

Dismissed by critics as "quackery" and "snake-oil economics," supply-side theory in fact represents a return to the dominant orthodox strain of public finance analysis which originated with the attacks of Hume, the Physiocrats, Adam Smith, and others on mercantilism.

We hear an abundance of criticism of supplyside economics these days. We hear that it is "voodoo economics", that it is simply the latest fad, and even that supply-side economists are guacks.

Is this so-called supply-side economics really just a lot of "quackery"? Is it novel? Is it already yesterday's craze? Several very well known economists and leaders in this country have stated that it is some or all of these things.

In view of this almost daily criticism we hear about supply-side economics, I want to examine the theoretical basis and historical origins of supply-side economics.

Defining Supply-Side Economics

Since supply-side economics has come to mean many things to many people, let me define what I view as the essential features of supplyside economics.

The single line of thought that distinguishes

economics from other fields of inquiry is that human behavior responds to changes in economic incentives. Other things being equal, buyers of products purchase less of that product when the price is high. On the other hand, suppliers of that product supply more. The quantity supplied and demanded responds to price. Similarly, it is generally recognized that when you tax a product, you get less of it. And, in general, when you subsidize a product, you get more of it.

It is also common knowledge that the U. S. economy has performed rather poorly in recent years. Real economic growth, productivity growth, and personal savings rates have been low. Unemployment has been high. Supply-side economics recognizes that this poor economic performance is related to the existence of sharply higher tax rates since the mid-1960s. In other words, a primary reason for our poor economic performance is that we are taxing work, saving, and output while at the same time we are subsidizing consumption, nonwork, leisure, unemployment,

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"Supply-siders contend that if you want more of something (e.g. work, saving, output), tax it less. And if you want less of something (e.g. unemployment, nonwork), subsidize it less."

and retirement. Supply-siders contend that if you want more of something, tax it less. And if you want less of something, subsidize it less. Consequently, in order to get more work, saving, and output, these economists recommend lowering tax rates on these activities. Similarly, in order to get less unemployment and nonwork, they recommend reducing their subsidies. Thus, supplyside economics has to do with the use of fiscal policy to increase production and aggregate supply by making work more attractive than nonwork and saving more attractive than nonsaving. In short, supply-side economics focuses on the effects that tax rates have on relative prices, aggregate supply, and, hence, economic growth.

Three Basic Elements of Supply-side Theory

First, and probably most fundamental, is the idea that changes in (marginal) tax rates are changes in relative prices and, consequently, will always affect choice, the allocation of resources, and real economic activity. Accordingly, changes in tax rates will have important repercussions on people's incentives to supply labor and capital to the market. Tax-induced relative price changes affect choices between (1) work and leisure, (2)consumption and savings, and (3) market activity and nonmarket activity. Consequently, reductions in tax rates-by inducing shifts from leisure to work, from consumption to saving, and from nonmarket activity to market activity-have important impacts on aggregate supply and economic growth. In sum, supply-side economists view changes in tax rates as incentive changes rather than income changes.

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A second fundamental element of supply-side economics is the relationship between tax rates and output. Specifically, when tax rates are near zero, output is low because certain public goods which are essential for markets to operate are not being provided. Examples of such goods might include justice (a conducive legal framework), defense, law and order, the maintenance of roads, and primary education. As tax rates rise, these essential public goods and services are provided and economic activity expands. When these public goods are provided, in other words, we see rapid increases in the productive efficiency of capital and labor, and consequently, output.

At this initial stage, the effects of this increased efficiency outweigh any efficiency losses due to higher tax rates. However, as tax rates are increased further, disincentives and inefficiencies due to these higher tax rates begin to become more important. Specifically, these increased tax rates cause the after-tax rewards of saving, investing, and working for taxable income to decline. Consequently, people shift out of these activities into leisure, consumption, tax shelters, and working for nontaxable income. As a result, the market supply of goods and services (aggregate supply) and, hence, economic growth-is less than would otherwise be the case. At the same time, public good-induced improvements in productive efficiency increase at a slower rate (because less essential public goods are provided). Consequently, output gains become smaller and smaller. Eventually, total output peaks and begins to decline as the efficiency gains due to government spending are completely offset by efficiency losses and disincentives due to high tax rates. Additional tax rate increases lead to even further output declines as supplies continue to be withdrawn from production.

This relationship between aggregate market output and tax rates is of primary concern to supply-side economists. It represents the basic



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Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis concern of the supply-side view, which is to support those public policies which maximize economic growth.

The fact that tax rate changes affect aggregate supply implies that tax rate changes also have implications for tax revenues. Tax revenue equals the product of the tax rate times the tax base. Since tax rate changes affect aggregate supply, these rate changes also affect the tax base—

"Supply-side economics, then, relates to policies for long-run economic growth and not to policies for smoothing the business cycle."

sometimes in the opposite direction. This recognition has led to the explicit depiction of the relationship between tax rates and tax revenues known as the Laffer curve. The Laffer curve is essentially a by-product of the above-discussed tax rate/output curve. (The tax rate/tax revenue curve can be derived from the output/tax rate curve by multiplying the tax rate times the output to yield the tax revenue generated at each tax rate.)

A third basic element of supply-side economics is the recognition that the various relationships of changes in tax rates to incentives, factor supplies, output, and tax revenues are long-run relationships. All economists recognize that elasticities become larger the longer the time frame under consideration. Hence, the longer the time frame, the more potent will supply tax cuts become. Supply-side economics, then, relates to policies for long-run economic growth and not to policies for smoothing the business cycle; i.e., it pertains to growth, not stabilization.

Supply-Side: A Theory from Nowhere?

A good many commentators view supply-side economics as a novel response to the demandside policies that have been employed by various administrations over the past 20 years or so. They often characterize supply-side economics as both a novel theory and as most likely the latest fad among economists. Supply-side economics, after all, has been referred to as voodoo economics, snake-oil economics, as well as tooth-fairy economics. It has been called ill-conceived. One former Carter economic advisor referred to 1981 as the "Year of the Quack." Another former advisor to a previous Democratic administration referred to the supply-side tax program as "the most irresponsible fiscal action in modern times."

These characterizations—many of which were made by well-trained economists—display a shortsighted view of economic history. Supply-side economics is neither novel nor a fad. In fact, it constitutes a re-emergence of classical economics and the classical economic principles of public finance. In particular, the supply-side view represents a return to the dominant orthodox strain of macro public finance analysis which originated with the attacks of Hume, the Physiocrats, Smith, and others on mercantilism. Specifically, each and every one of the fundamental elements described above was stated over and over again by the classical economists.

The Mercantilists

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In order to understand the message of the classical economists, we need to understand the circumstances under which they wrote. The period prior to 1750, for example, can be characterized as one dominated by mercantilist economic policies—primarily various forms of governmental intervention and control of the economy. This intervention took the form of strict regulation of markets and guilds, quotas, licensing for export and import trade, royal industries, public works, paternalism, the subsidization of certain industries, grants of monopoly charters and patents, and colonial restrictions. Special interest groups could obtain governmental favors such as price fixing and even exclusion of competitors. High tariffs and other taxes (such as transportation tolls, church taxes, and excise taxes) were rampant.

Moreover, mercantilists viewed wealth as a zero-sum game. Wealth to the mercantilist was something gained at the expense of someone else. As a consequence, mercantilists were more concerned with the transfer as opposed to the creation of wealth. In short, the mercantilist period was characterized by high tax rates, a high degree of government regulation, and sluggish economic growth.

High tax rates, a high degree of government regulation, and sluggish economic growth—does

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this sound familiar? Recently, several commentators have equated Reaganomics with turning-backthe-clock. Yet, it was policies of government regulation and high tax rates that were associated with the low growth and low standards of living commonplace before the period of laissez faire.

The Classical Economists

It was in this mercantilist environment that the writings of David Hume, the Physiocrats, and Adam Smith took root and flourished. Responding to high tax rates and government intervention, they began to piece together the basic elements of what is now known as supply-side economics. The Physiocrats, for example, acknowledged a relationship between tax rates and output. They indicated that if the state and church were to appropriate more than one third of the income of the landed proprietors, net product would decline. David Hume recognized this relationship as well as the tax rate/tax revenue relationship, especially for tariffs.

Adam Smith, however, was the first economist who put it all together. Smith, building on the writings of the Physiocrats and Hume as well as on philosophers such as Locke and Montesquieu, presented a tax-related scheme that fully incorporated all of the supply-side principles cited above. Rather than being concerned with the transfer of wealth as were the mercantilists, Smith was most concerned with the production or creation of wealth. To Smith, wealth consisted of real goods and services rather than the stock of gold, and a nation was rich or poor according to its annual production of goods and services.¹ Smith's focus on aggregate supply formed the basis of his primary theme, namely, the nature and causes of wealth and economic growth. This is evident in the full title of his classic, An Inquiry into the Nature and Causes of the Wealth of Nations. Indeed, this pervasive concern for economic growth dominated every aspect of classical economics.²

Smith argued that in order to increase economic growth, emphasis needed to be placed upon increasing aggregate supply and production rather than on increasing the monetary gold stock (the mercantilist prescription). According to Smith, increases in aggregate supply necessarily



implied increases in the supply of labor and capital. In the **Wealth of Nations**, he stressed the importance of incentives in eliciting increases in labor and capital. Smith explicitly stated that wage increases would *always* increase the supply of labor. Taxes on wages, he said, were "absurd and destructive," and high taxes would "obstruct the industry of people" as well as promote tax avoidance activities such as smuggling.

Smith also showed that taxes on capital and profits would discourage saving-investing activity and promote an outmigration of capital and, hence, adversely affect economic growth. In sum, Smith recognized that changes in tax rates had important effects on incentives and affected the choices between work and nonwork, saving and consumption, and market and nonmarket activity.

Finally, Smith also clearly recognized the essentials of the relationship between taxes and output described above. One passage in the **Wealth of Nations** merits particular attention in that Smith explicitly states his intentions:

"That the mercantile system (and its high rates of taxation) has not been very favorable to the revenue of the great body of the people, to the annual produce of the land and labour of the country, I have endeavored to show in... this inquiry. It seems not to have been more favorable to the revenue of the sovereign, so far at least as that revenue depends upon the duties of customs."³

Smith also clearly and repeatedly stated the Laffer view that when tax rates are high, tax revenues and tax rates can move in opposite directions. He continually asserted, for example, that high tariffs discouraged import consumption, promoted smuggling, and worked to diminish government revenue. More moderate tax rates,

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¹ Thomas Sowell, 'Adam Smith in Theory and Practice," Adam Smith and Modern Political Economy, edited by Gerald P. O'Driscoll, Jr., Iowa State University Press, Ames, Iowa, p. 5. ² Ibid., p. 13.

³ Adam Smith, An Inquiry into the Nature and Causes of the Wealth of National, edited by Edwin Cannan, University of Chicago Press, Chicago, 1976, ii, p. 438.

Smith contended, would provide larger tax revenues. In sum, Smith endorsed all of the essential elements of supply-side economics outlined above.

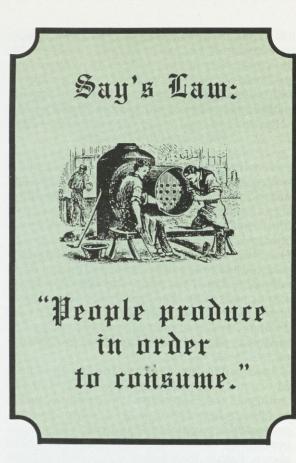
Smith's endorsement of a fully consistent supplyside view was important not only in and of itself but because he was so influential. Virtually all economists of later generations were familiar with his writings and, hence, were influenced by Smith to some degree.⁴

Say's Law

Among those so influenced were two economists, J. B. Say and James Mill. Say and Mill further refined some of Smith's views. In particular, they refined the primacy of aggregate supply into what became known as Say's Law. The central theme of Say's Law is that production and aggregate supply create wealth and economic growth. In other words, there cannot be more real income unless people produce more. The idea underlying Say's Law is quite simple: people produce in order to consume. Workers' or businessmen's buying power consists of their supplying power. Supply or production, then, is the wherewithal or means for demand and the origin of demand lies in production.

The goal of policy, according to Say's Law, should be to foster production and aggregate supply rather than consumption and aggregate demand. If aggregate supply is promoted, demand will take care of itself. Say himself stated this well:

"The encouragement of mere consumption is no benefit to commerce; for the difficulty lies in supplying the means, not in stimulating the desire of consumption; and we have seen, that production alone, furnishes those means. Thus, is the aim of good government to stimulate production, of bad government to encourage



consumption.... It is impossible to deny the conclusion, that the best taxes...are least injurious to reproduction."⁵

As a corollary to fostering aggregate supply, emphasis should be given to the encouragement of factor supplies. This emphasis on aggregate supply, according to Say's Law, is the fundamental ingredient to the creation of wealth and consequently economic growth.

Say's Law was strongly supported by James Mill, David Ricardo, John Stuart Mill, and many others. Supporters of Say's Law all recognized the important role of incentives in fostering the supply of labor, saving, and investment. Both Say and Mill, for example, indicated that increases in wages would *always* work to increase the supply of labor. Given their pervasive concern for economic growth, these economists supported tax policies which fostered work effort, savings, and

Incidentally, it is interesting to note that the same writers who influenced Smith—namely writers of the classical liberal tradition such as Locke, Montesquieu, and Hume—also influenced the founding fathers of the United States. Many of the above-cited essential features of supply-side economics, for example, can be found in the Federalist Papers. In No. 35 of the Federalist Papers, Hamilton contends that:

[&]quot;There is no part of the administration of government that requires extensive information and a thorough knowledge of the principles of political economy so much as the business of taxation. The man who understands those principles best will be least likely to resort to oppressive expedients, or to sacrifice any particular class of citizens to the procurement of revenue. It might be demonstrated that the most productive system of finance will always be the least burdensome."

Similarly, in No. 21, Hamilton describes the relationship between tax rates and tax revenues which is now referred to as the Laffer curve. Elements of supply-side economics, then, were recognized by the founding fathers as well as by Smith.

⁵ Jean-Baptiste Say, **ATreatise on Political Economy**, Book III, pp. 92, 196. (emphasis added).

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investment, and hence, aggregate supply and production. Supporters of Say's Law recognized that high tax rates would work to destroy the incentives to work, save, and invest and therefore would adversely affect economic growth. John Stuart Mill, for example, stressed that high tax rates would "discourage industry by insufficiency of reward." High tax rates, Mill maintained, would diminish the motive to save and cause both capital and labor to migrate. According to Mill, when tax rates have reached this level, they should be reduced so as to stimulate the supply of labor, capital, and, hence, aggregate supply.

In sum, supporters of Say's Law endorsed all the key elements of supply-side economics outlined above. Say's Law constituted the essence of the supply-side view and formed the basis of much classical thinking on public finance. The fundamentals of supply-side economics, therefore, became well established with the development and elaboration of Say's Law and its implications. Because of its general acceptance, the emphasis on the primacy of aggregate supply and economic growth dominated economic thinking until about World War I.

Contributions to this view made by later economists consisted largely of more lucid clarifications or more elegant restatements of the same principles.

Some Restatements

In clarifying the relationship between tax rates and output, some of these later writers emphasized that high tax rates encouraged people to avoid taxes. They argued that high tax rates adversely affect production and output not only because of shifts from production into leisure (and from savings into consumption), but by encouraging shifts from taxable activity into nontaxable (and often unproductive) activity. This nontaxable activity included illegal activities, such as smuggling, fraud, and evasion, but also included legal activities such as the migration of factors of production. These classical writers repeated over and over again that one sure way to recognize when tax rates are excessive is to identify when a great deal of tax avoidance activity is taking place.

These writers also restated the relationship between tax rates and tax revenues. They declared over and over again that when tax rates were confined to moderate limits, they produced more tax revenue than when rates were excessive. When tax rates increased beyond moderate levels, tax revenues decreased not only because of decreased production but also because of shifts to tax avoidance activities. Some classical authors were so confident that tax revenues would increase with reduced tax rates that they advocated tax cuts in the face of fiscal deficits.⁶ An example of a practical application of this was the administration of British Prime Minister William Gladstone who advocated cutting taxes in order to reduce the deficit.

Various writers in the mid-to-late nineteenth century continued to support these views and thus perpetuated supply-side economics. One prominent supply-side supporter was John Stuart Mill. It is well known that all through the second half of the 19th century Mill's **Principles of Political Economy** was the undisputed bible of economists.... As late as 1900, Mill's work was still the basic textbook in elementary courses in both British and American Universities."⁷ This long, unchallenged dominance of Mill's work not only enhanced the prominence of Say's Law but extended credence to the supply-side view in general so that this view remained largely unchallenged by economists until the interwar period.

In addition to being supported by the profession's leading thinkers (like Mill), supply-side theory came to be well accepted by most economists and indeed was regarded as the dominant view of fiscal policy by public finance economists within the academic community. Any review of the period's public finance literature reveals a strong supply-side orientation. Public finance economists of the day placed most emphasis on the following principle: the best tax system is the one which interferes least with economic growth. Thus, the growth aspects of taxation were more important to these writers than any other concern of taxation. Some of the authors of this period actually made explicit empirical estimates of the point at which they believed taxation became exorbitant. One author, for example, indicated that when the sum of state, local, and federal taxation exceeds 12 or 13 percent of private incomes, it brings about a slowdown in economic growth.8

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⁶ See, for example, D.P. O'Brien, J.R. McCulloch: A Study in Classical Economics, p. 263.

⁷ Mark Blaug, Economic Theory in Retrospect, p. 180.

⁸ Paul Leroy-Beaulieu, "On Taxation in General" (1906), Classics in the Theory of Public Finance, edited by Richard Musgrave and Alan Peacock, p. 164.



In sum, the public finance economists of the late nineteenth and early twentieth centuries fully endorsed the supply-side view. During this period, supply-side economics was the orthodox view among economists and, indeed, dominated macroeconomics so thoroughly that it was virtually never challenged."⁹

The Demise of the Supply-Side View

Events in the interwar period ended the centurylong dominance of the supply-side view. Along with the demise of the supply-side view came the rejection of Say's Law. Fiscal considerations such as income distribution and stabilization came to replace economic growth as principal concerns of fiscal policy.

Much of the reason for the dramatic shift in emphasis in fiscal policy relates to the circumstances of the period. First, there was a dramatic collapse of the money supply and of aggregate demand. Since this produced large amounts of idle capacity and unemployment, there was no need to encourage aggregate supply, i.e., excess supplies of labor and capital were readily available. Rather, the proper policy prescription was to stimulate aggregate demand.

Second, because of the banking collapse, monetary policy was seen as entirely impotent. Because of this supposed inability to stimulate demand via traditional channels of monetary policy, it was thought that the stimulation of aggregate demand had to come from fiscal policy. Hence, the primary emphasis of fiscal policy shifted from fostering aggregate supply to stimulating aggregate demand. More generally, emphasis shifted from supply-oriented, long-run economic growth policies to short-run, demand-oriented policies concerned with stabilizing the business cycle, i.e., a shift from growth to stabilization. Paralleling the emergence of this new stabilization function of fiscal policy was a call to use taxation and

9 W.H. Hutt, A Rehabilitation of Say's Law, p.2.

spending policies to bring about a "more proper" distribution of income. Instead of aiming primarily to produce growth, then, fiscal policy became a tool to stabilize the economy and redistribute incomes.

The public finance textbooks of the 1930s and 1940s contain ample evidence of this shift in emphasis and the subordination of supply-side views. But the shift occurred not only in textbooks. It also appeared in the substantial increase in the relative size of the public sector vis-a-vis the private sector and in the growth in government spending for "social" purposes. This increased size of government, of course, necessitated increases in tax rates. Since taxation's effects on aggregate supply had been subordinated, however, there was little discussion of the effects of higher tax rates on the supply of labor and capital as well as on output and economic growth.

High tax rates were seen as not necessarily bad. Indeed, it was often contended that high tax rates had little if any adverse effects on the supply of labor. Some economists of this period even asserted that tax rate increases would increase work effort. Moreover, since saving was seen as a leakage from the income-expenditure flow, the "new economics" came to view increases in saving as adversely affecting economic activity. According to this view, output was determined by aggregate demand and not by saving or other factor supplies.

The Re-emergence of Supply-Side Economics

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Recently there has been a re-emergence of supply-side views, sparked by economic circumstances all too familiar to everyone: (1) high and rising tax rates, (2) increased government regulation and intervention into the economy, (3) increasing amounts of tax-avoidance activities, and (4) lower rates of economic growth. Indeed, the circumstances of recent years have begun to resemble those conditions of the mercantilist era which induced the classical economists to reject mercantilist economic policies. Like the classical economists centuries earlier, some economists have come to recognize the adverse effects that high tax rates and government intervention can have on incentives, factor supplies, and economic growth. This has led to a re-emergence of supplyside (classical) principles of public finance. Although dormant, then, the supply-side view was not dead.

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Summary and Conclusions

- (1) Supply-side economics is neither novel nor is it a fad. It is instead well-rooted in classical macroeconomic analysis and, in particular, classical principles of public finance. These views originated in the attacks of the Physiocrats, Hume, Smith, and other classical economists on the policies of mercantilism.
- (2) The approach was further developed and elaborated by such economists as J.B. Say, James Mill, John Stuart Mill, McCulloch, and others.
- (3) The dominance of the supply-side view continued uninterrupted until the interwar period when concerns such as stabilization and redistribution began to receive more emphasis than did the growth orientation of fiscal policy.
- (4) Supply-side economics constitutes a return to the classical principles of public finance.

Although not discussed here, these classical principles of public finance have often been successfully implemented in the past. The administration of William Gladstone, the Mellon tax cuts, the Kennedy tax cuts, and experiences in Puerto Rico, Hong Kong, and elsewhere support this contention. Moreover, recent empirical studies have clearly documented significant incentive responses to changes in marginal tax rates. Given (1) the very substantial precedent for these policies, (2) the fact that these views formed the basis for the policy prescriptions of the classical economists, and (3) the record of successful implementation of these policies, it is evident that supply-side theory cannot be dismissed as "voodoo economics," "guackery," and so forth.

In fact, as the descendant of mainstream, classical economic thought, supply-side economics deserves to be viewed with proper historical perspective. Given the apparent inadequacy of demand-side policies to deal with our current economic dilemma, it is just possible that the supply-siders may have the last laugh.

-Robert E. Keleher

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