

Adam Smith and the Great Deceleration in the U,S. Economy

Gerdes, William

2013

Online at https://mpra.ub.uni-muenchen.de/53599/ MPRA Paper No. 53599, posted 16 Feb 2014 01:24 UTC

Adam Smith and the Great Deceleration in the U.S. Economy

William D. Gerdes Clarke University, #1555 1550 Clarke Drive Dubuque, IA 52001

(563)-588-6362 william.gerdes@clarke.edu

Adam Smith and the Great Deceleration in the U.S. Economy

From Adam Smith's perspective, the most prominent macroeconomic happening of the post-World War II period was not the Great Moderation, nor was it the recent Great Recession. Instead, it was the secular deceleration in economic growth occurring in the U.S., or the Great Deceleration. Smith's growth theory and his measure of aggregate output are employed in analyzing and documenting this Great Deceleration. From Smith's perspective, the most likely causal forces are the same ones that were retarding economic growth in eighteenth-century England: government command over resources and also its growth-inhibiting policies. On a positive note, Smith would consider the Great Deceleration as reversible. (JEL B12, E02, E60, O10, O43)

KEYWORDS: Adam Smith, economic growth, saving, capital accumulation, gross domestic product

I. Introduction

This paper presents an assessment of the long-run performance of the U.S economy from the perspective of Adam Smith. The time frame is the more than six decades that have passed since the conclusion of World War II. From a Smithian perspective, the most prominent macroeconomic happening of this period was not the empirical proposition known as the Great Moderation, although this has received considerable attention (Bernanke 2004).¹ Nor was it the apparent successor, the Great Recession of 2008-2009. Rather, it was what Smith might describe as the Great Deceleration, or the notable decline in rate of U.S. economic growth that has occurred in the post-World War II period.

This Great Deceleration has gone largely unnoticed. It is testimony to lower priority accorded Smith's long-run view. It reflects, in turn, the dominance of the more short-run macroeconomic perspective of followers of John M. Keynes.² The disproportionate attention given the Great Moderation, and more recently the Great Recession, is evidence of the pervasiveness of the Keynesian perspective.

Assessing the performance of the U.S. economy from the vantage point of Adam Smith resuscitates his predilection for the long-view. At the epicenter of Smith's perspective on long-run growth are counteracting forces involving the laws of human nature and actions undertaken by governments. Prior to examining the potential role played by such forces during the Great Deceleration, it is useful to briefly recount Smith's analysis of the causes of economic growth, and also his perception of how economic growth is properly measured.

II. Economic Growth

An Inquiry into the Nature and Causes of the Wealth of Nations is a treatise on economic growth. Smith's growth theory, while embellished with historical examples, has a distinctly modern flair. Economic variables accounting for growth are very similar to those enumerated by Robert Solow (1957) in his seminal study of the aggregate production function: 1) improvements in productivity; and, 2) growth of the factors of production.

While land, labor, and capital all contribute to economic growth, they are not all equally important. For Smith, labor is primary source of wealth creation. It is the property rights that each man has to the fruits of his own labor that lead to the development and improvements in other inputs, land and capital.

The property which every man has in his own labor, as it is the original foundation of all other property, so it is the most sacred and inviolable. (Smith 1937, 121-122)

This emphasis on the input labor distinguishes Smith's work from that of modern theorists, who often give equal treatment to all factors of production. It also differentiates Smith from some of his contemporaries. It was the French physiocrats who considered land the principal input, while the mercantilists often stressed the importance of a favorable trade balance for the process of wealth accumulation.

As testimony to the pivotal role played by labor, Smith devoted much of Book I in the *Wealth of Nations* to a discussion of those factors that contribute to increases in labor productivity over time. He was quick to acknowledge, however, that both increases in the quantity of labor employed and improvements in labor productivity do not occur independently of the other inputs. Indeed, neither will likely happen if there is not a prior increase in a nation's capital stock. As a consequence, the study of capital formation becomes central to Smith's

analysis of the growth process, so much so that he devoted Book II (*Wealth of Nations*) to the subject.

It is noteworthy that Adam Smith's concept of capital included not only tools, machinery, and buildings (fixed capital), but also the wage goods (circulating capital). Inclusion of the latter is necessary because production is roundabout. Wage goods are required to support workers during the period of production. Given the current practice of excluding circulating capital, Smith's version of the capital stock is more general than contemporary versions.³

With increases in the quantity of labor employed and improvements in the productivity of labor both dependent on the accumulation of capital goods, how resources are allocated is a critical determinant of economic growth. More resources allocated for the production of capital goods increases the prospect for growth. Fewer resources allocated for that purpose implies the opposite---a reduced likelihood of economic growth.

Smith introduced the distinction between productive and unproductive labor to accentuate this resource allocation issue. Productive labor is labor that is employed in the production of goods. While not all goods that are produced serve as capital goods, many of them do. Thus, resources supporting productive labor generally favor greater capital accumulation. By contrast, Smith considered labor used to produce services as unproductive labor. Given that services are most often consumed instantaneously, resources devoted to their production generally undermine capital formation.⁴

Because saving is a requisite for capital formation, the accumulation of capital goods depends importantly upon human values. Parsimony and frugality, Smith noted, are favorable for economic growth because they free resources for this purpose. Prodigality, on the other hand, does just the opposite, i.e., it results in less saving and a reduced rate of capital formation.⁵

In the state of natural liberty, human values tend to promote economic growth. The lifelong striving on the part of man to improve his economic condition nurtures his natural inclination to save more. This is not always easily accomplished given the ever-present temptations associated with the pleasures of current consumption. The volume of saving that does occur under these circumstances testifies to the dominance of man's long-run disposition, something that is embedded in human nature.

With regard to profusion, the principle which prompts to expense, is the passion for enjoyment; which, though sometimes violent and very difficult to be restrained, is in general only momentary and occasional. But the principle which prompts us to save, is the desire of bettering our condition, a desire which though generally calm and dispassionate, comes to us from the womb and never leaves us till we go into the grave. (Smith 1937, 324)

While individual frugality and prudent behavior provided an undergirding for the natural economic progress occurring in England (and elsewhere), the magnitude of this progress was, in many instances, diminished by actions undertaken by governments.

Smith cited two principal ways that governments undermine economic growth. First, governments can and often do absorb large quantities of resources. Military expenditures and outlays related to maintaining the royal court were the primary culprits in Smith's day. Lavish expenditures for both purposes were a drain on England's resources, resources that could have been employed to increase the nation's capital stock. While harmful, Smith observed that, to date, such government profligacy had not been sufficient to bring to a halt long-run capital formation in England.

But though the profusion by government must, undoubtedly, have retarded the natural progress of England towards wealth and improvement, it has not been able to stop it. The annual produce of its land and labour is, undoubtedly, much greater at present than it was either at the restoration or at the revolution. The capital, therefore annually employed in cultivating this land, and in maintaining this labour must likewise be much greater. In the midst of all the exactions by government, this capital has been silently and gradually accumulated by the private frugality and good conduct of individuals.... (Smith 1937, 328-329)

Second, governments retard economic progress by enacting growth-inhibiting policies that redirect resources from more productive to less productive uses. Smith cited, in particular, mercantilist trade policies that caused England to domestically produce goods that could have been produced much more cost-effectively elsewhere. In addition to its trade policies, government in England had refused to modernize numerous laws and regulations that were legacies from medieval times. The economic consequences were reduced labor mobility and less effective land utilization.

From Smith's perspective, then, economic growth is compatible with the laws of human nature. The observed rate of economic growth, for any country, reflects the relative strength of two conflicting forces: 1) the natural inclination of man to save more and to accumulate

additional capital goods; versus, 2) the actions of governments that both absorb valuable resources and engage in growth-inhibiting policies. The practical consequence for Smith's England was a pattern of economic growth that, while positive, was considerably muted relative to what it otherwise might have been.

III. Measuring the Wealth of Nations: Smithian Domestic Product

An Inquiry into the Nature and Causes of the Wealth of Nations was primarily concerned with economic growth and not macroeconomic measurement. In his theorizing on growth, however, Smith did offer a conceptual version of the national product. He called it "the annual produce of the land and labour of a nation," which is subsequently referred to as Smithian Domestic Product (SDP).

Smithian Domestic Product consists of the aggregate production of goods.⁶ This goodsonly production boundary is evident in Smith's analogy concerning factor claims on output. Factor claimants are the same whether one considers the revenue from sale of an individual commodity or revenue from the sale of a country's total output.

Since this is the case, it has been observed, with regard to every particular commodity, taken separately; it must be so with regard to all the *commodities* which compose the whole annual produce of the land and labour of every country, taken complexly. The whole price or exchangeable value of that annual produce, must resolve itself into the same three parts, ... the wages of their labour, the profits of their stock, or the rent of their land. (Smith 1937, 270) [my italics]

The composition of SDP is compatible with Smith's growth analysis, and reflects the importance he attached to the process of capital formation. His predilection for goods production is based on the observation that services generally are deficient on plutological grounds. Their consumption most often is instantaneous, as evidenced by the menial servant, whose services "generally perish in the very instance of their performance." (Smith 1937, 315)

By way of contrast, goods possess a critical inter-temporal feature that allows them to serve as capital goods. We can distribute their consumption through time. While not all goods that are produced are employed as either fixed or circulating capital, all have the potential for such employment. Hence, Smith viewed the aggregate production of such goods as a form of "generalized" (gross) capital formation.

Estimates of Smithian Domestic Product for the U.S. economy are presented below. They were derived from gross domestic product (GDP) data. Because GDP includes the production of both goods and services, it is necessary to separate the production of these two types of output. The U.S. Department of Commerce presents GDP data in several formats, and one of them separates output in the desired manner. It is called Real Gross Domestic Product by Major Type of Product, Chained Dollars.⁷

In this data set, real output is decomposed into three categories: goods, services, and structures. Goods are products that can be stored or inventoried, services are products that cannot be stored and are consumed at the place and time of their purchase, and structures are products that are usually constructed at the location where they will be used and typically have long economic lives. Products with characteristics of more than one category are classified on the basis of their dominant characteristic. (U. S. Department of Commerce 1998, M-14) SDP estimates are constructed from this data set by summing the production of goods and structures. For a more detailed discussion of Smithian Domestic Product and its estimation, refer to Gerdes (2005).

IV. The Great Deceleration in the U.S.

In TABLE 1, average annual U.S. growth rates for both real SDP and real GDP are presented by decade as well as for the entire 63-year period from 1949-2012. By both measures, the most rapid U.S. economic growth occurred in the early post-World II period (1950s and 1960s). The relatively robust 4.3 percent average annual growth rate for the 1950s warrants an historical comment. In retrospect, this solid performance is in marked contrast to the characterization of that decade by early Keynesian economists. They generally dismissed the 1950s as a decade of missed opportunities, with the economy performing much below its potential. By Smith's measure, and with the benefit of hindsight, it appears that they should have been telling us something quite different: "You never had it so good."

SDP and GDP data both document the Great Deceleration. The marked decline in decadal production growth is readily discernable. From four percent (or four percent plus) in the 1950s and 1960s, average annual growth for the most recent decade fell to 1.0 percent (1.7% for GDP). This was by far the lowest growth recorded for any post-World War II decade. Moreover, the abysmal performance in the last decade remains after diluting the impact of the Great Recession (2008 and 2009) by extending that decade to include the three years from 2010-

2012. Average annual growth for SDP and GDP was 1.9 and 1.8 percent respectively for the thirteen years from 1999-2012.⁸

That the secular deceleration in the growth of both SDP and GDP occurred in tandem would not have surprised Smith.⁹ He would likely argue that there is causality here. That is, the decline in SDP growth is *causing* deceleration in the growth of GDP. SDP measures the quantity of generalized saving and capital formation that provides the foundation for long-run improvements in the wealth of nations. Any deceleration in the rate of generalized capital accumulation, such as that occurring in the U.S., has pernicious consequences for economic activity in all of its forms. Reduced capital formation not only depresses future goods production (and SDP growth), but also growth as recorded by more comprehensive output measures such as GDP. That is because capital goods not only beget goods, but they also beget services (which are included in GDP).

V. The Great Deceleration: Causality

Isolating causal factors for the Great Deceleration is not an easy task given the size and diversity of the U.S. economy. Examining potential causality from Adam Smith's point of view considerably narrows that focus.

Unlike some of his classical successors [Ricardo, 1962 (1821); John S. Mill, 1965 (1848)], Smith did not subscribe to the view that long-run deceleration in economic growth was something inevitable that would eventually lead to a stationary state. He was generally much more sanguine about such matters. Natural forces in the form of prudent individual behavior resulted in the accumulation of more capital goods and long-run improvements in living standards. Thus, it is very unlikely that Smith would view the Great Deceleration in the U. S. as something natural.

If the Great Deceleration was not the result of natural forces, Smith would turn to the role played by government. The issue here is whether post-World War II governments in the U.S. behaved in a manner that mimicked, in a demonstrable way, the behavior of England's government at the time of Smith. If they did, Smith would most likely assign culpability to government for the deteriorating performance of the U.S. economy.

Two questions are critical for assessing possible government involvement. First, did governments in the U.S. absorb larger quantities of resources during the period of the Great

Deceleration---enough so to potentially crowd out private capital formation? Second, for the same period, did government embark upon new policies that could potentially inhibit the rate of economic growth? With both questions answered in the affirmative, Smith would raise the specter of a government-induced Great Deceleration in the U.S.

1. The Size of Government in the U.S.

Government as a portion of the U.S. economy expanded dramatically in the post-World War II period. FIGURE 1 shows total government spending (for all levels of government) as a percentage of GDP for the period 1948-2009. In 1948, nominal government spending was slightly more than one-fifth of nominal GDP (20.5%). That ratio doubled to nearly 42 percent in 2009.

The magnitude of this increased claim on resources reflects a quantum shift in government behavior following World War II. Two of the most noteworthy changes were the buildup of a permanent U.S. military establishment, and an unprecedented growth of government social programs. The former was most prominent during the first decade under consideration. Since the mid-1960s, nearly all of the growth in government (in relation to the size of the economy) resulted from increased outlays for social programs.

Adam Smith would maintain that the diversion of an additional one-fifth of the economy to the government sector would dramatically increase the quantity of unproductive labor employed in an economy. The anticipated result is a greatly reduced rate of capital formation and a slowing of economic growth. This (Smithian) prognosis is consistent with the observed deceleration in both SDP and GDP growth for the U.S. in the post-World War II period.

Additional support for Smith's crowding-out hypothesis occurred in the form of a natural experiment in the U.S. data for the 1990s. Following the collapse of the Soviet Union and other like-minded governments in Eastern Europe, the perceived security threat to the U.S. diminished dramatically. That allowed for a "peace dividend" in the form of a release of resources that were previously employed by government for military purposes.

FIGURE 1 shows the resulting decline in total government spending relative to GDP. The drop was most pronounced during the years 1991-1999. Government spending as a portion of GDP fell by 4.6 percent (from 37.2 percent to 32.6 percent), with reduced defense spending accounting for approximately 40 percent of that decline.

If increases in government spending did, indeed, crowd out private sector spending (and capital formation) in the post-World War II period, then evidence of a reversal should be present in the data for the 1990s. That is, reductions in government spending (as a portion of the economy) should be good for capital formation and economic growth. Both GDP and SDP data confirm that it was. Average annual GDP growth accelerated from 3.0 in the 1980s to 3.8 percent from 1991-1999 (TABLE 1, 9). The acceleration, by Smith's measure, was even more pronounced. SDP growth more than doubled to 5.1 percent from 2.5 in the 1980s. This growth rate for SDP was appreciably higher than that recorded for any decade in the Post-War period.¹⁰

Smith would not find this reversal in the pattern of U.S. production growth a bit unusual. Reallocating resources away from government should lead to greater prosperity (and a more rapid growth of SDP). Had England's wars with France during the previous two centuries not transpired, England would have experienced a similar fate.

But had not those wars given this particular direction to so large a capital, a greater part of it naturally would have been employed in maintaining productive hands. The value of the annual produce of land and labour of the country, would have been considerably increased by it every year, and every year's increase would have augmented still more that of the following year. More houses would have been built, more lands would have been improved, and those which had been improved before would have been better cultivated, more manufactures would have been established, and those which had been more extended; and to what height the real wealth and revenue of the country might, by this time, have been raised, it is not very easy even to imagine. (Smith 1937, 328)

2. Government Policies

A second way that government contributed to the Great Deceleration in the U.S. was through its economic policies. Those that Smith found especially harmful in eighteenth-century England were trade barriers, regulations resulting in greater labor market rigidities, and land use restrictions. Such policies appear much less burdensome during the Great Deceleration. After World War II, there was a marked increase in the value of international trade relative to the size of the U.S. economy. Moreover, there was evidence of greater labor mobility, and land use restrictions did not appear constraining.

While adverse policies enumerated by Smith may not lend much insight into the Great Deceleration, the post-World War II period did witness an entirely new set of government

policies that are not so easily dismissed. They were the macroeconomic policies popularized by Smith's fellow countryman John M. Keynes. In contrast to the limited role for government envisioned by Adam Smith, Keynes and his followers maintained that the scope of government should be allowed to grow in order to accommodate efforts to mitigate the damaging repercussions of business cycle fluctuations.

Because Keynesian policies were novel and anticlassical, they often met with considerable resistance, both in academe and in political circles. To gain acceptance for their policies, Keynes and his followers took steps to discredit Adam Smith (and the classicists). Under attack were not only the long-run perspective that, for Smith, had served as the foundation for centuries of economic growth, but also the most important practical implication of that longrun perspective---acts of private saving.

The long-run perspective central to Smith's analysis was inconsistent with new policy initiatives envisioned by Keynes (and his followers). Government efforts to tame the business cycle required something much more myopic. In advancing that cause, Keynes exhibited disdain for those, who like Smith, gave deference to the long-run. From his oft-quoted critique of the quantity theory of money, a long-run proposition:

Now 'in the long-run' this is probably true.....But this *long-run* is a misleading guide to current affairs. *In the long-run* we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again. [Keynes 1971 (1923), 80]

Keynes also moved to stigmatize the principal by-product of the long-view, acts of private saving. He crafted an argument that Adam Smith had it all wrong. Saving is not, as Smith would have it, a public virtue. In many instances, it was positively harmful to the economy. Keynes's position required a dramatic reinterpretation of the relationship between saving and aggregate economic activity.

For Smith, abstinence from consumption was *the* form of behavior that allowed individuals to realize their aspirations for a better economic life. It was not always easily accomplished and required self-discipline and a willingness to defer gratification. What turned this form of behavior into a public virtue was its unintended consequence. Saving laid the foundation for long-run economic growth. As a necessary condition for capital formation, it served as the edifice for long-run improvements in the wealth of nations.

Keynes turned Smith's view of saving on its head. Saving was not considered a virtuous form of behavior. Instead of laying the foundation for additional wealth accumulation, it often had the unsalutary consequence of doing just the opposite----destroying wealth. This novel view of saving was subsequently dubbed the *paradox of thri*ft. It hinged on differentiating individual acts of saving from attempts to save in the aggregate.

For although the amount of his own saving is unlikely to have any significant influence on his own income, the reactions of the amount of his consumption on the incomes of others makes it impossible for all individuals simultaneously to save any given sums. Every such attempt to save more by reducing consumption will so affect incomes that the attempt necessarily defeats itself. (Keynes 1936, 84)

That is, when people, in the aggregate, attempt to save more, it undermines productive activity, with the ultimate result of less wealth accumulation.

No attempt is made to systematically assess the impact of these attacks by Keynes on the premises of Adam Smith's growth analysis. Anecdotal evidence, however, does suggest that individuals in the U.S. may well have shortened their time-horizons. From the growth in popularity of fast food restaurants, to the ready use of credit cards and the accumulation of unprecedented amounts of consumer debt, they appear less willing to defer gratification than was true in the past. On the policy side, there has been an ebb and flow to the popularity Keynesian policy measures directed toward reducing time-horizons and the volume of saving. An important exception, though, is deficit spending by governments. Negative government saving has become a permanent part of the economic and political landscape. By serving as an offset to private saving, it provides a drag on aggregate saving.

Adam Smith would, in all likelihood, be aghast at both the dramatic growth in the size of government during the Great Deceleration, and also the degree to which Keynesian economic policies found favor in the U.S. From his perspective, both are likely to depress long-run economic growth. They are, however, consistent with the downward drift in generalized capital formation and the pattern of decelerating production growth that characterize the Great Deceleration.

VI. Summary

The data corresponding to Adam Smith's long-run perspective indicate that the U.S. is not experiencing a Great Moderation nor a Great Recession, but rather a Great Deceleration. Economic growth is in a secular decline. The empirical markers are reduced growth rates for saving, generalized capital formation, and aggregate production.

Smith would aver that this Great Deceleration is ahistorical and not something natural. In the state of nature, human values generally nurture behavioral patterns that embody prudence and self-restraint. The result, in most cases, is greater saving, capital formation, and secular economic growth. That has been the general case since the days of the Roman Empire, with the norm a pattern of steady, but irregular, economic progress.

Disruptions to this pattern of natural economic progress most often result from actions undertaken by government. This observation appears to have relevance for the Great Deceleration. The size of government (relative to the U.S. economy) more than doubled since the beginning of the Great Deceleration. In addition, government also embarked on new (Keynesian) economic policies that often rewarded those with predilections for the short-run outcomes, and encouraged consumption at the expense of saving. Both this reallocation of resources from the private sector to government, and economic policies that detract from longrun decision-making, are capable of undermining the very foundations of natural economic progress as envisioned by Smith.

Indeed, were Adam Smith here today, he would likely make the case that John M. Keynes had it all wrong. In the long-run, we are not all dead. Rather, we are all alive and are the benefactors of decisions made by those before us. If the values and supporting institutions of those before us resulted in greater saving and more capital formation, we are, indeed, fortunate. If they favored consumption at the expense of saving, then our prospects are much less sanguine. Evidence from the Great Deceleration suggests that, in the U.S., the pattern of behavior more closely resembles the latter.

On a more positive note, Smith would not view this Great Deceleration as irreversible. After all, economic growth is natural in the sense that it tends to occur in the state of natural liberty. If the declining growth in the U.S. is largely a result of actions undertaken by government, as Smith might infer, then smaller government and changes in government policies will be instrumental for a reversal of the Great Deceleration.

NOTES

¹ The Great Moderation was in reference to a significant reduction in the *short-run* volatility of both aggregate production and inflation in the U.S. The general tenor of this message was that, from a macroeconomic perspective, the U.S. economy was performing much better. While Bernanke noted that there was no consensus on the reason for the reduced volatility, one explanation was that it resulted from better economic policy

² Theories of early disciples of Keynes, that extended his macroeconomic framework to the long-run, generally were short-lived. Alvin Hansen's secular stagnation thesis (1939) was a case in point. The argument that the American economy faced a long-run deficiency in aggregate demand was laid to rest by the robust performance of the U.S. economy after World War II.

³ At one point, where Smith classified the different types of capital, his concept of capital was even more inclusive. Here he also discussed human capital and improvements to land (Smith 1937, 265-266).

While the nature of capital goods received much attention in Book II, forms of business organization for the employment of capital did not. Evidently Smith considered them of secondary importance in matters relating to capital accumulation and economic growth. Smith did include a somewhat detailed discussion of proprietorships and joint-stock companies in the final book (BookV) of *The Wealth of Nations*, which dealt with issues related to public finance.

⁴ The distinction between productive and unproductive labor was not always well received by 20th century economists. Schumpeter was one of Smith's harshest critics. With this dichotomy, "the blame is at his door for much that is unsatisfactory in the economic theory of the subsequent hundred years." (Schumpeter 1954, 308) Studenski (1961) and Stigler (1976) also viewed the distinction unfavorably. Not all economists were critical. See Myint (1948), West (1976), and Blaug (1978).

⁵ Smith also cited "misconduct" as unfavorable for capital formation. By this he meant that failed enterprises absorb capital as well. (Smith 1937, 324-325)

⁶ Smith's annual produce (or SDP) was a gross product concept. He was familiar with depreciation and the distinction between gross and net product (Smith 1937, 271).

⁷ Refer to the Bureau of Economic Analysis website (<u>http://www.bea.gov</u>): National Income and Product Accounts, Table 1.2.6.

⁸ At these growth rates, it takes more than twice as long for real output to double than it does for growth rates prevailing in the 1950s and 1960s.

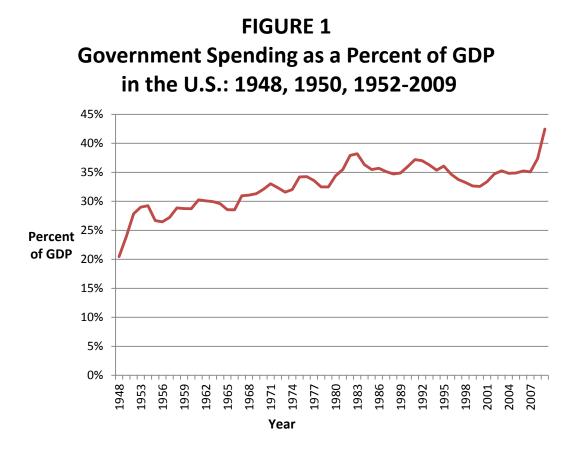
⁹ The fact that SDP and GDP grew at the same rate in the post-World War II period might surprise some contemporary observers. It casts aspersion on the proposition that the U.S. economy is becoming more service-oriented.

¹⁰ Innovation and economic activity was so robust during the 1990s that some raised the possibility that the country was in the midst of a third industrial revolution. See, for example, Greenwood (1999).

References

- Bernanke, B. 2004. "The Great Moderation." <u>http://www.federalreserve.gov/</u> boarddocs/speeches/2004. Retrieval: 2-26-2009.
- Blaug, M. 1978. Economic Theory in Retrospect. 3rd edition. London: Cambridge.
- Gerdes, W. 2005. "Smithian Domestic Product and the U.S. Economy." *The Social Science Journal* 42: 511-522.
- Greenwood, J. 1999. "The Third Industrial Revolution: Technology, Productivity, and Income Inequality." Federal Reserve Bank of Cleveland *Economic Review* 35(2): 2-12.
- Hansen, A. 1939. "Economic Progress and Declining Population Growth." *American Economic Review* 29: 1-15.
- Keynes, J.M. 1971 (1923). A Tract on Monetary Reform. London: Macmillan.
- Keynes, J.M. 1936. *The General Theory of Employment, Interest, and Money.* New York: Harcourt, Brace, and World.
- Kruger, A. and R. Solow, eds. 2001. *The Roaring Nineties: Can Full Employment be Sustained?* New York: The Russell Sage Foundation and the Century Foundation.
- Mill, J.S. 1965 (1848). Collected Works of John Stuart Mill, Volume IV: Principles of Political Economy with Some of Their Applications to Social Philosophy. Toronto: University of Toronto.
- Myint, H. 1948. Theories of Welfare Economics. Cambridge: Harvard.
- Ricardo, D. 1962 (1821, 3rd edition). *The Principles of Political Economy and Taxation*. London: J.M. Dent & Sons.
- Schumpeter, J. 1954. History of Economic Analysis. New York: Oxford.
- Smith, A. 1937 (1776). An Inquiry into the Nature and Causes of the Wealth of Nations. New York: Random House.

- Solow, R. 1957. "Technical Change and the Aggregate Production Function." *Review of Economics and Statistics* 39: 312-320.
- Stigler, G. 1976. "The Successes and Failures of Professor Smith." *Journal* of *Political Economy* 84(6): 1199-1213.
- Studenski, P. 1961. *The Income of Nations. Part One: History*. New York: New York University.
- U.S. Department of Commerce, Bureau of the Census. (1975) *Historical Statistics* of the United States: Colonial Times to 1970 (Part 2).
- U.S. Department of Commerce, Bureau of the Census. *Statistical Abstract of the United States* (various issues).
- U.S. Department of Commerce. (2008, 2009) Bureau of the Census, *State and Local Government Finances Summary: 2008 (and 2009).*
- U.S. Department of Commerce, Bureau of Economic Analysis. National Income and Product Accounts, Table 1.2.6. http://www.bea.gov/iTable/iTable.cfm?ReqID=98step=1. Retrieval: 1-30-2013.
- U.S. Department of Commerce. (1998) National Income and Product Accounts of the United States, 1929-94: Volume 1.
- West, E.G. 1976. Adam Smith: the Man and his Works. Indianapolis: Liberty Fund.



Sources:

- U.S. Census Bureau, U. S. Department of Commerce, *Historical Statistics* of the United States: Colonial Times to 1970.
- U.S. Census Bureau, U.S. Department of Commerce, *Statistical Abstract of the U.S.,* (various issues).
- U.S. Census Bureau, U.S. Department of Commerce, *State and Local Government Finances, Summary:* 2008 and 2009

•

TABLE 1

| (United States, 1949-2012) | | | |
|----------------------------|------------|------------|------------|
| Years | SDP | GDP | Difference |
| 1949-1959 | 4.3 | 4.1 | 0.2 |
| 1959-1969 | 3.9 | 4.4 | - 0.5 |
| 1969-1979 | 3.2 | 3.2 | 0.0 |
| 1979-1989 | 2.5 | 3.0 | -0.5 |
| 1989-1999 1991-1999 | 3.7 5.1 | 3.2 3.8 | 0.5 1.3 |
| 1999-2009 | 1.0 | 1.7 | - 0.7 |
| 1999-2012 | 1.9 | 1.8 | 0.1 |
| 1949-2012 | 3.2 | 3.2 | 0.0 |

Annual Growth Rates for SDP and GDP (United States, 1949-2012)

SOURCE: Bureau of Economic Analysis, U.S. Department of Commerce, http://:www.bea.gov/iTable/iTable.cfm?ReqID=98step=1.