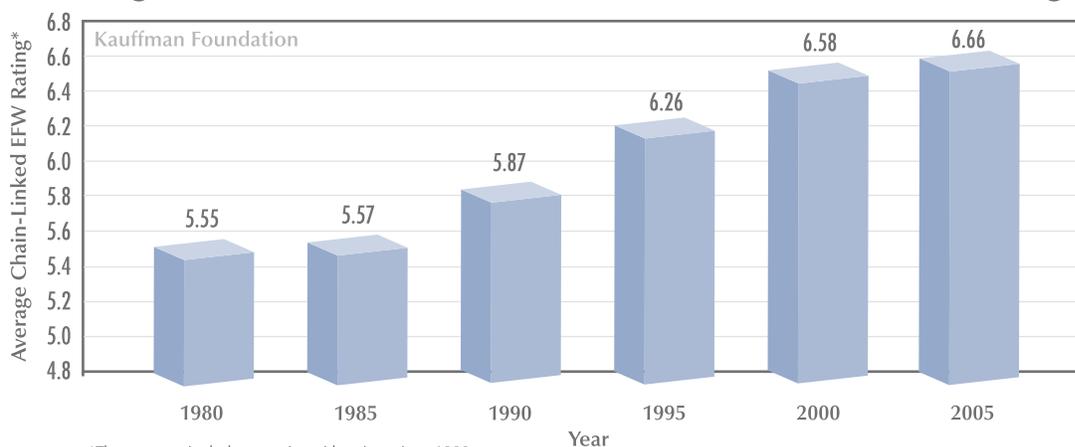
Let me make clear what exactly I'm claiming here. By economic freedom, I don't mean laissez faire or the bare minimum of taxes and regulations. It's true that, from an individual's perspective, every tax interferes with her ability to spend her money as she wishes, and every rule and regulation hinders her freedom to buy, sell, and run her business. But the point here

isn't to look at things from one person's perspective. Rather, the relevant question is whether the economic system *considered as a whole* is more or less free—in other words, the extent to which it is guided by the free play of competitive market forces. For present purposes at least, the term economic freedom refers to things like the freedom of new businesses to enter the marketplace, the freedom of struggling businesses to exit, the freedom of businesses to hire and fire workers, the freedom of prices to move up and down in response to supply and demand, and freedom from government intervention that takes the form of "picking winners and losers."

Accordingly, economic freedom isn't the same thing as small government.⁸ Governments don't have to spend a lot of money to be oppressive. And, as the Nordic countries demonstrate, high levels of government spending can coexist with relatively robust economic freedom. Indeed, higher government spending can facilitate liberalization by allaying the concerns of (or, more cynically, buying off) constituencies that stand to lose from reform. And, likewise, liberalization can facilitate higher government spending by boosting growth and making bigger government more affordable.

Figure 1

Average Chain-Linked Economic Freedom of the World Ratings



*The averages include countries with ratings since 1980.
SOURCE: *Economic Freedom of the World: 2009 Annual Report*.

8. The relationship between economic development and government spending thus is beyond the scope of this paper. For present purposes, suffice it to say that this relationship is ambiguous. On the one hand, as countries grow richer, the requirements of economic growth may create pressure for reducing taxes and, consequently, eliminating or restructuring government programs funded by those taxes. On the other hand, certain public goods that governments historically have played a major role in providing—basic scientific research and education, for example—become more important as advanced economies grow more dependent on innovation. Also, it is possible that, because growth benefits some more than others, new safety net programs may be needed to ensure that entrepreneurial capitalism remains politically sustainable.

**As the saying goes, nothing fails like success:
Economic institutions and policies that deliver sustained
growth eventually run up against diminishing returns.**

Government spending does have an indirect effect on economic freedom because, sooner or later, it has to be paid for with taxes. And high tax rates can blunt and distort incentives in damaging ways.⁹ So, the requirements of growth do impose constraints on how high spending, and taxes, can climb. Indeed, learning to live within those constraints is one of the biggest challenges currently facing the United States and other advanced countries. Nevertheless, it's clear enough that economic freedom does not impose draconian restrictions on the size of government.

With that bit of throat-clearing out of the way, let's return to the ratchet effect hypothesis. What's the basis for the claim that economic development leads to greater dependence on markets for continued growth? To understand the underlying dynamics, it's useful to begin with the insights of F. A. Hayek, the Nobel-Prize winning economist who was among the twentieth century's most profound and influential theorists and defenders of competitive markets.

According to Hayek, the chief virtue of the market order is its fertility in discovering and applying socially useful information. First, the system of freely moving prices distills and communicates existing information about consumers' relative preferences—information so widely dispersed, and so often tacit and ephemeral, that it could never be successfully imparted to or made use of by a central planner. In addition, what Hayek called the "discovery procedure" of market competition constantly is generating useful new information—about new products, or product improvements, or

new production techniques—through trial-and-error experimentation by competing enterprises and the feedback of profit and loss. In the end, the market order is an ingenious solution to the problem of economic *uncertainty*—about what people want and how best to give it to them. "Wherever the use of competition can be rationally justified," wrote Hayek, "it is on the ground that we do *not* know in advance the facts that determine the actions of competitors."¹⁰

It follows, therefore, that the importance of competition strengthens as uncertainty deepens.¹¹ If you already know that one chess player is a grandmaster and the other is a novice, there really isn't much point in staging a match between them. But, if you have two comparably ranked players, the only way to really find out who is better is to let them play. Likewise, if you already have a pretty clear idea of which new investments and new industries are needed to spur economic growth and raise productivity and living standards, then to that extent, at least, you don't need to rely on the discovery process of the marketplace. Government-directed allocation of resources can provide an adequate substitute. If, however, the path of economic progress is shrouded in uncertainty, there is no good substitute for the marketplace's encouragement and vetting of rival approaches.

And, generally speaking at least, the richer a country gets, the more uncertain its economic future becomes. This is true because sustained economic development leads to the progressive exhaustion of growth's "low-hanging fruit"—the most obvious and

9. See, e.g., William M. Gentry and R. Glenn Hubbard, "Tax Policy and Entrepreneurial Entry," *American Economic Review*, Vol. 90, No. 2, May 2000, pp. 283–287; Edward C. Prescott, "Why Do Americans Work So Much More Than Europeans?" *Federal Reserve Bank of Minneapolis Quarterly Review*, Vol. 28, No. 1, July 2004, pp. 2–13.

10. F. A. Hayek, "Competition as a Discovery Procedure," in *New Studies in Philosophy, Politics, Economics and the History of Ideas* (Chicago: University of Chicago Press, 1978), 179 (emphasis in original).

11. For a more detailed treatment of this point, see Brink Lindsey, *Against the Dead Hand: The Uncertain Struggle for Global Capitalism* (New York: John Wiley & Sons, 2002), pp. 38–60.

easily accomplished opportunities for wealth creation.¹² First, continued growth becomes increasingly reliant on indigenous innovation, as opposed to expansion of existing activities and imitation of advances pioneered elsewhere. Furthermore, the innovation process becomes ever more unpredictable as affluence deepens and spreads and economies grow increasingly complex.

Here, then, is the basic logic of the ratchet effect. Economic development deepens uncertainty, and greater uncertainty heightens the dependence of further development on wide-ranging and vigorous competition among rival approaches. As the saying goes, nothing fails like success: Economic institutions and policies that deliver sustained growth eventually run up against diminishing returns. At this point, countries come under increasing pressure: To keep growth and prosperity going, they need to reform their institutions and policies to make them more conducive to competition—that is, to make their economies more entrepreneurial.

Imitative versus Innovative Growth

Let's dive in now and examine the details of how this logic plays out. To begin with, it's important to understand that economic growth—that is, the increasing value of exchanged goods and services—comes in different forms. For present purposes, the key distinction is between growth as more of the same and growth as something new and different. Specifically, growth can come from capital accumulation, expansion and upgrading of the labor force, and adoption of ideas developed elsewhere; or it can come from innovation—that is, the development of new products and new production processes. The former, which I will call *imitative* growth, occurs within the existing technological frontier; the latter, or *innovative* growth, pushes that frontier outward.¹³

When countries are poor and their economies operate well behind the technological frontier, opportunities for imitative growth are relatively plentiful. Consider the conditions that typically exist in a less-developed country before the process of sustained growth begins. First, high birth rates and high death rates are the norm, and thus the average age is quite young. Second, a relatively large segment of the population remains in the countryside and still earns its living the old-fashioned way, in small-scale agriculture. Third, most industries that do exist lag well behind prevailing world standards of best practices. Finally, education levels generally are low, as there is relatively modest demand for highly skilled workers.

The upside of their relative backwardness is that less-developed countries have an opportunity to experience accelerated “catch-up growth.” All they have to do is shift workers out of low-productivity farming and into modern, organized industry, and get their industries to adopt more-advanced production processes and organizational structures already developed elsewhere. Without much in the way of home-grown innovation, they can achieve rapid productivity growth and the fast-rising living standards that go with escalating GDP per capita.

This growth then feeds on itself by boosting the inputs of physical and human capital, the two sources of imitative growth. Rising incomes increase the pool of savings available for investment, thus promoting capital accumulation and further growth; at the same time, emerging markets become better at attracting foreign capital. Additional labor also comes online as the takeoff in living standards ushers in the so-called “demographic transition”: a plunge in death rates followed by a gradual decline in birth rates. The result is a kind of turbo-charged growth in the labor force as the population simultaneously booms and ages. Meanwhile, labor quality also improves as investments in education lead to rising skill levels.

12. The concept of growth's “low-hanging fruit,” and the contention that it is being progressively exhausted, has been popularized recently by economist Tyler Cowen. See Tyler Cowen, *The Great Stagnation: How America Ate All the Low-Hanging Fruit of Modern History, Got Sick, and Will (Eventually) Feel Better* (New York: Dutton Adult, 2011). In a curious coincidence, the original drafting of this paper, including the use of this specific term, predates my reading and the publication of *The Great Stagnation*.

13. The distinction drawn here between imitative and innovative growth is similar to the more-familiar distinction between extensive and intensive growth. Extensive growth refers to growth that results purely from increased inputs (i.e., capital and labor), while intensive growth comes from getting more output from a given level of inputs (i.e., productivity growth). While these two dyads are related closely, there are important differences. Although innovation is the ultimate source of productivity growth, for a given country at a given time it is by no means the only source. In particular, shifts of labor and capital from low-productivity to higher-productivity sectors (e.g., from agriculture to manufacturing) and adoption of foreign technologies are major sources of productivity growth in less-advanced countries, but neither requires indigenous innovation. Nevertheless, because of the ultimate connection between innovation and productivity growth, the terms extensive and intensive growth sometimes are used in the same sense that I am using imitative and innovative growth.

For much of the twentieth century, the possibility of catch-up growth fostered the widespread belief that markets could be largely or completely dispensed with and, indeed, were an impediment to progress.

All of these rich opportunities for imitative catch-up growth make for a development process that is relatively predictable. Which is to say, policymakers in less-developed countries have a fairly clear idea of where future growth is going to come from. In effect, the example of more-advanced countries allows them to peek into the future and see the economic changes that need to be made.

For much of the twentieth century, the possibility of catch-up growth fostered the widespread belief that markets could be largely or completely dispensed with and, indeed, were an impediment to progress. In the end, though, the old statist orthodoxy in development economics proved badly mistaken. There's no getting around the need for a vibrant market economy, which is why we have seen such dramatic moves toward liberalization in less-developed countries over the past few decades.

Fulfilling the requirements for catch-up growth mentioned above may sound simple, but the task still eludes all too many countries today. To develop modern industries capable of absorbing a large rural population, you need a business climate that is favorable for large-scale, long-term investments. How exactly this arises differs from country to country; what suffices in one place may not work somewhere else. Generally, though, we're talking about things like civil peace; basic macroeconomic stability; avoidance of negative real interest rates (caused by a combination of high inflation and repressive interest-rate controls), which stifle the development of the financial sector; tolerable security of property rights (so investments don't get expropriated as soon as they start paying off); manageable levels of taxation and regulation; and a business culture in which getting rich by selling a better or cheaper product is widely seen as a viable alternative to getting rich through government connections.

Next, to facilitate the adoption of foreign best practices, you need to ensure that your country's industries are constantly exposed to and tested

by them. For one thing, that means encouraging foreign investment and doing what's needed to make investors feel welcome. Even more important, you need to encourage the development of export industries. Historical experience teaches us that it's far more important, in the early going, for a developing country's industries to seek out competition abroad than to face it at home. Accordingly, even if domestic import-competing industries remain protected behind high tariff walls, exporters need to operate in a free-trade environment. And the best way to create that environment is by eliminating trade barriers on imported equipment and components that are needed for export production.

It's clear, then, that less-developed countries need pro-market policies to achieve economic takeoff. Nevertheless, compared to rich countries, they can thrive with a distinctly different institutional mix between markets and government than that which prevails in more-advanced countries. Because of the availability of catch-up growth, poor countries can reserve a larger role for government, as both market regulator and market participant, and still deliver excellent economic performance. In particular, the government can dominate decision-making over the large-scale allocation of capital—through state-owned enterprise, control over the financial sector, corporatist coordination, and industrial policy.

Consider the two great "miracles" of catch-up growth since World War II: first in western Europe and then (and still continuing) in East Asia. These two episodes are, at bottom, testaments to the astonishing productive power of market-based economic systems. Yet, in both cases, aggressively interventionist governments featured prominently, as well. Western Europe's "mixed economy" or "social market economy" combined a large welfare state, state ownership of key industries, corporatist governance structures for industry with a prominent voice given to organized labor, and indicative government planning

To keep growth and prosperity going at the technological frontier, countries need to make the switch from imitation to innovation. They need to get better at pushing back the technological frontier on their own instead of relying on others to do it for them.

of investment. Meanwhile, in the so-called “Asian model” pioneered by Japan and later mimicked widely up and down the Pacific Rim, the welfare state was more modest and state ownership less pervasive, but here, too, governments exerted heavy influence over the allocation of resources through industrial policy and mercantilist export promotion.

Notwithstanding their considerable successes (actually, precisely because of them), these systems of political economy eventually ran into trouble. Remember the old riddle about what a dog does when it catches the car it’s chasing? Countries face the same riddle when, after a sustained run of economic development, they get rich and approach the technological frontier. The challenge of continued growth now becomes very different. Work force growth slows down as populations continue to age. The payoffs to investments in mass schooling decline. Opportunities for rapid growth through borrowed technology begin to dissipate. To keep growth and prosperity going at the technological frontier, countries need to make the switch from imitation to innovation. They need to get better at pushing back the technological frontier on their own instead of relying on others to do it for them. No longer can policymakers peek ahead into the future; now they must grope in the dark of radical uncertainty. And, as Hayek recognized, the best way to deal with such uncertainty is by unleashing the trial-and-error experimentation of competition.

So, as countries get rich, they come under pressure to liberalize their economic systems. An innovative economy requires a different institutional mix than does an imitative economy. It needs more decentralized decision-making, more flexibility in the face of unforeseeable changes, and greater fertility in coming up with and trying out new ideas. Specifically, it needs a business environment in which entrepreneurial upstarts are free to compete and have good access to multiple and competing sources of funding. And getting there from here well may require heavy doses of privatization, deregulation of product markets, and liberalization of the financial sector.

This is precisely what has taken place in the advanced economies of Europe and Asia.¹⁴ In his detailed analysis of postwar Europe’s economic history, economist Barry Eichengreen explains how pressures for reform grew out of the changing requirements for growth. The early postwar decades, when Europe was playing catch-up with the United States, were a period of “extensive growth,” or “growth based on capital formation and the existing stock of technological knowledge.” By the 1970s, however, western Europe had entered the period of “intensive growth,” or “growth through innovation.”¹⁵

That transition, Eichengreen argues, required fundamental and wrenching changes in the European economic system. “Increasingly, then, the same institutions of coordinated capitalism that had

14. Note that the precise mechanism by which the changing requirements of growth lead to actual policy change is beyond the scope of this paper. For present purposes, I am content to point out two facts. First, faltering economic performance generates political pressure to enact pro-growth policies. This is so both because growth, high employment, and rising incomes are almost universally popular among electorates and because poor growth tends to cause mounting fiscal problems for governments. Second, in recent decades, there has actually been a great deal of market- and growth-friendly policy change around the world, generally catalyzed by poor economic performance and tightening fiscal constraints. How exactly these two dots are connected is a subject I hope to turn to in the future.

15. Barry Eichengreen, *The European Economy since 1945: Coordinated Capitalism and Beyond* (Princeton, N.J.: Princeton University Press, 2007), p. 6. Note that Eichengreen uses the terms extensive and intensive growth, respectively, in the same sense that I am using imitative and innovative growth.

Table 1
Indicators of European Liberalization

Liberalization Indicator	Government Investment (%)		Top Marginal Income Tax Rate (%)		Ease of Starting a Business Rating (Scale:1–10)	
	1980	2007	1980	2007	1995	2007
Austria	44.5	4.8	62.0	50.0	3.7	8.9
Belgium	26.8	7.7	76.0	52.5	4.6	9.8
Denmark	25.0	8.0	66.0	59.0	6.3	9.7
Finland	23.3	11.1	68.0	51.5	8.5	9.5
France	27.4	14.8	60.0	40.0	3.4	9.8
Germany	25.7	8.2	65.0	47.0	5.0	9.2
Greece	32.0	11.7	60.0	40.0	4.2	9.2
Ireland	24.6	13.7	60.0	42.0	7.6	9.6
Italy	25.9	11.0	72.0	44.0	4.1	9.5
Luxembourg	22.0	19.0	N/A	39.0	7.0	9.0
Netherlands	14.8	17.3	72.0	52.0	7.5	9.5
Portugal	42.2	10.9	84.0	42.0	4.3	9.7
Spain	27.1	12.0	66.0	43.0	5.3	8.3
Sweden	41.2	16.9	87.0	55.5	5.1	9.4
United Kingdom	29.1	10.1	83.0	40.0	8.1	9.6
EU-15 Average	28.8	11.8	70.1	46.5	5.7	9.4

Source: *Economic Freedom of the World: 2009 Annual Report*.

worked to Europe's advantage in the age of extensive growth now posed obstacles to successful economic performance," Eichengreen writes. "In this sense, the continent's very success at exploiting the opportunities for catch-up and convergence after World War II doomed it to difficulties thereafter."¹⁶

Those difficulties have catalyzed far-reaching economic reforms. However halting and often insufficient these efforts have been in some countries, still the clear policy trend has been in the direction of privatization, tax-cutting, and deregulation. Among the members of the "EU-15" (Austria, Belgium,

Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Sweden, Spain, and the United Kingdom), average government investment as a percentage of total investment has fallen from 28.8 percent in 1980 to 11.8 percent in 2007, while the average top marginal income tax rate has dropped from 70.1 percent to 46.5 percent. Between 1995 and 2007, the average score on the World Bank's rating for the ease of starting a business has improved from 5.7 (on a scale of one to ten) to 9.5 (See Table 1).¹⁷ And, at least some countries—notably Denmark and the Netherlands—have made impressive strides in improving labor market flexibility, although

16. Eichengreen, p. 7.

17. Data obtained from James Gwartney and Robert Lawson, *Economic Freedom of the World: 2009 Annual Report* (Vancouver: Fraser Institute, 2009).

Alas, the Japanese “wealth machine,” like poor King Midas, met an unhappy end. In Japan’s case, it was the bursting of the stock market and real estate bubbles and the ensuing “lost decade” of the 1990s.

high unemployment benefits and barriers to firing workers remain the general rule.

Japan hit the same wall a decade or two later. In the 1980s, the country’s world-beating industries and impressive economic growth led many to proclaim that “Japan, Inc.” would soon replace the United States as the world’s economic superpower. Typical of the time were the sentiments of Clyde Prestowitz, author of the 1988 jeremiad *Trading Places: How We are Giving Our Future to Japan and How to Reclaim It*. “The power behind the Japanese juggernaut is much greater than most Americans suspect,” he wrote, “and the juggernaut cannot stop of its own volition, for Japan has created a kind of automatic wealth machine, perhaps the first since King Midas.”¹⁸

Alas, the Japanese “wealth machine,” like poor King Midas, met an unhappy end. In Japan’s case, it was the bursting of the stock market and real estate bubbles and the ensuing “lost decade” of the 1990s. And so, less than a decade later, Prestowitz was forced to concede the limitations of the Japanese model. “As a catch-up machine, this model was unparalleled,” he wrote. “But, once Japan caught up ... problems began to arise. While the model was good at concentrating resources to hit targets already set by the pattern of Western development, it performed poorly at selecting new directions.”¹⁹

The prolonged, post-bubble slump has brought mounting pressure for structural reforms. So far, this pressure has resulted in the “Big Bang” liberalization of financial markets, efforts to privatize Japan’s massive postal savings system, some unwinding of the *keiretsu*

system of corporate cross-ownership, reform of large-store regulation (designed to protect mom-and-pop retailers from big-box competition), and reduced barriers to inward foreign investment. To be sure, the pace of reform has been disappointingly slow—but the overall direction is clear enough.

Understanding America’s Postwar “Golden Age”

And what about the United States? Like the other advanced countries it leads, and the rest of the world, as well, it, too, has moved in the direction of greater economic freedom over the course of recent decades. But why? After all, the United States thrived with distinctly less economic freedom in the decades after World War II, when it was already well established as the largest and most advanced economy on the planet. Since it has been at the technological frontier all this time, what was behind its shift to more entrepreneurial capitalism?

It turns out that, even at the vanguard of economic progress, opportunities for imitative growth were ample during the early postwar decades. Although the American economy considered as a whole occupied the technological frontier, whole regions of the country remained underdeveloped as the postwar boom began. Accordingly, there were significant opportunities for internal catch-up growth. In addition, the peculiar conditions of the time temporarily boosted the extent to which growth could rely on application of the existing stock of knowledge.

18. Clyde Prestowitz, *Trading Places: How We are Giving Our Future to Japan and How to Reclaim It* (New York: Basic Books, 1993 [1988]), p. 72.

19. Clyde Prestowitz, “Retooling Japan Is the Only Way to Rescue Asia Now,” *Washington Post*, December 14, 1997.

By the 1970s, the Sunbelt had risen, the migration to suburbia had largely played out, and the backlog of pent-up supply and demand had long been exhausted. And it's no coincidence that, at just the same time, the Golden Age ended: U.S. productivity growth slumped and the economy succumbed to the blight of stagflation.

As of the end of World War II, America's South and West lagged far behind the industrial heartland of the Northeast and Midwest. Dixie remained rural and backward, while the West was still largely empty. But, with the advent of air conditioning, interstate highways, and affordable air travel came the explosive growth of the "Sunbelt." Florida, Texas, Arizona, and California led the way: Between 1940 and 1970, their combined population increased more than two-and-a-half times, from 15.7 million to 39.7 million. In 1940, only three cities in the South and West—Los Angeles, San Francisco, and New Orleans—numbered among the nation's top twenty largest cities. By 1970, nine cities—Los Angeles, Houston, Dallas, San Francisco, San Diego, San Antonio, Memphis, New Orleans, and Phoenix—made the cut. The attractions of the Sunbelt's climate thus created lavish opportunities for economic growth without the need for any further technological or organizational breakthroughs.

Occurring at the same time as regional catch-up growth was another burst of imitative growth: the construction of suburbia. Between 1940 and 1970, the suburban population increased by nearly 65 million people and the homeownership rate soared from 44 percent to 63 percent—a figure that then remained stable until the recent, unsustainable housing bubble.²⁰

Another opportunity for imitative growth came as a result of unique historical circumstances. Because the boom followed on the heels of two decades of depression and war, it profited from a big backlog of pent-up demand and supply. Consumers had long wish lists of purchases they had been forced to delay because of hard times or wartime rationing; meanwhile, for similar reasons, a host of new technologies had been

developed but not yet commercialized. Working off this backlog can be seen as another form of catch-up growth: making up for lost time.

The combined effect of all these factors was a temporary lull in economic uncertainty. Building up the South and West, building out suburbia, bringing pent-up supply to market and satisfying pent-up demand—none of these contributors to the postwar boom required any significant extension of the technological frontier. As a result of these uniquely favorable circumstances, America experienced a so-called "Golden Age" of economic growth during the quarter century from 1948 to 1973 (See Table 2).

But the lull in uncertainty didn't last. By the 1970s, the Sunbelt had risen, the migration to suburbia had largely played out, and the backlog of pent-up supply and demand had long been exhausted. And it's no coincidence that, at just the same time, the Golden Age ended: U.S. productivity growth slumped and the economy succumbed to the blight of stagflation. The macroeconomic malaise then begat a policy response: the wholesale elimination of barriers to competition and entrepreneurship. Price and entry controls in the airline, trucking, and railroad industries were phased out. Oil and natural gas prices were deregulated. The AT&T monopoly was broken up, and competition in long-distance telephone services was permitted. Cable and satellite television were allowed to compete with broadcasting. Interest rates were deregulated, limits on branch banking were lifted, the wall between commercial and investment banking was lowered, and brokerage commissions became competitive. And tax rates were slashed: The top marginal rate for individuals plummeted from 70 percent in 1980 all the way to

20. For statistics on the move to the suburbs, see Michael Elliott, *The Day before Yesterday: Reconsidering America's Past, Rediscovering the Present* (New York: Simon & Schuster, 1996), p. 75.

Table 2
Twenty Most Populous U.S. Cities

Rank	1940	Population	1970	Population
1	New York City	7,454,995	New York City	7,894,862
2	Chicago	3,396,808	Chicago	3,366,957
3	Philadelphia	1,931,334	Los Angeles	2,816,061
4	Detroit	1,623,452	Philadelphia	1,948,609
5	Los Angeles	1,504,277	Detroit	1,511,482
6	Cleveland	878,336	Houston	1,232,802
7	Baltimore	859,100	Baltimore	905,759
8	St. Louis	816,048	Dallas	844,401
9	Boston	770,816	Washington, D.C.	756,510
10	Pittsburgh	671,659	Cleveland	750,903
11	Washington, D.C.	663,091	Indianapolis	744,624
12	San Francisco	634,536	Milwaukee	717,099
13	Milwaukee	587,472	San Francisco	715,674
14	Buffalo	575,901	San Diego	696,769
15	New Orleans	494,537	San Antonio	654,153
16	Minneapolis	492,370	Boston	641,071
17	Cincinnati	455,610	Memphis	623,530
18	Newark	429,760	St. Louis	622,236
19	Kansas City	399,178	New Orleans	593,471
20	Indianapolis	386,972	Phoenix	581,562

Source: U.S. Bureau of the Census.

28 percent in 1986, although it has drifted generally upward since then.

The turn toward entrepreneurial capitalism unleashed a quarter century of sustained growth: the so-called “Long Boom” of 1983–2008, interrupted by only eighteen months of mild recession and highlighted by the spectacular rise of personal computing and the Internet. But here’s a sobering fact: Despite the embrace of more market-friendly policies, the economic performance of the Long Boom could not match that of the Golden Age. Productivity growth, or the rise

in output per hour worked, is perhaps the best single indicator of economic dynamism, as it is the ultimate foundation of rising living standards. By that measure, the dynamism of the early postwar decades was truly remarkable: Between 1947 and 1973, productivity rose at a brisk clip of 2.9 percent a year—the highest sustained rate in American economic history, and much better than the average annual growth of 2.0 percent between 1980 and 2006. Meanwhile, the prosperity generated by rising productivity was much more widely shared during the Golden Age. Back then, incomes at the bottom of the pay scale actually grew faster than

With the exhaustion of relatively easy opportunities for imitative growth in the United States and other advanced economies, the prospects for growth became less favorable. Continued growth has had to rely more heavily on home-grown innovation, and innovation is harder than imitation.

those at the top, so income gaps were narrowing. The situation was reversed during the Long Boom, as top earners far outpaced everybody else and income inequality has risen sharply.

These comparative statistics have resulted in lamentable, if understandable, confusion. Skeptics of free markets point to the good old days of muscular government involvement in economic affairs and argue that the turn toward greater competition has been a mistake. Paul Krugman, the Nobel Prize-winning economist and columnist for *The New York Times*, is perhaps the most prominent contemporary defender of the Golden Age's model of political economy. "Basically, U.S. postwar economic history falls into two parts," Krugman writes, "an era of high taxes on the rich and extensive regulation, during which living standards experienced extraordinary growth; and an era of low taxes on the rich and deregulation, during which living standards for most Americans rose fitfully at best."²¹

This beguiling analysis fails to reckon with the changing nature of economic growth.²² It is true that, all things being equal, better economic performance should result from better economic policies. But the fact is, all things are seldom equal. A country's growth rate is the product not only of its policies and institutions, but of larger and exogenous circumstances, as well. If circumstances are exceptionally favorable for growth, even relatively poor policies and institutions can lead to excellent results. By comparison, if circumstances are more challenging, growth may be less impressive even with superb policies and institutions.

And that's the key to the puzzle. With the exhaustion of relatively easy opportunities for imitative growth in the United States and other advanced economies, the prospects for growth became less favorable. Continued growth has had to rely more heavily on home-grown innovation, and innovation is harder than imitation. As the Red Queen told Alice, sometimes you have to run hard just to stay in place. And that's the world we've been living in since the early 1970s. So, even with improved economic policies, the United States—like other advanced economies—has been unable to match the strong growth record of the early postwar decades.

But, contra Krugman, that falloff in performance does not constitute an indictment of the turn toward entrepreneurial capitalism. As economist Scott Sumner has observed, "Because economic growth slowed almost everywhere after 1973, however, we need to look at relative economic performance in order to identify the effect of neoliberal policy reforms." Sumner examines Australia, Canada, France, Germany, Italy, Sweden, Switzerland, the United Kingdom, Hong Kong, Japan, Singapore, Argentina, and Chile, comparing the ratios of their per-capita GDP figures to U.S. per-capita GDP in 1980, 1994, and 2008. And he finds that the degree to which those economies caught up with or fell further behind the United States over the course of this period matches up with the extent to which they undertook free-market reforms. "The relative performance of each of these economies," Sumner concludes, "is consistent with the view that neoliberal policies promote economic growth"²³ (See Table 3).

21. Paul Krugman, "Down the Memory Hole," *The New York Times*, May 22, 2010.

22. For other flaws in Krugman's historical analysis, see Brink Lindsey, "Paul Krugman's Nostalgianomics: Economic Policies, Social Norms, and Income Inequality," Cato Institute White Paper, February 9, 2009.

23. Scott Sumner, "The Unacknowledged Success of Neoliberalism," *Library of Economics and Liberty*, July 5, 2010, <http://www.econlib.org/library/Columns/y2010/Sumnerneoliberalism.html>.

Table 3
Income Per Capita (PPP)
as a Percentage of U.S. Income Per Capita

Country	1980	1994	2008
United States	1.000	1.000	1.000
Australia	0.841	0.770	0.837
Canada	0.905	0.818	0.843
Britain	0.688	0.705	0.765
Germany	0.803	0.812	0.763
Italy	0.756	0.754	0.675
Sweden	1.146	0.987	0.915
Asia			
Hong Kong	0.547	0.845	0.948
Japan	0.732	0.815	0.736
Singapore	0.577	0.899	1.064
Latin America			
Argentina	0.395	0.300	0.309
Chile	0.210	0.251	0.311

Source: Sumner, "The Unacknowledged Success of Neoliberalism."

A New Frontier

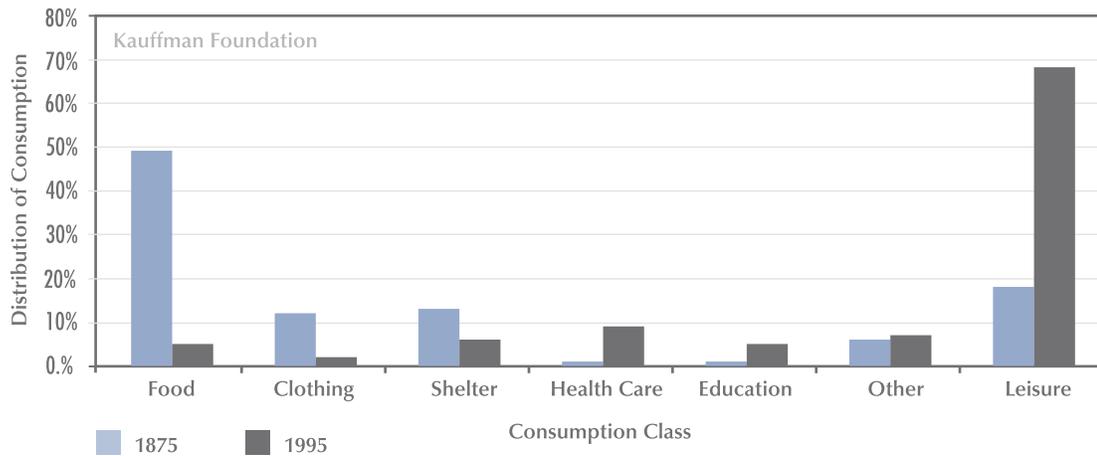
The dwindling away of opportunities for robust imitative growth is not the only factor driving the United States and other advanced economies toward a more entrepreneurial version of capitalism. It's not just that more and more economic activity is taking place near or at the technological frontier; in addition, the very nature of that frontier is changing. Simply put, the changing structure and output of advanced economies are making them progressively less amenable to centralized direction and control.

Modern economic development commonly is divided into two distinct phases. The first generally is known as industrialization or the industrial economy, but the second goes by a variety of labels. Some refer to the service economy, others call it the knowledge

or information economy, while yet others play it close to the vest and speak simply of the postindustrial economy. For present purposes, I think it's illuminating to refer to these two phases as the transition to mass affluence on the one hand and mass affluence itself on the other. Because that's what industrialization is really all about: the transformation of a poor country into a rich country. In other words, the move from being a country in which most people have to struggle just to ensure their physical survival, to one in which most people take the fulfillment of their basic material needs for granted. In the one, biological imperatives dictate the main concerns of life, and choices are relatively few and clear cut; in the other, people are shielded from the harsh demands of nature by an immense edifice of technology and organization, and choices range far and wide among proliferating products of the human imagination.²⁴

24. See Brink Lindsey, *The Age of Abundance: How Prosperity Transformed America's Politics and Culture* (New York: Collins, 2007).

Figure 2
Changing Structure of Consumption



SOURCE: Fogel, *Escape from Hunger and Premature Death*.

The transition was made possible by the fusion of science, technology, and commerce—and, more specifically, by the complex of technologies and organizational innovations that enable mass production and mass distribution. During the transition, the central economic challenge was the development and servicing of mass markets for the staples of life: food, clothing, housing (including home furnishings and appliances), and transportation. The focus was on exploiting economies of scale by producing relatively homogeneous goods of middling quality and aimed at middling tastes.

As America's postwar boom began to roar, though, the great transition had been accomplished. And once mass affluence had arrived, the nature of the economic challenge shifted—from mass markets to *market segmentation*. Wendell Smith coined that term in a 1956 article in the *Journal of Marketing*. The problem

for "many companies," he noted, was that "their core markets have already been developed ... to the point where additional advertising and selling expenditures [are] yielding diminishing returns." The solution, he argued, was to start paying "attention to smaller or *fringe* market segments, which may have small potentials individually but are of crucial importance in the aggregate."²⁵

And that's the direction advanced capitalism has been following ever since—although, of course, it's not a single direction, but countless different ones. As product varieties proliferated to suit every taste and social identity, what was being produced and consumed changed as, well. The richer we get, the more discretionary our purchases become. According to Nobel Prize-winning economic historian Robert Fogel, 74 percent of U.S. consumption went to food, clothing, and shelter back in 1875, at the outset of

25. Quoted in Lizabeth Cohen, *A Consumers' Republic: The Politics of Mass Consumption in Postwar America* (New York: Alfred A. Knopf, 2003), p. 295.

the transition to affluence. As of 1995, that share had fallen to 13 percent²⁶ (See Figure 2). Also, our consumption choices shift toward the intangible as we accumulate more and more stuff: We look to buy good experiences rather than another thing to gather dust. Between 1950 and 2000, the share of total personal consumption expenditures on physical goods declined from 67 percent to 42 percent, while the share spent on intangible services rose from 33 percent to 58 percent.²⁷

The arrival of mass affluence and the move beyond mass markets made the path of economic progress even more unpredictable than before. What new products would people actually want to buy? What nuances of function or design or marketing would separate big sellers from duds? During the industrial era, it was possible to identify mass markets that weren't yet fully saturated and know with reasonable certainty that the future would bring the further expansion of those markets. Now, though, the future is more obscure than ever.

So far I've been focusing on how mass affluence heightens uncertainty on the demand side. That is, as basic material needs are satisfied, the question of what new products, or product improvements, actually will result in higher consumer satisfaction becomes increasingly subjective and unpredictable. At the same time, though, the advance of the technological frontier ramps up uncertainty on the supply side, as well.

First of all, the richer and more advanced our economies become, the more we are deluged with new knowledge and information. Economic and knowledge growth are intimately interrelated: The former simultaneously feeds off of and stimulates the latter. It is, therefore, no coincidence that the era of modern economic growth, which began around 1800, has been characterized by the exponential growth of knowledge. According to a landmark study by physicist and science historian Derek Price back in 1961, the

number of scientific journals—which serves as a proxy for the volume of significant scientific findings—has been doubling every fifteen years or so since the late eighteenth century.²⁸ As the economist Paul Romer conjectures, "It may be inherent in the process of discovery that the more we learn the faster we can learn. It's a notion that was captured by Newton when he said that he could see farther because he stood on the shoulders of giants."²⁹

Meanwhile, thanks to revolutionary developments in information technologies, the amount of new usable data generated every year has attained mind-boggling proportions—and it's growing rapidly. According to a study by economists Peter Lyman and Hal Varian, the total production of new information stored on paper, film, and magnetic and optical media came to roughly five trillion megabytes in 2002—or the equivalent of 37,000 book collections as big as the Library of Congress. Some 92 percent of these data were stored on magnetic media, mainly hard disks; only a paltry 0.01 percent were stored on paper. Furthermore, they found that the volume of new information produced in a year had basically doubled over a three-year period—an annual growth rate of 66 percent.³⁰ The Information Age, indeed.

What does all of this have to do with economic uncertainty? The explosion of new ideas and new information means an equivalent explosion in the possible new avenues for economic progress. Which will lead to new products and whole new industries, and which will peter out in dead ends? Nobody knows. And the more possible futures we can imagine, the more mysterious the real future becomes.

Paradoxically, even as knowledge and information grow more plentiful, innovation apparently is growing more difficult.³¹ Consider the fact that the number of scientists and researchers has exploded over the course of the past century—without any corresponding acceleration in growth or innovation. Benjamin Jones,

26. Robert William Fogel, *The Escape from Hunger and Premature Death, 1700–2100: Europe, America, and the Third World* (New York: Cambridge University Press, 2004), p. 89. Note that Fogel's calculations include consumption of leisure through the reduction of working hours.

27. Historical Statistics, Series F, 47–59, p. 229; 2004-5 SA Table 641.

28. Derek Price, *Science since Babylon* (New Haven: Yale University Press, 1961).

29. Quoted in Arnold Kling and Nick Schulz, *From Poverty to Prosperity: Intangible Assets, Hidden Liabilities, and the Lasting Triumph over Scarcity* (New York: Encounter Books, 2009), p. 80.

30. Peter Lyman and Hal Varian, "How Much Information? 2003," <http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/>.

31. This paragraph, added just before this paper went to press, owes an obvious debt to Tyler Cowen's provocative new book, *The Great Stagnation*.

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an economist at Northwestern University, hypothesizes that the culprit is what he calls a growing “knowledge burden”: As the total sum of knowledge grows, it takes longer and longer for a person to learn enough to make any additional contribution. He thus sees the darker side of that Newton quotation mentioned by Paul Romer above: If one is to stand on the shoulders of giants, one must first climb up their backs, and the greater the body of knowledge, the harder this climb becomes.³² Paul Segerstrom of the Stockholm School of Economics suggests an alternative explanation: The stock of truly welfare-enhancing ideas is running down. “In each industry the most obvious ideas are discovered first,” he writes, “making it harder to find new ideas subsequently.”³³ Citing the work of Segerstrom and others, Tyler Cowen recently has made waves by claiming that we have reached a “technological plateau.”³⁴

Whether or not Cowen’s gloomy assessment is correct, the growing difficulty of innovation compounds the uncertainty of the economic future even further. Not only is the amount of information to be sifted through for new ideas with commercial potential growing by leaps and bounds, but possibly the supply of good but undiscovered ideas is beginning to peter out. The haystacks are multiplying while the needles may be getting scarcer.

Deepening uncertainty on the supply side extends not only to new ideas for new products and production processes, but also to who the leading producers will be. Over the course of the transition to mass affluence, large economies of scale figured prominently in shaping the structures of firms and industries. As a consequence, average firm size tended to grow while rates of entrepreneurship fell throughout the most advanced economies.³⁵ Barriers to entry created by the high returns to scale led to a relative muting of competitive intensity in a host of leading industries.

With the arrival of mass affluence and the emergence of the postindustrial, information economy, returns to scale—and barriers to entry—began to fall. Numerous studies have confirmed a general and persistent trend in rich countries: Starting in the 1970s, the average size of firms has shrunk substantially, while self-employment and business ownership rates (proxies for entrepreneurship) have posted modest gains.³⁶ Meanwhile, competitive dominance—at least in the United States—has grown increasingly precarious. According to one study, the chances that a company in the top 20 percent of firms in an industry (as measured by market capitalization) will fall out of that elite group over the next five years increased fivefold between 1960 and 2000.³⁷ In a similar vein, the average annual turnover in the Fortune 500 between 1985 and 2005

32. Benjamin F. Jones, “The Burden of Knowledge and the Death of the Renaissance Man: Is Innovation Getting Harder?” *Review of Economic Studies*, Vol. 76, No. 1, January 2009, pp. 283–317.

33. Paul S. Segerstrom, “Endogenous Growth without Scale Effects,” *American Economic Review*, Vol. 88, No. 5, December 1998, pp. 1290–1310.

34. Cowen, *The Great Stagnation*.

35. See, e.g., Sander Wennekens, André van Stel, Martin Carree, and Roy Thurik, “The relationship between entrepreneurship and economic development: Is it U-shaped?” SCALES research report, April 2010, <http://www.entrepreneurship-sme.eu/pdf-ez/H200824.pdf>.

36. See, e.g., *ibid.*

37. Diego Comin and Thomas Philippon, “The Rise in Firm-Level Volatility: Causes and Consequences,” National Bureau of Economic Research Working Paper 11388, May 2005, Figure 4.

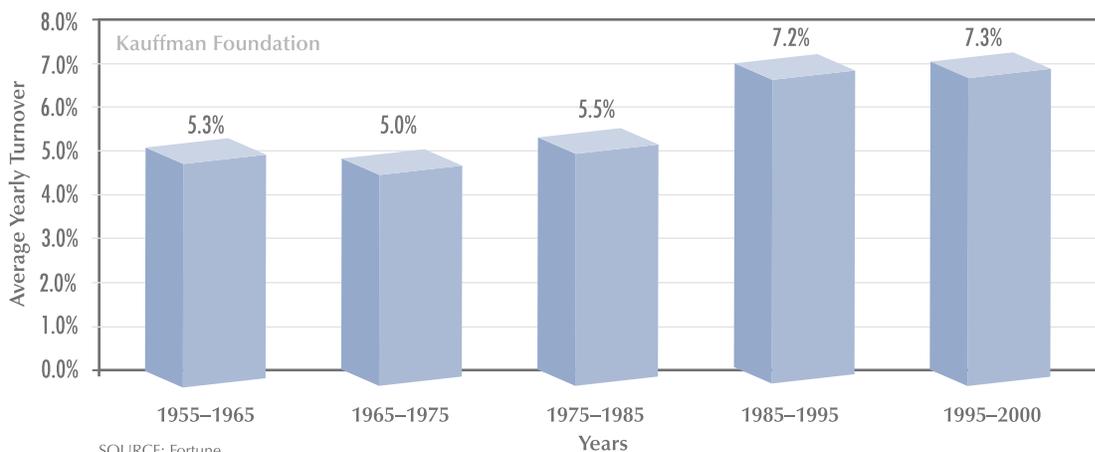
was more than 40 percent higher than that between 1955 and 1975³⁸ (See Figure 3).

Some of this surge in competitive intensity reflects the changes in the policy environment noted earlier. In addition, though, market factors have played a major role. Scale economies always were less important in the service sector than in manufacturing, so the steady relative growth of the service economy has served to promote the overall decrease in firm size (although that decrease has been occurring within manufacturing, as well). The progress of economic development globally, combined with falling transportation costs—in other words, globalization—has reduced market power by making producers anywhere ever more vulnerable to competitors everywhere. Likewise, the development and deepening of financial markets have reduced barriers to entry by giving upstarts improved access to the

capital they need to challenge incumbent firms. And the spectacular advance of information technologies has made major contributions to the shift from oligopolistic to more entrepreneurial capitalism. First, research shows that increased IT investment leads to smaller firms, by automating what had previously been labor-intensive clerical work and by reducing the transaction costs associated with using outside suppliers and, thereby, encouraging vertical specialization.³⁹ Also, by facilitating the bringing together of buyers and sellers, IT reduces barriers to entry and encourages the emergence of “long tail” niche markets.⁴⁰

Reduced market barriers to entry make government efforts to direct the course of economic development increasingly problematic. Such efforts typically take the form of funneling resources to existing producers—through directed credit, restrictions on competition, or

Figure 3
Turnover in the Fortune 500



38. Calculations by the Kauffman Foundation. Note that the turnover between 1994 and 1995 was excluded because in 1995 Fortune changed its methodology to include firms in the service sector.

39. See Erik Brynjolfsson, Thomas W. Malone, Vijay Gurbaxani, and Ajit Kambil, “Does Information Technology Lead to Smaller Firms?” *Management Science*, Vol. 40, No. 12, December 1994, pp. 1628–1644.

40. See Chris Anderson, *The Long Tail: Why the Future of Business Is Selling Less of More* (New York: Hyperion, 2006).

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outright subsidies. When market conditions are such that the identity of leading producers in a given industry is fairly stable even without government intervention, the effect of such intervention can be relatively benign. Basically, what government does in these situations is to augment and accelerate investments that would be going on anyway.

When, however, the marketplace is considerably more dynamic, the risk grows that government intervention will back the wrong horse—in particular, by propping up incumbent firms and thwarting the emergence of new firms with new and better ways of doing things. And the opportunity costs of backing the wrong horse go up, as well, as the possible trajectories of industries with and without intervention grow increasingly divergent. Economist Scott Sumner puts the matter succinctly: “If all you have to do is churn out iron and steel and washing machines and apartment buildings, it can be done passably well with central planning ... [but not] when the decisions were about whether to allocate capital to Google or Genzyme, or whether to build that auto parts plant in Detroit or Mexico or China. It’s no longer about simply mobilizing capital to mass produce clearly defined output of stuff we all know consumers will want.”⁴¹

Conclusion

What public policies deliver economic growth? There are few questions of greater importance, but the frustrating and confusing answer is: It depends. Institutions and governance are capable of yielding robust growth in one setting, only to produce dysfunction and disappointment elsewhere. This leads, again and again, to misconstruing another country’s successes, or the successes of a country’s own past, as a model that can be applied under very different circumstances.

But all is not a hopeless muddle. The key to breaking through the confusion and misunderstanding is to recognize that the policy requirements for economic growth are a function of a country’s relative and absolute levels of economic development. At lower levels of economic development, the relatively centralized economic decision-making that results from more interventionist government can work fairly well. Indeed, direct government intervention in markets even may serve to accelerate economic progress under certain circumstances. But, at higher levels of development, there is simply no substitute for the robust competition and perpetually unsettling dynamism of entrepreneurial capitalism.

When an economy is operating well behind the technological frontier, or has reached the frontier only unevenly, it faces plentiful opportunities for imitative growth—the low-hanging fruit of economic progress. Likewise, during the process of industrialization—or, to put it another way, during the transition to mass affluence—the primary thrust of economic growth is

41. Scott Sumner, “Invisible Martians and Occam’s Razor,” *The Money Illusion*, January 3, 2011, <http://www.themoneyillusion.com/?p=8289>.

The richer we get, the more we rely on innovation to keep growth going—and, therefore, the more we need free-market policies that foster the creation of new businesses and the implementation of new ideas.

aimed at the efficient fulfillment of basic human needs through mass production and mass distribution. Both when economic development is at a relatively low level (behind the technological frontier), or when it is still at an absolutely low level (still transitioning from mass poverty to mass affluence), the uncertainty of economic life is thus at a relatively low ebb. But, as an economy approaches the technological frontier, and as successful industrialization ushers in mass affluence, increasing uncertainty about how best to advance consumer welfare requires incessant, extensive trial and error to plot a viable path forward. This requires, in turn, an institutional and policy environment that gives free rein to entrepreneurship and competition.

Armed with the insights of “frontier economics,” it is easy to see what went wrong with those bold forecasts that the 2008 financial crisis would provoke a worldwide shift away from free markets. Quite simply, we’re a long way from the 1930s. Back then, when the world was much poorer than it is today—and when, as well, economic policies in many countries were more hands-off—it was possible for governments to expand significantly their involvement in economic affairs in a way that was consistent with (even if not necessary or even good for) the eventual resumption of growth and prosperity. Certainly that was the case in the United States, as the postwar boom of the Golden Age amply testifies.

Things are very different today. The poorly understood, but vitally important, fact of the matter is that there is a ratchet effect in the relationship between economic policies and economic performance. The richer we get, the more we rely on innovation to keep growth going—and, therefore, the more we need free-market policies that foster the creation of new businesses and the implementation of new ideas. If we are to rise out of the current slump and launch a new, twenty-first-century boom, it is in the direction of freer, more competitive markets that our policies must turn. However well they worked in the past, neither

the specific policies nor the general style of governance from the Golden Age are viable options today. The past is gone, and we can never go back.

NOTES

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