



# The Palgrave Handbook of Methodological Individualism

Volume I

*Edited by*  
Nathalie Bulle · Francesco Di Iorio

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# The Methodological Foundations of Macroeconomics: A View from Say's Law

Rosolino A. Candela

## 1 Introduction

Macroeconomic theories are often understood in terms of the policy conclusions with which they are identified, particularly with regard to the role of government in mitigating macroeconomic fluctuations in unemployment, output, inflation, and other macroeconomic phenomena. An overemphasis on the “interventionist” or “laissez-faire” policy implications of different macroeconomic theories can generate the presumption that what we call “macroeconomic theory” is little more than a policy conclusion in search of a set of assumptions that justify a preconceived policy conclusion, rather than theory referring to the reasoning out a set of policy conclusions from a particular set of assumptions. Moreover, such an understanding of macroeconomic theory directs attention away from the fact that theories that are

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defined by different policy recommendations often share common theoretical foundations, or that theories that share similar policy recommendations have different theoretical foundations. Therefore, methodological investigation of the underlying assumptions of macroeconomic theory can provide a fruitful approach to understand the commonalities and differences between different macroeconomic theories that might not otherwise be apparent, and that identifying macroeconomic theory in terms of its policy conclusions can be misleading.

The purpose of this chapter is to explain the evolution of macroeconomic theory from a *methodological standpoint*. In doing so, my argument will be twofold. First, any theoretical explanation regarding the causes and consequences of macroeconomic phenomena cannot be understood without an underlying theory of microeconomics, whether explicitly or implicitly stated. To state this in modern parlance, all macroeconomic theory, both past and present, has entailed an underlying set of “microfoundations” of one form or another, entailing a theory of individual action (or inaction for that matter). Secondly, if the purpose of theory for the macroeconomist is to reason out a set of macroeconomic consequences from a set of assumptions, then the purpose of methodology is to understand how the selection of particular assumptions drives not only the questions that motivate different theories, but also the answers that flow from different macroeconomic theories. Thus, from a methodological standpoint, *different microeconomic foundations will yield different macroeconomic explanations*.

To be clear, my goal will not be to provide a comprehensive survey of the variety of macroeconomic theories in the history of economic thought, per se. Such an exercise would entail an overview of how different economists across various schools of thought have applied theories to explain macroeconomic phenomena, a task beyond the scope of a single chapter. However, understanding macroeconomic theory in terms of its methodological foundations is a distinct exercise that is not mutually exclusive from understanding the history of macroeconomic thought. This being said, the central theme that will undergird my entire argument focuses on the methodological foundations of what is known as “Say’s Law” (or the fundamental law of markets), its various interpretations, and the policy implications that flow from its microfoundations. Stated briefly, Say’s Law postulates that the production of particular goods or services by one group of individuals (or firms) is the source of demand for other goods produced by other individuals (or firms). Therefore, there can be no inherent tendency in the market process toward a general “glut” or an economy-wide overproduction of *all* goods and services.

The central relevance of Say's Law to my argument is twofold. The first reason has been best stated by Axel Leijonhufvud in the following way: Say's Law, "though simply and outwardly trivial, is crucial for clear understanding of macro-theory. *Indeed, there is hardly a single problem in macro-theory (or, for that matter, micro-theory) that can be consistently analyzed without it*" (emphasis added, 1981: 80).<sup>1</sup> Therefore, what are regarded as "problems" in macroeconomic theory are fundamentally driven by microeconomic explanations. Secondly, as noted by Tyler Cowen, "Say's law of markets was not conceived as an isolated economic principle, but was rather part of the base of the entire edifice of Say's liberal philosophy" (1982: 167–168). Such an observation explains why the interventionist policy recommendations made by John Maynard Keynes are a by-product of what was his first and foremost priority: a denial of the validity of Say's Law. Steven Kates has gone so far as to state that the "Keynesian Revolution was about Say's Law and nothing else" (Kates 2003: 8). However, understanding Keynes's attack on Say's Law, as well as macroeconomic theory and policy in general, ultimately turns on a methodological investigation into the nature of individual choice and the role of the price mechanism, particularly intertemporal prices (i.e. interest rates), in coordinating production and consumption decisions across time.

A large body of literature has already poured over the various interpretations (and misinterpretations) of Say's Law (Lange 1942; Mises [1950] 1960; Becker and Baumol 1952; Hazlitt 1959; Sowell 1972; Hutt 1974; Leijonhufvud 1981; Cowen 1982; Blaug 1997; Kates 1998; Baumol 1999; White 2012). Therefore, I claim no originality in reinterpreting Say's Law, but to use this existing literature in order to distinguish between what I will refer to as "price-theoretic" and "choice-theoretic" microfoundations of macroeconomic theory.<sup>2</sup> I use this distinction to render explicit and illustrate the methodological foundations that have underpinned the coevolution of both macroeconomic theory and Say's law as a by-product of differences in microfoundations.

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<sup>1</sup> As a note of detail, Leijonhufvud refers to Say's Law as "Say's Principle" in his argument. I will elaborate further on the distinctions below.

<sup>2</sup> Elsewhere, Peter Boettke and I have made this distinction to draw distinctions in the evolution of microeconomic theory (see Boettke and Candela 2017, 2020). See also Evans and Dragos Aligica (2016).

## 2 Which Microfoundations of Macroeconomic Theory: Price-Theoretic or Choice-Theoretic?

The central puzzle of economic theory, from the days of Adam Smith onwards, has been primarily focused on the possibility of social cooperation without command. Accordingly, it has been motivated by the following question: how can it ever be possible for individuals, pursuing their own individual goals, to unintentionally generate social order without design? If economic theory, or “microeconomics” as it is known today, explains social order as the coordination of individual plans about consumption and production across time and place, resulting in an economy-wide clearing of markets, then the obverse of this puzzle can be stated in the following way: how can it ever be the case that the pursuit of one’s self-interest unintentionally results in a *systematic cluster of errors in decision*, resulting in periods of economic discoordination in which markets fail to clear as well as a corresponding general glut of resources? From this standpoint, what is known today as modern *macroeconomic* theory can be understood as addressing the obverse of the central puzzle motivating microeconomic theory. Framed in this way, Say’s Law is the underlying economic principle that addresses *both* of these questions.

In the next section, I will provide an overview of how Say’s Law has been understood, and how such interpretations have paralleled trends in macroeconomic theorizing, but before doing so, it is important to outline the methodological underpinnings upon which such trends have been founded. Economic theorizing, whether we are referring to “microeconomics” or “macroeconomics,” can be distinguished between two paradigms: (1) a choice-theoretic paradigm; and (2) a price-theoretic paradigm. This distinction also illustrates different meanings of methodological individualism, a term first used in 1904 by the French philosopher and historian Élie Halévy, but later popularized it in the scientific community by Joseph Schumpeter (1909).<sup>3</sup> Methodological individualism is an analytic principle that treats individual action as basic unit of analysis for explaining social phenomena (Boettke and Candela 2015; Di Iorio 2020). In drawing this distinction, I will highlight how these paradigms parallel a difference between two conceptualizations of methodological individualism: (1) an *atomistic* form of methodological individualism; and (2) a *compositive* form of methodological individualism.<sup>4</sup>

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<sup>3</sup> See also Hodgson (2007).

<sup>4</sup> I will mention a point of clarification regarding the distinction I am drawing here. The term “compositive” is borrowed from Hayek ([1952] 1979), but Hayek himself borrowed the term from a

Given that both approaches are methodologically individualist, they are both reductionist in the sense that theoretical explanations of economic phenomena must be grounded in individual human action, and therefore economic phenomena are the aggregation of individual plans (Nozick 1977: 353). Therefore, to the extent that critics of methodological individualism use the term reductionist in a pejorative sense, they misdirect attention away from the relationship between the micro-level of human action to the macro-level of the economic coordination. The key to understanding the micro–macro relationship in economics can be understood in terms of the relationship between what economists refer to as “optimization” and “equilibrium.” Optimization refers to a course of action in which an individual has chosen, from an available set of means, the most effective for the purpose of achieving a particular end. An equilibrium refers to an economic outcome in which the interaction of optimizing individuals has exhausted all the potential gains from trade, and therefore a situation in which the plans of individuals are perfectly coordinated. An atomistic form of methodological individualism conflates the distinction between the two, such that an equilibrium represents the mere aggregation of all optimizing activity. In effect, the sum equals its parts, negating the relevance of *time* as a medium of human action, as well as negating the relevance of institutions, such as money, as a medium of exchange. However, a compositive form of methodological individualism implies that an equilibrium outcome is greater than the mere aggregation of optimizing activity, whereby institutions, such as market prices denominated in terms of money, *emerge* as an outcome of *exchange*, which in turn guides individuals toward an optimal course of action in terms of their decisions to buy and sell goods and services as well as their decisions to hold money. Therefore, the key distinction between these two approaches to methodological individualism, from a macroeconomic standpoint, is the relevance of time and money, which Roger Garrison (1984) refers to as the two universal concepts of macroeconomic theorizing. Whereas a choice-theoretic approach renders time and money irrelevant for macroeconomic analysis, time and money is central to a price-theoretic approach of macroeconomic analysis.

Mainstream macroeconomic theorizing follows a choice-theoretic approach to economic theorizing, which collapses the optimizing activity of an agent onto the conditions of general competitive equilibrium as the ideal welfare standard of analysis. According to this paradigm, the logic of

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manuscript note of Carl Menger, who used the term in his personal annotated copy of his review of Gustav Schmoller's *Methoden der Socialwissenschaften* (see Hayek [1952] 1979: 212, fn. 33). However, Menger ([1883] 1985) himself identified methodological individualism as atomistic, and therefore did not imply a pejorative meaning with which it is often understood in contemporary debates.

human choice is not a subset of macroeconomic theory, but its defining characteristic. Such a conflation implies a *direct link* between the presumed rationality (or irrationality) of an economic agent and the extent to which market outcomes are consistent with a coordination (or discoordination) of resources according to consumer demands. To be clear, to argue that there is a *direct link* between the two levels of analysis does not imply a *direct relationship* between the two. In other words, macroeconomic theories that model suboptimal outcomes are not necessarily based on irrational behavior. As I will explain below, macroeconomic theories based on the same micro-foundations of rational, maximizing agents can result in optimal as well as suboptimal macroeconomic outcomes.

What all choice-theoretic models have in common is that they are consistent with an atomistic form of methodological individualism, since economic phenomena are simply an aggregation that can be *directly reduced* to the individual “choice” of individuals. James Buchanan best explains the implications of macroeconomic modeling in choice-theoretic terms as follows: “Precisely because it has divorced itself from the central proposition relating to human behavior, modern macroeconomic theory is really no theory at all. It has evolved, and remains, a set of models for the workings of economic aggregates, models that have little predictive value. Lord Keynes, of course, recognized this, and it was for this reason that he tried to tie his theoretical structure to basic psychological propensities” (Buchanan [1966] 1979: 121), what Keynes referred to as “animal spirits” (Keynes [1936] 1964: 161) to explain declines in aggregate demand, and therefore why Say’s Law fails to hold. While this may seem to be an unfair conclusion given that Keynes argued that “[w]e should not conclude from this that everything depends on waves of irrational psychology” ([1936] 1964: 162), the rise of New Keynesian macroeconomics has been predicated on “the absence of a theoretical underpinning for this Keynesian price stickiness” (Mankiw 1985: 529). Although New Keynesian economics has been characterized as a reconstruction of Keynesian macroeconomics on neoclassical microfoundations, it has only done so by reducing the macroeconomy to a representative agent model that is continuously optimizing. “Representative agent models in macro”, according to Richard Wagner, “are no different than treating a beehive as a gigantic bee or a traffic jam as a gigantic car moving in reverse. More generally, macro theorizing is filled with formulations where one macro variable acts directly upon another macro variable” (2010: 141). If the “economy” is modeled as an individual, and the “government” as another individual acting over the economy, then it easily follows that macroeconomic outcomes can

be changed by manipulating macroeconomic variables as objects of choice, such as aggregate demand, using fiscal or monetary policy.

The policy implications that follow from a choice-theoretic conceptualization of macroeconomic theory can be drawn from three different macroeconomic models. First, according to the New Classical vision of macroeconomic theorizing, prices and wages instantaneously adjust so that markets are continuously clearing, and therefore labor and other resources do not remain idle. The economy is always and everywhere in an optimal state of affairs as an approximate fact of reality, given the underlying preferences, resource availability, and technology of the economy. The policy conclusion that follows is that government intervention is redundant and unnecessary. Secondly, according to the Old Keynesian<sup>5</sup> vision, macroeconomic outcomes are hopelessly stuck in depression, characterized by a general glut of goods and services, perpetual unemployment, and idle resources. The policy conclusion that follows requires government intervention to continuously boost aggregate demand. Third, the New Keynesian vision of macroeconomic theorizing, which shares the same neoclassical microfoundations of New Classical economics, postulates “all agents are optimizing and all prices result from that optimization” (Mankiw 1985: 535), but aggregate demand failures at the macro level of analysis can be directly reduced to suboptimal price adjustments at the individual level of analysis. The resulting conclusion is a policy of active macroeconomic stabilization due to “too much price adjustment following an expansion of aggregate demand and too little price adjustment following a contraction in aggregate demand” (Mankiw 1985: 536).

This being said, if Mankiw is correct in that the “conflict between modern neoclassical and traditional Keynesian theories of the business cycle centers upon the pricing mechanism” (1985: 529), then the mutually exclusivity of policy choices between these theories is a by-product of their choice-theoretic microfoundations. Macroeconomic policy is regarded as either passive or otherwise redundant, based on fully flexible, perfect prices. Or, an active role of macroeconomic policy is necessary, based on the prevalence of imperfect or “sticky” prices. This choice-theoretic paradigm, however, precludes the theoretical *possibility* of passive macroeconomic policy, based on general rules rather than arbitrary discretion, being predicated on imperfect pricing and imperfect market-clearing. Why is this the case?

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<sup>5</sup> I use the term “Old Keynesian” to refer to Keynes’s theory, as discussed in his *General Theory*, in order to distinguish it from: (1) “Post Keynesian” economics, which evolved “unalloyed with neoclassical microeconomics” (White 2012: 153); and (2) “New Keynesian” economics, which is foreshadowed by the “neoclassical synthesis” developed by Paul Samuelson, but explicitly builds on the neoclassical microeconomic foundation of consumer optimization to explain aggregate demand failures (see Mankiw 1985, 1990; Gordon 1990).

Different meanings of the word “imperfect” frame our understanding of macroeconomic phenomena and the policy implications that are derived from understanding how macroeconomic forces work. From a choice-theoretic standpoint, to say that markets are “imperfect” in terms of pricing and market-clearing implies that they are flawed, suboptimal, or otherwise not ideal compared to the ideal of general competitive equilibrium. The policy implication here is either Say’s law always holds, meaning that markets are always clear based on fully flexible pricing, rendering macroeconomic policy unnecessary or redundant. Or, if prices are regarded as “sticky” and therefore markets are prone to aggregate demand failures, then government intervention is the *deus ex machina* that saves the macroeconomy from its own “imperfections” either through activist monetary policy or activist fiscal policy. Why? The answer is twofold. First, to use a quote from Frank Knight often used by James Buchanan, “to call a situation hopeless is to call it ideal.” The narrative that is constructed is one in which, outside the conditions of the ideal of general competitive equilibrium, there is no hope but for government intervention to save the market from itself. This conclusion, Hayek (emphasis added; 1989: 3) states, is based on “a mistaken conception of the proper scientific procedure” that “consists in the assertion that there exists *a simple positive correlation between total employment and the size of the aggregate demand for goods and services*; it leads to the belief that we can permanently assure full employment by maintaining total money expenditure at an appropriate level.” Moreover, as Tranditis and Boettke (2022: 215) argue: “Reducing economic phenomena to the input of a sum of aggregates or basic units that can be modelled for analysis fosters the idea that policy interventions can rearrange these parts following this analysis. Reductionist analysis helps policymakers build confidence in their capacity to control and direct economic activity. Informed by the right model or data analysis, the government supposedly knows what it should do.”

Macroeconomic theorizing according to a price-theoretic approach, however, is primarily about the study of how individuals pursue their separate goals through exchange, which in turn create exchange ratios (i.e. market prices) as by-products of their purposive behavior. Such market prices, which include interest rates, in turn guide individuals in their consumption and production decision-making. Human choice is not absent according to this rendering of macroeconomic theorizing; rather, it is a necessary subset of macroeconomic theorizing, though not sufficient, for understanding the invisible hand processes that generate social order according to Say’s Law. Nor does it imply that markets allocate resources instantaneously clear based on fully flexible pricing. Rather, a price-theoretic approach to macroeconomic

theorizing is based on a compositive form of methodological individualism, one in which there is an *indirect* link between a human agent and the tendency toward equilibrium, and therefore market outcomes are not directly reducible to the individuals that constitute the macroeconomy. As Cachanosky (emphasis original; 2021: 281) elaborates, “the market process is the outcome of a multiplicity of interactions among *heterogeneous*, not representative, economic agents that do not know the model [in which] they live.” That is, prices emerge from the act of exchange between individuals engaging in open-ended choice under a world of uncertainty, but not of human design. However, once emerged, prices then become guides for future action.

Thus, whether markets “work” or “fail” do not depend on the behavioral characteristics of individuals, but whether institutions secure and enforce the ability for individuals to exchange (i.e. private property). From this standpoint, a “market failure” associated with aggregate demand failures or macroeconomic instability is not a failure of markets to “work” but a failure to establish the conditions for a market to exist, namely due to a lack of stable enforcement of general rules that enforce residual claimancy of decision-making and constrain the arbitrary discretion of policymakers. Two examples illustrate this point, one from the Great Depression and another from the more recent Great Recession. Robert Higgs (1997) has argued that “regime uncertainty” explains why the Great Depression lasted as long as it did. Higgs’s argument is a variant of Keynes’s claim that a lack of “animal spirits” or confidence among businessmen to invest their capital resulted in the Great Depression. However, for Higgs, the lack of “animal spirits” is not an exogenous cause, but a *consequence* of “a pervasive uncertainty among investors about the security of their property rights in their capital and its prospective returns” (1997: 564). In the context of the Great Recession, Lawrence White has argued that an absence in the rule of law regarding bankruptcy is what precipitated the uncertainty and subsequent financial shock following the collapse of Lehman Brothers in 2008. Rather than consistently applying the rule of law, in which banks would have had the expectation to bear both the profits and losses resulting from their decision-making, policymakers exercised discretion in terms of choosing to allow particular banks to fail or bailing them out. The collapse of Lehman Brothers was preceded by the bailout of Bear Stearns, which had set the expectation that Lehman Brothers would also be bailed out. Given these expectations, discretionary policy generated an undesirable consequence, in which “Lehman Brothers *increased* its leverage and its exposure to risky mortgage assets” (emphasis in original; White 2010: 458). The financial crisis that resulted cannot be

attributed to a market failure, but a failure of policy to enforce the conditions for market discipline in the banking industry to exist in the first place.

From a price-theoretic standpoint, by using the same word “imperfect”, the narrative about macroeconomic forces and the policy implications that follow are radically different. Tracing the etymology of the word “imperfect” back to its Latin origins, and breaking it down from its constituent parts (“im-perfect”) you will learn that “im” expresses the negation, “per” comes from the Latin word meaning “thorough” or “thoroughly done” and “fect” comes from the Latin verb “facere,” meaning “to do.” Thus, rather than saying that something, or some state of affairs, is flawed, suboptimal, or nonideal, another way to interpret the meaning of “imperfect” is an act or process that is not thoroughly done, or incomplete (Candela 2020). An appropriate understanding of an “imperfect market” reveals that the market is a process of continuous tendency toward perfection, or completion, where all the gains from trade are exhausted and all plans between buyers and sellers are perfectly coordinated. As Ludwig von Mises states, the “market process is the adjustment of the individual actions of the various members of the market society to the requirements of mutual cooperation” ([1949] 2007: 258).

Thus, markets will always be imperfect, but that is precisely why markets exist in the first place. Market processes exist precisely because they generate the information necessary to better coordinate the plans and purposes of individuals in a peaceful and productive manner consistent with market-clearing tendencies. The entrepreneurial lure for profit and the discipline of loss is what guide such imperfect processes in a tendency toward the creation of more complete information between buyers and sellers. Money pricing is what guides this perfecting process of “completing” the plans of buyers and sellers. None of this implies that money prices are sufficient for market clearing. Thus, although not immediately obvious by its epithet, a price-theoretic approach to macroeconomic theorizing implies that market clearing is *not* entirely based on the price mechanism, but also on a corresponding set of institutions that emerge to facilitate the intermediation of goods and services *through time*, including banking, clearinghouses, and insurance markets. Moreover, in a world in which all exchanges could be perfectly coordinated through the price mechanism, we would not observe inventories of goods or resources, including unemployment of labor.

Because macroeconomic phenomena are in a process of completion that cannot be directly reduced to the choice of individuals, then this implies that interventionist macroeconomic policy is faced with both an “epistemic problem” (Trantidis and Boettke 2022). Given that the knowledge necessary to generate macroeconomic coordination is an emergent phenomenon

that is context-specific to the process of exchange itself, macroeconomic theory generates different implications for macroeconomic policy that differs from a choice-theoretic approach. If policymakers do not have the knowledge necessary to generate equilibrium outcomes in the macroeconomy, then they will be incentivized to respond to the knowledge that is available to them. That is, democracies under the guise of “independent” central banking will use macroeconomic policy to manipulate relative prices for the approval of elected authorities seeking political survivability by generating conditions consistent with reelection.<sup>6</sup> Rather than assuming that policymakers acting in the public interest can manipulate macroeconomic variables, in accordance with a positive relationship between total employment and the size of the aggregate demand for goods and services in the economy, analogous to a high tide lifting all boats proportionally, a focus on relative price distortions paints a different picture regarding the implications of discretionary macroeconomic policy. Given the logic of political processes is to concentrate short-term benefits of higher employment and incomes on well-organized interest groups and diffuse the long-term costs of inflation and macroeconomic instability on the ill-informed masses of the population, only a price-theoretic approach focused on the structure of relative prices in the economy, rather than focusing on the level of absolute prices, makes it possible to explain how political discretion can be used to generate politically-motivated business cycles, and the undesirable consequences of macroeconomic instability that followed from it (Wagner 1977). Thus, the implications of discretionary macroeconomic policy led Milton Friedman to argue the following: “Any system which gives so much power and so much discretion to a few men that mistakes – excusable or not – can have such far reaching effects is a bad system...Mistakes, excusable or not, cannot be avoided in a system which disperses responsibility yet gives a few men great power, and *which thereby makes important policy actions highly dependent on accidents of personality,*” concluding that “*money is much too serious a matter to be left to the Central Bankers*” (emphasis added; Friedman [1962] 2002: 50–51; see also White 2010; Boettke et al. 2021).

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<sup>6</sup> As an example, see Abrams (2006), which presents a case study of U.S. President Richard Nixon pressuring Federal Reserve Chairman Arthur Burns to use expansionary monetary policy, in spite of rising inflation, in order to increase his likelihood of reelection in 1972.

### 3 The Evolution of Macroeconomic Theory: A View from Say's Law

The intellectual trajectory of economic theory from Adam Smith onward can be roughly divided with changes in the manner in which Say's Law has been interpreted. From 1776 to 1871, which marks the publication of Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations*, and the Marginal Revolution, respectively, is the period of classical political economy. During this period and among early neoclassical economists up to the 1930s, the unifying substantive proposition of social order that economists held in common was the study of invisible hand theorizing, in which private property and freedom of contract under the rule of law were the governing institutional prerequisites for social cooperation without command. Economists following this line of inquiry has been dubbed by economist Peter Boettke as "mainline economics," which is the study of the uniting substantive propositions held by economists going back to Adam Smith. This is distinguished from "mainstream economics," which refers to what is perceived to be scientific and fashionable among leading economists at a particular time (Boettke 2012: xvii). The primary thrust of the mainline of macroeconomic theorizing during this period was, as the title of Adam Smith's book suggests, about economic growth. Such luminary figures of this period included Jean Baptiste-Say, David Ricardo, James Mill, and John Stuart Mill, and discussions regarding the nature and causes of the wealth of nations were inextricably tied to Say's Law.

As its namesake suggests, the fundamental law of markets, or Say's Law, is credited to Jean Baptiste Say ([1803] 1971). However, Say's Law can trace its roots back to Adam Smith,<sup>7</sup> and would later take its more mature form in James Mill's *Commerce Defended* ([1808] 1965), through Say's debate with Thomas Malthus ([1821] 1967), as well as John Stuart Mill's classic essay "Of the Influence of Consumption on Production" ([1844] 1960).

Two reasons can explain why debate and controversy continues to ensue over the meaning of Say's Law. One reason is that "Say's Law, as it emerged in the classical period," Sowell writes, "was a cluster of related propositions contributed and refined by a number of individuals" (2006: 26). Had it not been for the piecemeal nature in which Say's Law had developed, Steven Kates argues that "the controversy that has surrounded the meaning of Say's Law during the past two centuries would have never occurred" (2003: 8).

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<sup>7</sup> Smith states the essence of Say's Law in the following manner: "though a particular merchant, with abundance of goods in his warehouse, may sometimes be ruined by not being able to sell them in time, a nation or country is not liable to the same accident" ([1776] 1981: 439).

But as Kates admits, Say's Law "was accepted by virtually every economist of the classic period and was accepted just as strongly following the marginal revolution of the 1870s as it had been before" (2003: 7). If there was a general consensus over the meaning of Say's Law that was generally accepted in the mainline of classical and early neoclassical economics, then how did its rejection become mainstream? This second reason, upon which my argument is based, is a paradigmatic shift from price-theoretic "microfoundations" to choice-theoretic "microfoundations" without there might have been no controversy. As Cowen states, the "extent to which a new paradigm can color and influence succeeding economic thought for decades (sometimes even centuries) to come should not be underestimated" (1982: 160).

Understanding the evolution of Say's Law in the history of economic thought requires that we draw a distinction between its various interpretations by its proponents and critics alike. Bernice Shoul (1957: 615) provides four distinct meanings of Say's Law as follows:

- (1) Supply creates its own demand; hence, aggregate overproduction or a "general glut" is impossible.
- (2) Since goods exchange against goods, money is but a "veil" and plays no independent role.
- (3) In the case of partial overproduction, which necessarily implies a balancing underproduction elsewhere, equilibrium is restored by competition, that is, by the price mechanism and the mobility of capital.
- (4) Because aggregate demand and supply are necessarily equal, and because of the equilibrating mechanisms, output can be increased indefinitely and the accumulation of capital proceed without limit.

The first interpretation of Say's Law, which is the most well-known among mainstream economists today, was provided by Keynes in his *General Theory* ([1936] 1964: 25). Although we will elaborate on the microfoundations of Keynes's argument later, it is important to raise here that Keynes is attacking a strawman in order to undermine Say's Law. It is therefore more appropriate to dub this meaning of Say's Law as "Keynes's Law" (Hazlitt 1959: 32; Cowen 1982: 178). In its simplest rendition, Say and his followers were *not* arguing that supply creates its own demand in the sense that "supply of shoes creates demand for shoes. It means that supply of shoes creates demand for everything *other than shoes*" (emphasis original; White 2012: 144–145). As Say argued (emphasis in original; Say [1803] 1971: 134):

It is worth while to remark, that a product is no sooner created, than it, from that instant, affords a market for other products to the full extent of its own

value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable. *But the only way of getting rid of money is in the purchase of some product or other.*

Even the most important critic of Say's Law, namely Thomas Malthus, with whom Say debated through correspondence (see Say [1821] 1967), would not object to this specific point. The main point of contention was over whether production would lead to an overall "general glut" of goods and services, specifically over the claim that increasing productivity due to capital investment would generate an abundance of supply of goods and services that would be insufficient to maintain demand due to the erosion of profits and corresponding fall in prices. Capital investment would bring about underconsumption due to prices being driven down to unprofitable levels. The error of reasoning is an omission of the fact that falling prices reflect decreasing costs of production. More importantly, increasing profitability and cost minimization are two ways of expressing the same tendency of the market process. The fact that producers are able to realize greater profits through increasing productivity is what frees up resources to be used in additional lines of production, hence "*the mere circumstance of the creation of one product immediately opens a vent for other products*" (emphasis added; Say [1803] 1971: 134–135) in an ever-widening scope of productive specialization and exchange that drives economic growth.

While indeed a "general overproduction of commodities is impossible because the production of one commodity creates a market for another" (Cowen 1982: 171), a reassessment of the first meaning of Say's Law does not imply that we should interpret Say's Law in a vulgar sense of an automatic market-clearing *outcome* based upon fully flexible and instantaneous price adjustment, but as a *process of discovery* consistent with (3) and (4) of the list above. As Leijonhufvud elaborates, Say's Law "refers only to purchase and sale intentions; *it asserts absolutely nothing about the possibility of their realization*" (emphasis added; 1981: 89). The fact that Say's Law, appropriately understood, refers *only* to a general tendency in the market process means that it is impossible to assert that all trades are executed as planned; rather, the market serves as an error-correcting mechanism in which "*prices and trading plans must be revised*" (emphasis added; Leijonhufvud 1981: 92). These points raised by Leijonhufvud are consistent with the price-theoretic approach outlined in Sect. 2, implying that Say's Law is not a static concept, but an "imperfect" dynamic concept that reflects a process by which the plans

of buyers and sellers *become* coordinated overtime, *not guaranteed at every moment in time*.

The implication here is that Say's Law, according to the second interpretation of the term, does not suggest that all cash balances are immediately spent, and therefore exerting no relative price effects, as would be the case if money were a "veil" as suggested by the second meaning of Say's Law, or better known as "Say's Identity" (Cowen 1982: 162). In this respect, institutions such as money serve as a lubricant of commerce "to minimize the likelihood of entrepreneurial error, and helps *to ensure that input and output flows shall be continuous even under the complexities of the highly advanced division of labor which the monetary mechanism has rendered possible*" (emphasis original; Hutt 1974: 60). Given that goods are generally not exchanged directly for goods, but indirectly via money, with "trivial exceptions *every* market is a market for money" (emphasis original; Garrison 1984: 199). Once we take into account that money is a good for which, like all other goods and services, there is a demand, this "keeps Say's Law from being true in the vulgar sense" in which monetary equilibrium always holds, as implied by Lange (1942: 52). "The play in the system associated with the use of money allows for" disequilibrium in an economic system, whereby "deviations between the quantities of nonmonetary goods supplied and quantities demanded" exist (Garrison 1984: 202). Thus, if an excess supply of some goods implies an excess demand for others, then those other goods must also include money (Yeager 1956: 439).

During the period between 1920 and 1950, a sharp divide between the mainline and mainstream of macroeconomic theorizing would become apparent. This was particularly evidenced by the publication of John Maynard Keynes's *The General Theory of Employment, Interest and Money* in 1936. Keynes's attack of classical macroeconomics was predicated on a rejection of Say's Law, but such a rejection was not a *sui generis* argument. Its roots can be traced back to the choice-theoretic microfoundations that had developed in mainstream economics, which in turn would serve as the basis for the development of "market failure" theory during the second half of the twentieth century. Based on its choice-theoretic microfoundations, Say's Law would become a static concept, consistent with an identity principle (i.e. "Say's Identity") understood in terms of an outcome or a state of affairs, rather than as a dynamic process as it was understood among economists of the classical and early neoclassical period.

The result of this choice-theoretic approach would be an interpretation of Say's Law in terms of Say's Identity, the implications of which would render

macroeconomic policy as either necessary and active, or passive and redundant. However, such policy implications are by-product *directly reducing* macroeconomic outcomes from the choices of individuals, whereby general equilibrium (or a lack thereof) analysis moves to the foreground of analysis.

One rendition related to Say's Identity is what is known as mainstream economics is known as "Walras Law" developed by Oskar Lange (1942). This particular interpretation of Say's Law is one in which the impossibility of a general glut follows directly from its underlying assumptions. In this Walrasian model, disruptions to an equilibrium generate instantaneous adjustment to a new equilibrium, given the assumption of zero transaction costs. Moreover, commodities are strictly homogenous, and individuals have perfect information regarding what they are exchanging as well as the terms of trade (i.e. prices), rendering trade instantaneous. Since all resources are allocated through a "Walrasian auctioneer," individuals passively respond to equilibrium prices, which serve as a sufficient statistic by which to allocate resources to their highest-valued uses. Mainstream macroeconomic theorizing in the vein of New Classical Economics (and DSGE<sup>8</sup> modeling) has proceeded through this equilibrium lens.

By ruling out the *process* by which prices *emerge* to generate a tendency whereby excess demands and excess supplies of resources become eliminated, all that is required to illustrate the "imperfection" of markets, according to this choice-theoretic paradigm, is to point to the existence of unemployed resources, as Keynes did. According to Keynes ([1936] 1964: 28), it is only by "accident or design" that a market economy achieves its potential of full employment. The basis for Keynes's argument is explained by the fact that money is not a "tight joint" (Garrison 1984), whereby cash balances are immediately spent to reflect a match between aggregate supply and aggregate demand. Rather, money is a "broken joint" whereby the possibility of intertemporal coordination is precluded. Moreover, by eliminating the *communicative* role that interest rates play in channeling available savings into investment, money that is not spent is not saved (i.e. deferred for future consumption) but hoarded, resulting in a decline in both consumption and investment that manifests in fall in aggregate demand, a fall in output, and increasing unemployment. For Keynes, it is not supply that creates demand; rather, it is demand that creates supply. The problem is not one of a lack of production, but an overabundance of idle resources. The policy recommendation that flows from these assumptions is one in which active fiscal policy can rescue the macroeconomy from market imperfections. However,

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<sup>8</sup> "DSGE" is the acronym for Dynamic Stochastic General Equilibrium.

as Leijonhufvud argues, Keynes's rejection of Say's Law was not a removal of the foundations of classical economics, but the removal of an assumption in classical economics falsely interpreted in terms of choice-theoretic microfoundations of Walrasian general equilibrium:

The only thing which Keynes 'removed' from the foundations of classical theory was the *deus ex machina* – the auctioneer which is assumed to furnish, without charge, all the information needed to obtain the perfect coordination of the activities of all traders in the present and through the future (Emphasis original; Leijonhufvud 1981: 15).

In effect, government intervention replaced the role played by the Walrasian auctioneer as the *deus ex machina*, predicated on the ad hoc assumption of wage and price stickiness, the rationale for which New Keynesian economics would later attempt to reconstruct based on microfoundations. However, as macroeconomists Roger Garrison (2001), Lawrence White (2012), and Leland Yeager (1997) have pointed out, this label "new" is a misnomer since the connection is premised on the fact that both Old Keynesian and New Keynesian models are uniquely premised on "sticky" or downward rigid prices. Moreover, such a premise is not unique to Keynesian economics, and misleadingly implies that *all other* macroeconomic models are premised on fully flexible pricing and instantaneous market clearing (Garrison 2001: 232).

Mainstream economic theorizing has evolved in such a way that a defense or rejection of Say's Law on the basis of flexible or "sticky" pricing, respectively, misdirects attention away from the fact that such conclusions are based on choice-theoretic microfoundations. Moreover, it also overlooks the fact that the divergence between mainstream economics and mainline economics has fueled attempts to recapture, relearn, and rearticulate the fundamental roots of mainline macroeconomic theorizing on price-theoretic microfoundations. This continuation of the mainline has corresponded not only with a reevaluation and rehabilitation of Say's Law, but also to correct for the misinterpretations that Keynes had introduced and remain predominant in the mainstream of macroeconomic theorizing today.

What choice-theoretic microfoundations rule out is the possibility that Say's Law, "by itself, could not possibly pose a mental block to the development of unemployment theory. On the contrary, correct and systematic application of it is necessary for the construction of a consistent theory of *any disequilibrium (or equilibrium) phenomenon*" (emphasis added; Leijonhufvud 1981: 93). Understood according to price-theoretic foundations, Say's Law is not inconsistent with an excess withholding of "idle" resources by suppliers

of good and services (including one's own labor) *to account for time required to discover the expected demand from consumers*, thereby providing reliable availability of goods and services until buyers have formed their plans.

Alchian addressed the puzzle traditionally confined to macroeconomics using price-theoretic microfoundations, rather than appealing to ad hoc theorizing of “sticky wages”: what explains the continued unemployment of the Great Depression in the face of non-decreasing aggregate demand? Perhaps the best way to understand the answer he provided, and the manner in which he approached it, is to reframe the question in the following way: in the event of a fall in the demand of a particular firm's output, or a general economic downturn, why do we not observe individuals voluntarily accepting pay cuts to avoid unemployment? The answer rests on the fact that, given the heterogeneity of labor and human capital in alternative productive uses, an individual's information about the demand for his or her own labor and human capital in alternative productive activities is imperfect. When the wages currently paid to workers fall, the opportunity costs of *discovering* the values of their labor and human capital elsewhere also decline. The gap between being employed in one job, before being rehired by a different employer in another job, requires “*time for discovery*” (emphasis original; Alchian 1969: 122) not in the form of unemployment, as it's usually understood, but “self-employment,” that is, seeking job information (Alchian 1969: 111). For Alchian, unemployed labor and human capital can be understood within a broader theory of resource allocation, marshaled to illustrate how the holding of inventories of resources of all kinds economizes on the costs of discovering market-clearing prices across time and place (Alchian 1969: 113).

The implications of Alchian's price-theoretic approach are that discretionary macroeconomic policy intended to mitigate the undesirable consequences of economic downturn, such as a declines in output and unemployment, may have counterproductive effects. “A *sequence* of measures by the government (NIRA, Guffey Coal Act, agricultural price support, and the Labor Relations Act, minimum wages) arbitrarily and successively raised prices and wages over the period – not once and for all in 1932. In the absence of these autonomous factors pushing up permissible (though not the equilibrating) wages and prices, 1933–37 would have shown greater employment and output” (emphasis in original; Alchian 1969: 126–127). In the context of the more recent Great Recession, and consistent with Alchian's conclusion, Casey Mulligan argued that “parts of the 2009 ‘stimulus law’” implemented in the United States increased “subsidies such as unemployment insurance for people who did not find a job” (2012: 4). Therefore, delayed economic recovery manifested in the form prolonged unemployment, as was the case

throughout the Great Depression and in the more recent Great Recession was neither a result of idle resources, nor due to a fall in aggregate demand, but a result of discretionary macroeconomic policies that keep relative prices from adjusting to reflect underlying supply and demand conditions. The resulting uncertainty only decreases the opportunity cost of being “employed” seeking alternative job opportunities. The implications of such an analysis do not imply that macroeconomic policy is unnecessary, per se; rather, counterintuitively, it implies that macroeconomic policy, rather than being active in stimulating aggregate demand, must be “active” in maintaining a non-discretionary role. Analogous to a referee in a game, the purpose is not to manipulate the game to achieve a particular outcome, but to enforce a set of rules that allow for the fundamental law of markets (i.e. Say’s Law) to emerge indirectly from human action, though not directly from human design.

## 4 Conclusion

The importance of approaching macroeconomic theorizing from a methodological standpoint is to illustrate why it is misleading to conclude that macroeconomic theorizing is simply a set of public policy conclusions in search of a set of premises. This applies no less when we are discussing a theory’s policy implications. Viewing mainstream macroeconomic theorizing purely in ideological terms would misleadingly suggest that “laissez-faire” or “interventionist” macroeconomic theorists have chosen different sets of methodological assumptions to justify their policy conclusions. Such an interpretation of macroeconomics misdirects attention away from the fact that mainstream macroeconomists of a laissez-faire or of an interventionist stripe are based on a common *methodological* denominator: they have adopted “microfoundations” that are choice-theoretic in nature. The conclusion that macroeconomic outcomes can be directly reduced to the choices of individuals yields a binary choice in macroeconomic policy as either necessary and active *or* redundant and passive.

Rendering explicit the methodological foundations of macroeconomic theorizing, however, directs our attention to a price-theoretic approach to macroeconomic theorizing, which transcends the false dichotomy implied by a choice-theoretic approach. Thus, the point here has not been to argue that there is no theoretical role for government in terms of macroeconomic policy, per se. As Hayek writes, “a government that is comparatively inactive but does the wrong things may do much more to cripple the forces of a market economy than one that is more concerned with economic affairs but

confines itself to actions which assist the spontaneous forces of the economy” (1960: 222). Rather, if there is a necessary place for macroeconomic policy, a price-theoretic approach implies that macroeconomic policy must remain passive, namely by being “active” in enforcing general rules, which is necessary for Say’s Law to *emerge*, rather than be *directed*. The key to macroeconomic stability is not the “independence” of central bankers or macroeconomic policymakers in general, but *restraint* in their ability to exercise discretion based on the presumed ability to manipulate macroeconomic variables as objects of their choice in accordance with the goal of achieving macroeconomic stability, whether that includes discretion over the money supply, tax policy, or other policy variables to affect unemployment and output (White 2010: 460).

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