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RECONSIDERING EXPECTATIONS OF ECONOMIC GROWTH AFTER  
WORLD WAR II FROM THE PERSPECTIVE OF 2004

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### **ABSTRACT**

At the close of World War II, there were wide-ranging debates about the future of economic developments. Historical experience has since shown that these forecasts were uniformly too pessimistic. Expectations for the American economy focused on the likelihood of secular stagnation; this topic continued to be debated throughout the post-World War II expansion. Concerns raised during the late 1960s and early 1970s about rapid population growth smothering the potential for economic growth in less developed countries were contradicted when during the mid- and late-1970s, fertility rates in third world countries began to decline very rapidly. Predictions that food production would not be able to keep up with population growth have also been proven wrong, as between 1961 and 2000 calories per capita worldwide have increased by 24 percent, despite the doubling of the global population. The extraordinary economic growth in Southeast and East Asia had also been unforeseen by economists.

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## **Reconsidering Expectations of Economic Growth after World War II from the Perspective of 2004**

I want to add to the stories about Michael. At the end of Michael's first year at Chicago, four of his teachers had lunch together at the Quad Club: Al Harberger, Harry Johnson, Zvi Griliches, and me. Each of us said that in our own field Michael knew as much as we did. But no one was prepared to say that we each knew as much as all four people sitting around the table. So there was no doubt that the Chicago faculty knew early on that Michael was an exceptional student, and his subsequent career has lived up to that promise.

What I want to talk about is expectations of economic growth right after World War II, viewing them from the standpoint of the present. At the close of World War II, there were wide-ranging debates about the future of economic developments. In these comments, I want to consider three aspects of these debates. The first is expectations for the American economy. The second is expectations for the economies of Europe. The third is expectations for the less developed nations, and within that framework, particular interest in the prospects for India and China.

The debates about stagnation centered on the Keynesian analysis that a macro-economic equilibrium is possible at less than full employment and, in particular, the interpretation of that proposition by Alvin Hansen in his 1938 presidential address to the American Economic Association (Hansen, 1939). Hansen argued that secular stagnation was likely because of: (1) the end of the frontier, (2) the end of rapid population increase, and (3) the end of capital-intensive technological change. The key issue as the stagnationists defined it, was not whether the growth of the GDP would come to an end,

but whether a high level of government spending was necessary to prevent a high level of permanent unemployment, even if GDP did grow.

Table 1 presents the distribution of articles in JSTOR dealing with secular stagnation. It shows there was an explosion of articles on the topic during 1941-1960, most of which were written after the war or in anticipation of the imminent end of the war. That such a debate would erupt in anticipation of the peace is not surprising. The alarm about massive unemployment was widespread in 1943 and 1944 because the country was demobilizing over 11 million soldiers from the armed forces and there were some 9 million or more workers in defense industries that were simultaneously being let go. So there were about 21 million people thrown on a job market of about 60 million, including the armed forces and the defense establishment (U.S. Bureau of the Census, 1955, Table 220). But as it turned out, the recession of 1945 only lasted 8 months and was followed by a robust expansion that lasted 37 months. Moreover, the recession of 1949-1950 lasted 11 months and was followed by another robust expansion that lasted 45 months (U.S. Bureau of the Census, 2003, Table 771). The peak came in 1953 after the economy had already absorbed 20 million potentially unemployed workers, and unemployment was below 3 percent by 1953. Total civilian employment was up by 15 percent over the wartime peak (cf. Bratt, 1953).

So, in a sense, what needs to be established is why this debate continued decade after decade. Table 1 shows that secular stagnation was a heated topic down through 1960 and was still lively in the 1970s and 1980s. Although unemployment remained over 5 percent during some of the years of the long 106-month Kennedy-Johnson expansion, it dropped to 3.5 percent in 1969. So even a quarter of a century after the war, there were

still economists who believed that the U.S. could not have an economy with both growth and with low unemployment unless there was a very big government sector. By the late 1950s the U.S. and other OECD countries were well into the post-World War II expansion, now called the Golden Age, with growth rates twice the long-term average of the world leaders. Measured by per capita income, the long-term average growth rate was about 1.9 percent per annum and the growth rate during the Golden Age was, for Western Europe, about 3.8 percent (Kuznets, 1971; Maddison, 1995; Crafts and Toniolo, 1996). Over the whole period from 1950 to 1999, expansion multiplies for GDP averaged about 5-fold in Western Europe and the United States (see Table 2). The wide-ranging debates over the causes for the accelerated growth rates of the Golden Age suggested some points of consensus. These included the reduction of barriers to international trade, successful macroeconomic policies, and opportunities for catch-up growth following the end of World War II, especially in France, Germany, and Italy. The destruction of much of the pre-war capital stock, the reconstruction aid that rebuilt industry with a more advanced technology, the successes of macroeconomic policy, the elasticity of the labor supply, high levels of education, and the weakness of vested interests have all been advanced as explanatory factors (Abramovitz, 1990; Mills and Crafts, 2000; Crafts and Toniolo, 1996; Denison, 1967; Maddison, 1987, 1991, 1995; Olson, 1982).

The eventual fading away of the stagnation thesis, of the notion that there was something in the operation of capitalistic economies that made them inherently unstable, brought to the fore several new concerns. These included the growing gap in income between developed and less developed nations, and a new emphasis on cultural and ideological barriers to economic growth in poor countries. In contrast to some of the early

theories associated with the Harrod-Domar model, which suggested that poor countries would grow rapidly if there were large injections of capital from rich countries, by the 1960s the emphasis was that the export of capital would fail to promote growth unless the deep cultural barriers that made these countries unreceptive to the conditions needed for economic growth were somehow overcome. Some commentators, most notably Gunnar Myrdal, in his 3-volume work on the Asian economies, said that India would have difficulty in sustaining high growth because it promoted asceticism and thus undermined the acquisitive culture that spurred Western Europe (Myrdal, 1968).

There was also a shift from worries about over-saving, which I must say, never caught on at certain universities. It didn't catch on at Chicago or at Columbia. Nor did it catch on at the National Bureau of Economic Research. Analysts such as Kuznets, Burns, and others, thought that savings were not a threat to economic growth, but were a necessary condition for economic growth because you needed the savings to build both infrastructure in developing countries and also to get a thriving public sector growing (Kuznets, 1961; Colm, 1962; Samuelson, 1992).

There was, about this time, a new emphasis on export-led growth. The practice of poor countries selling their exports to rich countries got a bad name during the interwar period and was widely viewed as exploitation of these countries by imperial powers. The later view, looking at the Canadian and American experiences, was quite the contrary (North, 1966; Kravis, 1970). Selling raw materials and other labor-intensive products to the rest of the world is a way to get capital and entrepreneurship from the developed countries to provide those same talents and qualities to the less developed countries. Thus, at the outbreak of World War I, foreign capital owned one-third of the bonds of

American railroads (Ripley, 1915). One of the great discoveries of economic historians during the 1960s and confirmed in the 1980s and 1990s was that the Hobsen-Hilferding-Lenin thesis that English coupon-clippers got rich from investments in poor countries such as India, and then withdrew large sums of annual earnings, was wrong. After the computer revolution it was possible to put the whole late nineteenth-century portfolio of British overseas investments into machine-readable form (Simon, 1970; Davis and Huttenbock, 1986; Stone, 1999). Lo and behold, it turned out that there was a strong correlation between a country's per capita income and the share of the British overseas portfolio invested in it. The United States received the largest share, followed by Canada, and Argentina (which at the turn of the twentieth century had one of the highest per capita incomes in the world). Of course, that did not stop diehard critics of Western imperialism, who then denounced Britain for *failing* to have invested in underdeveloped nations.

There was also about this time (the late 1960s and early 1970s) a new concern about rapid population growth smothering the potential for economic growth in the LDCs. It reached the peak with the 1972 warning of the Club of Rome ("The Limits to Growth") which envisaged the world population getting so large so quickly that it would soon outrun global capacity. That was not a view shared by demographers since demographers believed that with a lag of about 20 or so years, the fertility rate would follow the death rate down. The world would reach a low-level rate of population increase at low levels of the death rate and birth rate in the same way that there had been low-level growth at high birth and death rates. An acceleration in the growth of the world's population was a transitory phenomenon, due to the lag in the decline of the birth

rate behind the death rate. This forecast became known as the “theory of the demographic transition.”

By 1973, it hadn’t happened yet. If we add to Stan Engerman’s list of bad forecasts, we have to say that demographers run out of patience in about 20 years, if what they theorize would happen doesn’t happen. And there must also be a malevolent deity, because just about the time that leading demographers began saying the theory of the demographic transition was dead, the fertility rate in third world countries, including Islamic countries, began to decline rapidly (see Table 3). Within two decades there were many countries with total fertility rates below 2.1. Of course, Kuznets never worried about population growth; indeed, he argued that a condition for modern economic growth was that the rise in per capita income had to be accompanied by an increase in population. That was one of his central tenets in his 1966 book, *Modern Economic Growth*, and he repeated it again in his Nobel address of 1971 (Kuznets, 1996, 1971).

A related concern with the world population taking off in an unprecedented way (with population doubling in less than half a century) was the belief that the production of food could not keep up with the growth of the population and here we are in 2004 worried about the global epidemic of obesity. By the way, one of the countries that was supposed to be starving was China, which increased its per capita food supply by over 70 percent in four decades (see Table 4). And for the world as a whole, calories per capita have grown by 24% during the same period, despite the doubling of the global population (see Table 4).

As remarkable as what was widely forecast in the post-World War II debates, and I have covered about a quarter century of them, were the things not foreseen in the 1940s,



1950s, or even the early 1960s. One of these was the extraordinary economic growth in Southeast and East Asia, beginning first with Japan, which in four decades went from a poor, defeated country to the second largest economy in the world, increasing per capita income by 10 fold. This was a feat that took leaders of the industrial revolution about 150 years to accomplish (Kuznets, 1971). The economic miracle of the high performing Asian economies other than Japan was also unforeseen, and that state of mind persisted into the 1970s. It wasn't that economists didn't know that per capita income was rising but there was a widespread opinion that it couldn't last, that somehow it was a fluke. So we have not only the four Asian dragons, Hong Kong, Singapore, South Korea, and Taiwan, going from very poor countries to quite rich countries, but also Malaysia, China, Indonesia, and Thailand (see Table 2).

About four years ago I gave a paper at Peking University in which I forecast that by 2025 China alone would be consuming 45 million cars a year, which was then the world total consumption of cars. It looks as though that forecast is going to be wrong because it may turn out to be too pessimistic, even though my friends in China thought that I was a little overenthusiastic. I obtained the estimate by taking the long-term U.S. income elasticity of the demand for cars between 1910 and 1970 and then multiplying it by an annual growth rate in GDP of about 6 percent. But the Chinese growth rate has averaged more than 6 percent. Last year's increase in automobile production was 37 percent, and production shows no sign of an early petering out as witnessed by the fact that every major car company in the world is investing heavily on the bet that China and Southeast Asia will be the major expanding market for several decades (see Table 5).

Another thing that was not foreseen was the extraordinary and sustained growth in agricultural productivity which led, as I mentioned, to a 24 percent increase in per capita consumption of calories. Despite the threat that fertilizers would become too expensive (because petroleum is an input into the production of fertilizers) that threat, stimulated by the sharp rise in oil prices during the 1970s, never materialized (cf. Johnson, 1980).

During the 1960s and 1970s there was a game played that involved guessing how long it would take for the per capita income of the Soviet Union to overtake that of the United States. That game was predicated on the false premise that the Soviet Union was growing at a faster long-term rate than the United States. And different people had the growth paths intersecting at different dates during the next quarter century. Those forecasts did not pan out. So in the 1980s some people started saying that Japan was going to overtake the United States. The new game was to see when growth paths of the U.S. and Japan would intersect. Despite this poor forecasting record, I'm very bullish on China and a few years ago I forecast that by 2030 China and Southeast Asia combined would have a total GDP that exceeds that of the United States and the five largest European countries combined. I still think that's a reasonable forecast, because I do not see the average annual growth rates in GDP per capita for these western countries as a group exceeding 2 percent per annum, as GDP is currently measured, and I think it's likely that the growth rates in Southeast Asia will be in the neighborhood of 6 percent, perhaps higher in China. Nevertheless, U.S. per capita income in 2030 will very likely still be several times greater than that of China.

I think I've covered the main aspects of how things looked after World War II, highlighting both what now seems to have been an unjustified pessimism and also the

difficulties in forecasting the future. I close with an anecdote from Simon Kuznets. He used to give a one-year course in growth economics both at Johns Hopkins and Harvard. One of the points he made was that if you wanted to find accurate forecasts of the past, don't look at what the economists said. The economists in 1850 wrote that the progress of the last decade had been so great that it could not possibly continue. And economists at the end of the nineteenth century wrote that the progress of the last half century has been so great that it could not possibly continue during the twentieth century. He said you would come closest to an accurate forecast if you read the writers of science fiction. But even the writers of science fiction were too pessimistic. Jules Verne recognized that we might eventually get to the moon, but he couldn't conceive of the technology that actually made the journey possible.

I was at a conference at Rockefeller University last year that brought together about 30 people from different disciplines (economics, biology, chemistry, physics, as well as some industrial leaders) who put forward their views of what was likely to happen in the new millennium. And I must say that the non-economists were far more bullish than most of the economists that I know. So I suspect if we have another MussaFest in 2024 we'll all look back at how pessimistic we were in 2004.

**Table 1**  
**The Distribution of Articles on “Secular Stagnation” in JSTOR**

	<b>Period</b>	<b>Number of Articles</b>	<b>Cumulative Number</b>
1	1938–1940	10	10
2	1941–1950	65	75
3	1951–1960	59	134
4	1961–1970	29	163
5	1971–1980	27	190
6	1983–1990	12	202
7	1993–1994	2	204

Source: JSTOR ([www.jstor.org](http://www.jstor.org))

Note: The first article to use the term, which appeared in 1938, was written by Arthur D. Gayer and was published in the March issue of the *American Economic Review*; it only mentioned “secular stagnation” in passing. The second article to use the term, Alvin H. Hansen’s presidential address to the American Economic Association, was published in March 1939 and ignited the subsequent debate (Gayer, 1938; Hansen, 1939).

**Table 2**

**Expansion Multiples of GDP for 15 Economies 1950–1999  
(ratio of GDP in 1999 to GDP in 1950, international dollars)**

United States	5.07	
France	5.22	
Germany	5.50	
Italy	6.20	
Spain	8.39	
United Kingdom	3.19	
5 European Nations		4.98
China	25.59	
Hong Kong	28.01	
Indonesia	9.48	
South Korea	38.93	
Malaysia	15.61	
Singapore	36.72	
Taiwan	46.84	
Thailand	23.68	
8 Southeast Asian Nations		24.06
India	8.11	
Japan	16.09	

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Sources: Maddison, 2001; World Bank, World Development Indicators Online (see <http://www.worldbank.org/data/wdi2004/index.htm>).

**Table 3**

**Changes in Total Fertility Rates in Eleven Nations, 1970–2003**

	<b>1970</b>	<b>2003</b>
<b>China</b>	4.8	1.7
<b>Indonesia</b>	5.1	2.6
<b>Korea (South)</b>	5.2	1.3
<b>Thailand</b>	5.0	1.7
<b>India</b>	5.4	3.1
<b>Japan</b>	2.1	1.3
<b>France</b>	2.5	1.9
<b>Germany (West)</b>	2.0	1.3
<b>Italy</b>	2.4	1.2
<b>United Kingdom</b>	2.5	1.6
<b>United States</b>	2.5	2.0

Sources: Keyfitz and Flieger, 1990; Population Reference Bureau Datafinder ([www.prb.org](http://www.prb.org)).

**Table 4****Secular Trends in Per Capita Daily Consumption of Calories, 1961–2000**

	<b>1961</b>	<b>2000</b>	<b>Percentage change</b>
<b>China</b>	1725*	2979	73
<b>Indonesia</b>	1727	2913	69
<b>Korea (South)</b>	2147	3093	44
<b>Thailand</b>	1938	2459	27
<b>India</b>	2073	2489	20
<b>Japan</b>	2468	2753	12
<b>France</b>	3194	3597	13
<b>Germany (West)</b>	2889	3505	21
<b>Italy</b>	2914	3663	26
<b>United Kingdom</b>	3240	3312	2
<b>United States</b>	2883	3814	32
<b>World</b>	2255	2805	24

Source: FAOSTAT (<http://apps.fao.org/>).

\*1962

**Table 5****Automobile Production in Southeast and South Asia Compared with  
5 Western Nations and Japan**

	<b>Production in 2003 (in thousands)</b>	<b>Production Increase over 2002 (%)</b>
<b>China</b>	4,444	35
<b>Hong Kong</b>	—	—
<b>Indonesia</b>	322	8
<b>Korea (South)</b>	3,178	1
<b>Malaysia</b>	345	-13
<b>Singapore</b>	—	—
<b>Taiwan</b>	387	16
<b>Thailand</b>	763	30
<b>India</b>	1,161	30
<b>Japan</b>	10,286	0
<b>France</b>	3,620	-2
<b>Germany</b>	5,507	1
<b>Italy</b>	1,321	-7
<b>United Kingdom</b>	323	17
<b>United States</b>	12,078	-2
<b>World</b>	60,597	2.6

Source: Organisation International des Constructeurs d'Automobiles, survey for 2002–2003 (<http://www.oica.net>).



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