



The broken bridge of public finance: majority rule, earmarked taxes and social engineering

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Abstract

Nobel laureate James Buchanan was influenced substantially by Knut Wicksell’s arguments in favor of unanimous consent or “qualified majorities” for approving or rejecting specific public spending programs. Buchanan thought of Wicksell’s recommendation that spending proposals be tied to dedicated revenue sources as way of erecting a bridge between the two sides of the public budget, thereby forcing politicians to face the same tradeoffs as individuals do when formulating their spending plans. We examine the history of Buchanan’s ideas on public finance and discuss how legislative processes have demolished the bridge between public expenditures and public revenues. In modern practice, tax “earmarking”, whereby local, state and federal governments ostensibly finance specific spending programs with the revenues raised by targeted consumption taxes, often becomes a smoke-screen hiding the opportunistic reallocation of taxpayers’ monies to finance unrelated policies or programs. Taxes on sugar-sweetened beverages provide our main case study. Other examples from public finance, past and present, such as selective excise taxes on cigarettes, lottery tickets and motor fuels, along with Alexander Hamilton’s tax on whiskey to pay Revolutionary War debts also are examined.

Keywords Knut Wicksell · James Buchanan · Tax earmarking · Selective consumption taxes · Externalities · Internalities

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1 Introduction

James Buchanan began his long and distinguished scholarly career, eventually leading to the 1986 Nobel Prize in Economic Sciences,¹ in the field of public finance. Influenced heavily by the Italian tradition in fiscal theory (Buchanan [1960] 2001; Fedeli 2018), the early Buchanan is perhaps most well-known for stumbling across a copy of Knut Wicksell's 1896 doctoral dissertation, *Finanztheoretische Untersuchungen*, in the University of Chicago's Harper Library during the summer of 1948, just after finishing his own Ph.D. dissertation under Frank Knight (Buchanan 1975, footnote 10). Although the story of that happy coincidence may be apocryphal (Johnson 2014), Buchanan translated Wicksell's German-language monograph into English as "A New Principle of Just Taxation", subsequently published in Buchanan (1958, pp. 72–118).

Buchanan's reading of Wicksell had at least two important consequences for the development of the field of public choice. It allowed him to start breaking away from the public finance orthodoxy of the time, which emphasized analyses of the forward- and backward-shifting of tax burdens in a neoclassical partial equilibrium framework (Buchanan 1975). What was more auspicious is that Wicksell led Buchanan to see strong links between a new approach to the public finance theories he had studied as a graduate student and the ideas about collective choice processes percolating in his fertile mind that later bore heavy fruit in his joint work with Gordon Tullock (Buchanan and Tullock 1962). Indeed, Buchanan (1975, footnote 10) writes that, "quite literally, [Wicksell's] book was responsible directly for the paradigm shift that I experienced."

As a matter of fact, Buchanan already had contributed to the scholarly literature of public finance with a 1949 article that contrasted what he called the "organismic" conception of the state, which conceives of all individuals populating it as a single, monolithic entity, with an "individualistic" theory that recognizes the inevitable conflicts of interest between citizens and their governmental representatives (Buchanan 1949). In that paper, Buchanan defends the individualistic approach and in so doing condemns the prevailing orthodoxy for ignoring the expenditure side of the public budget by focusing almost exclusively on general revenues and treating taxes "as if all [of them] were net subtractions from social income, never to be returned" (Buchanan 1949, p. 500).

Buchanan's insistence that public finance scholars situate their studies of public spending on the same plane as studies of public revenues—and, moreover, that the proper unit of analysis for both sides of the fiscal account is at the level of the individuals who share the benefits of public expenditures and share the (tax) costs of financing the provision of those benefits—is taken directly from Wicksell ([1896] 1958a, b). Wicksell, as we shall see, proposed that public spending programs and the taxes necessary to finance them be presented in a package that a qualified majority of voters could approve of or reject. That "new principle of just taxation" links the two sides of the public budget explicitly and builds a bridge between public finance and public choice by introducing the latter's methodological individualism, behavioral symmetry and politics-as-exchange into the former.

One example of the bridge between public choice and public finance is found in the literature on, and history of, selective sales and excise taxes in the United States. That history is marked by a slow expansion of tax levies being introduced to pay for certain

¹ Known officially since its creation in 1969 as the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

programs that rarely are repealed after their ostensible functions have been fulfilled. For example, specific taxes were approved to fund America's World War I effort and some of those taxes remain in effect more than a century later.² The ways in which selective consumption taxes are justified and used by legislators have not changed much in more recent times. Many taxes are imposed under the guise of financing a specific budget item, such as public healthcare programs, public roadways, or pensions. When the salience of a tax is high, generally when it is being debated in the relevant lawmaking body, politicians promise to dedicate the funds thereby raised exclusively to finance a particular budgetary outlay. When salience declines, the tax revenue often opportunistically is diverted to other uses.

Perhaps the best example of the political opportunism just described is the emergence of targeted taxes to correct so-called externalities, which raise the prices of particular consumption goods because of their negative *internal* effects rather than their negative *external* effects (Hoffer and Shughart 2018).³ Soda taxes, for instance, have been imposed by several cities across the United States and in countries like Mexico and France. Such new sin taxes, buoyed by findings from behavioral economics and the political philosophy known as "libertarian paternalism", frequently are justified as revenue sources for financing public spending programs that benefit the very consumers who pay the levies. The revenues generated by the soda taxes enacted by Berkeley and Oakland, California, for instance, were dedicated to healthcare programs aimed at curbing the obesity and Type II diabetes associated with consuming sugar-sweetened beverages. The paternalistic element of those and other sin taxes is clear from efforts not only to modify behavior, but then to use the revenue in attempting to change the preferences of the taxed consumers themselves. The City of Philadelphia's soda tax, in contrast, earmarked funds for health education programs targeting preschool children, making the link between taxes paid and benefits received somewhat tenuous.

Beyond such paternalism, libertarian or otherwise, is a public choice story explaining how and why earmarked tax revenue is reallocated to more politically rewarding programs by politicians acting entrepreneurially to win reelection to public office. Winer and Hettich (1998) argue that politicians have only weak incentives to equate societal marginal cost with societal marginal benefit when faced with tax policy questions. Rather, public officials set *political* marginal cost equal to *political* marginal benefit when allocating tax revenue across public spending programs.⁴ Winer and Hettich highlight the same romantic oversight that Knut Wicksell ([1896] 1958a, b), Buchanan and Tullock (1962) recognized: politicians are not any less self-interested after entering public office than they are beforehand.

² See the work of Adams (1998, [1993] 2001) on the history of taxes. Adams makes clear that taxes often are raised for specific purposes, but rarely are reduced or repealed after that specific purpose is attained. The War Revenue Tax Act of 1913, passed in advance of the First World War's outbreak in August 1914, imposed duties on numerous items of consumption, such as "theater admissions, jewelry, toilet articles, luggage and chewing gum", and reauthorized all federal excise taxes imposed during the War Between the States (1861–1865), including long-standing levies on alcohol and tobacco (Shughart 2018, p. 26). Taxes raised in wartimes or other economic emergencies seldom disappear when the crisis ends. A "temporary" tax on telephone calls was enacted during the New Deal; it was not repealed until "mid-2006, and then only in part" (Shughart 2018, p. 27).

³ Hoffer et al. (2013) as well as Hoffer and Shughart (2018) summarize the theory of externalities and review the history of similar taxes. In separate work, Allcott et al. (2019) operationalize the externalities notion to derive the optimal selective tax rate on sugar-sweetened beverages.

⁴ The analysis is an insightful application to public finance of the familiar equi-marginal principles deduced from price theory (more on that point below).

Tax earmarking may link revenues to expenditures, but politicians' vote motives often break that link.

Buchanan's work showing how many goods normally provided by the state could be provided privately (Buchanan and Stubblebine 1962) or by voluntary clubs (Buchanan 1965) also was informed by Wicksellian ideas. Specifically, the politics-as-exchange framework he developed (Buchanan 1964, 1976) emphasizes government's potential as a collaborative enterprise. In a paper introducing his idea of a fiscal constitution, Buchanan (1976, p. 29) writes, "The exchange framework tends to promote a constructive attitude toward governmental process, an attitude that accentuates the cooperative aspects, that underlines the prospects for mutuality of gain for all citizens."

Buchanan (1976) juxtaposes his exchange-contractarian approach to taxation with the widely accepted norm of horizontal tax equity, which says that individuals or households in similar economic circumstances "should" face similar tax bills. According to the traditional view that he criticizes, taxes are evaluated on the basis of their *outcomes*. A regressive tax, because it burdens poor households disproportionately, is a bad tax. A progressive tax, by contrast, is good because its burden falls on upper-income households. For Buchanan, that analysis is mistaken on two levels. First, it focuses only on tax collection and not on how tax revenue is spent. Second, Buchanan thought that taxes ought to be judged by the *process* through which collective tax and spending decisions are taken, not on the *results* of that process.

This paper provides an overview of Buchanan's exchange-contractarian paradigm for taxation with an emphasis on how Wicksell informed his ideas linking public finance and public choice. Our chief concern is with how political incentives demolish the bridge Buchanan wanted to build between the two sides of the public budget, thereby undermining governmental fiscal discipline and transforming taxation into a predatory tool of public finance (Shughart 1997; Hoffer and Nesbit 2018). We begin with a review of Wicksell's argument, critiques of his position, a discussion of Buchanan's relationship with Wicksell, and then a response to some of the criticisms of the exchange-contractarian paradigm. Our closing section offers some first thoughts on a set of potential constitutional rules of taxation.

2 Wicksell's New principle of just taxation

Knut Wicksell formulated his ideas about the proper purposes and fiscal limits of taxation as a Swedish politician. Described as a radical who loathed the exploitation he saw of the poor by the rich, Wicksell believed that the rich were placing inordinately heavy tax burdens on the poor in order to maintain their own elite positions and protect their wealth. Rather than advocating that the power to tax be handed over to the poor, however, Wicksell suggested expanding the franchise and, eventually, recommended adopting a voting rule for fiscal decisions approaching unanimous consent (Blankart and Fasten 2014).

Wicksell realized that transferring taxing power from the wealthy to the poor merely would change the identities of the exploited and the exploiter rather than constrain the ability of factions to influence governmental processes for their own ends (Blankart and Fasten

2014). He recognized the propensities of democratic governments, if unconstrained, to encourage a type of plunder of one group by another.⁵

Wicksell viewed government's taxing powers through a contractarian lens. He neither adopted nebulous ideas of "public interest" nor relied on a benevolent social planner to design an "optimal" tax system. In Wicksell's ideal fiscal policy world, taxes are tied to expenditures, which then are voted on by the polity as a whole under a requirement of unanimity or near unanimity (Wicksell [1896] 1958a, b). Combining a spending program with a tax earmarked for financing its provision allows individual voters to weigh both the benefits and costs of the package to them personally and to reject it if either element misaligns with their preferences. Near unanimity, for Wicksell, was a way of dealing with the practical realities of operationalizing the system of public finance he envisioned. Varying definitions of "nearness" to unanimous consent have been proposed, ranging from three-fourths, to five-sixths, to nine-tenths of the total vote (Christian 1978). Such "qualified majorities" help ensure that a proposed package of spending and taxes represents as nearly as possible a Pareto-improvement over the status quo. However, Pareto-superiority can be achieved only with a rule of full unanimity because only under that rule can we be sure that no one is made worse off by increases in public spending or taxes, and at least one person is made better off.⁶

The contractarian element of Wicksell is derived from his adherence to the benefits-received principle of taxation, the value and countervalue, as he writes. Government provides public goods and services, which, because it has no resources of its own, must be financed somehow. With explicit tax earmarking, government collects revenue from the voluntary, qualified assent of those benefiting from the public goods and services provided (Wicksell [1896] 1958a, b), thereby avoiding the coercion typically associated with taxation.

Much of Wicksell's position is informed by a belief that justice can be achieved only among equals. To tax one person to pay for a public good without that person's consent, is to undermine Wicksell's basic conception of justice. As Richard Wagner (2017, p. 35) writes,

For Wicksell, there was no sense of a ruler imposing his or her will on ruled subjects, for there were no ruled subjects in Wicksell's analytical framework, nor were there in Buchanan's. There were citizens rather than subjects, and those citizens governed themselves rather than being governed by some ruler.

Just as Wicksell was concerned with designing a system of taxation (and of government) that avoided coercion, other scholars extended his analysis in important ways, notably, for instance, Erik Lindahl's ([1919] 1958) derivation of a method for charging individuals tax prices for public goods tailored to the marginal benefits they receive. Through a procedure

⁵ In that regard, Wicksell echoed the fear of a tyranny of the majority famously expressed by James Madison in *The Federalist*, especially Nos. 10 and 51.

⁶ Unanimous consent, as a decision-making rule, is equivalent to insisting that the individuals advantaged by a particular collective choice compensate those who are disadvantaged by it, "if compensation is interpreted as that payment, positive or negative, which is required to secure agreement" (Buchanan and Tullock 1962, p. 91). Moreover, "without side payments, there is nothing in any voting rule to insure [sic] that collective decisions will move the group to the Pareto-optimality surface or that such decisions will keep the group on the surface if it is once attained" (Buchanan and Tullock 1962, p. 188). Requiring that winners actually compensate losers obviously undermines the orthodox Kaldor–Hicks potential compensation test for avoiding Paretian status-quo bias.

very like a contractarian exchange process, Lindahl argued that individuals could agree to set each person's tax share equal to personal marginal benefit from public outlays. If one person values a public service less than others, that individual's tax share would decline. Tax shares would rise for those who value the public good or service more highly.⁷

2.1 Critical responses to Wicksell's *New principle*

The central criticism of Wicksell's theory focuses on its lack of resemblance to the observed world. Governments, many critics argue, simply do not behave in the ways depicted by Wicksell. Musgrave (1939) is perhaps the most vehement supporter of that critique. He thought that the exchange theory of government made few, if any, valuable contributions to the field of public finance. He was far from alone in taking that position (Bates 1937; Neal 1940). Even positive reviews of Wicksell's ideas concluded that they were "unworkable" (Benham 1934; Johnson 2015).

Musgrave's analysis of Wicksell highlighted several problems, chiefly pointing to the problem of free riding.⁸ Faced with the prospect of paying her own money to fund a public good, why would any rational, self-interested individual, absent coercion, contribute her share of the cost?

Wicksell was not blind to that problem. In a response to Mazzola ([1890] 1958), who argued that individuals could be relied upon voluntarily to pay their shares without the need for enforcement mechanisms, Wicksell responded, "If the individual is to spend his money for private and public uses so that his satisfaction is maximized, he will obviously pay not a brass farthing for public purposes" (quoted in Blankart and Fasten 2014, p. 16).

2.2 Buchanan's development and extension of Wicksell

Buchanan wrote frequently and laudably about Wicksell's work and ideas. In a frequently cited reflection, Buchanan (2007, pp. 5–6) recalled,

Wicksell laid out a set of ideas that seemed to correspond precisely with those that I had already had in my head, ideas that I could not have expressed and would not have dared to express in the public finance mindset of the time. Wicksell told us that if economists really want to apply the test of efficiency to the public sector, only the rule of unanimity for collective choice offers the procedural guarantee.

As Johnson (2015) points out, however, much of Buchanan's early work on public finance had not yet argued that Wicksell's principle of just taxation could form a basis for the efficient provision of government goods and services. Rather, at that point he had published analyses emphasizing voluntary exchange as an alternative to the prevailing orthodoxy. Buchanan's conclusion that his exchange-contractarian approach could generate Pareto-efficiency came later (Buchanan 1951; Johnson 2015, p. 184).

⁷ In technical terms, Lindahl taxes are set equal to the inverse of each taxpayer's elasticity of demand for the public good whose provision is being financed.

⁸ Since in the Lindahlian (Lindahl [1919] 1958) and Samuelsonian (Samuelson 1954) worlds of public finance, tax prices hinge on individuals' demands for public goods, taxpayers therefore have incentives not to reveal their demands truthfully.

Still, Wicksell's influence on Buchanan is undeniable. His methodological individualism is sometimes justified by reference to Wicksell's comment that if each individual's valuation of a public good's worth is zero, then the total sum value of that good also is zero. Wicksell's "heady words" (Buchanan 2007, p. 6) helped crystalize his division of public finance theories into the organicist or individualistic (Buchanan 1949). Two of the key lessons Buchanan took from Wicksell led him to reject the public finance canon that transformed the field during and after the Second World War: "Post-Marshallian public finance had two major gaps: the expenditure side of the fiscal account, and the public decision making process" (Buchanan 1975, p. 383).

Buchanan, like Wicksell, was interested in and concerned with how individuals are treated in the political tax-levying process and, more broadly, with the individual's place in the operation of government. The concluding chapter of *The Calculus of Consent* notes that, "The relevant choice among alternative institutions reduces to that of selecting that set which effectively minimizes the costs (maximizes the benefits) of living in association" (Buchanan and Tullock 1962, p. 304). Buchanan and Tullock go on to observe that neither a fully market nor a fully state-run system could prevent the "exploitation of man by man and group by group." Instead, the problem facing individuals is how to create a bottom-up order that encourages cooperation instead of top-down fomenting of conflict. Buchanan makes that point explicitly when comparing "conflictual" theories with "constitutional" or "cooperative" theories of politics. Alternatives to his exchange-contractarian position result in policies that divide the citizenry into "winners and losers" (Buchanan 2008, p. 286).

2.3 Responding to critics of the voluntary exchange theory

Much of Buchanan's use of Wicksell's ideas and his own broader research agenda can be understood as responses to the criticisms leveled at voluntary exchange theory. For example, recourse to state compulsion to avert free-riding is answered by Buchanan's work on public goods; the practical difficulties of voting separately on every tax-spending proposal are answered by analyses in *The Calculus of Consent*.⁹ Furthermore, although it is true that actual governments cannot be characterized by the kinds of voluntary arrangements that Buchanan and Wicksell favored, historical examples and experimental evidence offer support for the exchange-contractarian paradigm, as we shall see below. It is important, however, to recall another of Buchanan's key insights: Critics of voluntary exchange theory often adopt their own unrealistic assumptions by "proffering advice to nonexistent benevolent dictators" and omniscient social planners to implement their policy recommendations (Buchanan 2007, p. 6).

⁹ Buchanan (1991, p. 157) also points out the need to differentiate theoretical abstractions from political reality in analyzing governmental resource use. He writes, "If the effective unanimity rule is dropped, as it must be in any approach to political reality, the model of the fiscal process dramatically changes, even if we retain the electoral democratic feature and continue to presume that an independently motivated 'fisc' does not exist at all".

2.4 Behavioral symmetry removes the implicit assumption of sainthood

As Buchanan emphasized multiple times, reliance on a hypothetical public-spirited social planner is inconsistent with neoclassical models of human behavior. In simple terms, behavioral symmetry requires that the same model be applied to individuals in all spheres of action, both private and public (Thomas 2019; Shughart and Wardle 2020). That is, rationally self-interested individuals respond to incentives and given constraints in the institutional settings in which they interact. As Buchanan (1982, p. 181) wrote,

A major deficiency in the political-legal-social philosophy of the 19th and 20th centuries has been the failure to model the behaviour of the sovereign, or, more precisely, to model the behaviour of those persons who are empowered or authorized to act on behalf of the state or government. This failure has been far more pervasive than any like failure to model what we may call “private man.” The latter has often been modelled as *Homo economicus* for the legitimate purpose of assisting in the dialogues on law reform. By contrast, “public man” has rarely been modelled at all, save implicitly as “saint.”

The essential point is that the failure to preserve behavioral symmetry introduces an implicit assumption that entering public office is akin to putting oneself back behind a hypothetical veil of ignorance. Although selfless benevolence is a commonly held ideal of public officials, the assumption violates behavioral symmetry by requiring the analysis of public policy to suppose that policymakers are motivated, by virtue of election or appointment, to ignore their own particularistic interests. In *Cost and Choice*, Buchanan ([1969] 1978) compares the idealized manager of a socialist enterprise with Pigouvian justifications for taxing activities that generate pollution or other negative externalities. Buchanan stresses that, in order for Pigou’s analysis of corrective taxation to hold, each individual who creates an externality must be assumed to act rationally by, in the absence of a tax, taking account only of the private benefits and costs of their behavior. After a tax on the externality-creating activity is imposed, the individual reduces his or her activity level so that the private benefits from it equate with the now higher tax-adjusted private cost, which includes the policymaker’s estimate of the activity’s social costs. The tax forces the individual to “internalize the externality”, thereby aligning private costs with social costs and ensuring that the activity level is socially optimal.

For the foregoing just-so story to materialize in actual practice, however, the public officials who determine the tax rate for reducing or eliminating a negative externality must be assumed to have access to detailed information about the magnitude of the activity’s social costs, to set the tax rate at the appropriate level,¹⁰ and, what is most important, be motivated to do so. In short, they must be Madisonian angels. As Buchanan ([1969] 1978, p. 97) wrote,

[F]or the Pigovian policy proposals to accomplish their own stated purposes, individuals who generate externalities must behave so as to maximize their own narrowly conceived economic interests. The effects of their own behavior on the predicted utility levels of others than themselves cannot be assumed to influence their behavior. By

¹⁰ Given the diversity in individual’s valuations of tax-and-spending activities, tax-rate setters will confront an insurmountable Hayekian (Hayek 1945) knowledge problem. That problem is compounded by the usual political requirement of imposing a uniform tax rate per unit of the externality-generating activity.

comparison, the idealized manager of the socialist enterprise must be assumed to act solely on the basis of nonindividualistic criteria. His own utility cannot be allowed to influence the decisions that he makes; he must choose in accordance with the costs and benefits predicted for the whole community; and his own position in the community must be treated as if it were the same as that of any other member. Whereas the Pigovian man must be strictly *homo economicus* in the narrowest sense, the socialist bureaucrat must be non-*homo economicus* in the purest sense. Both men can be only caricatures of actual persons, but both have been present in much serious discussion of real-world policy.

The implicit assumption of sainthood, once discarded, changes fundamentally how public policies are analyzed. Rather than adopting a romantic view of public officials, behavioral symmetry makes it possible to focus on analyzing the institutions that shape self-interested politicians' and policymakers' incentives. Outcomes in the public sector differ from those in the private sector, not because the motivations of the relevant actors differ, but because of differences in the institutions in which they interact.

For example, consider how neoclassical economics models the consumption choices of an individual. A person is endowed with preferences over available goods and services, faces an income-determined budget constraint and a set of market-determined prices, and then chooses the combination of the available goods that maximizes her satisfaction or utility. In serving her own utility-maximizing ends, she ultimately must consume up to the point at which the marginal benefit per dollar spent must be the same across all of the combination's elements. (If not, she could add to her total utility by buying more of the goods for which the marginal utility per dollar spent is high, substituting them for other goods having low marginal utilities per dollar spent.) That is the equi-marginal principle of consumption choice; following the rule selects the combination of goods and services that generates at least as much satisfaction as any other possible combination, given the chooser's preferences, income and market prices. The last unit of every element of the bundle yields the same utility per dollar spent on it.¹¹

Since individuals, like leopards, don't change their spots, the logic of rational choice models of behavior holds for politicians as well as for the actors in ordinary private markets. Consumers strive to maximize their own utilities; producers strive to maximize profits; and individuals holding public office likewise rationally pursue their own parochial interests. Those interests may be multifaceted, depending on whether they are appointed or elected, and may include power, prestige, and the perquisites of their positions, but for elected officials, reelection is the prime objective. Those politicians are tasked with allocating limited revenues over a variety of public policies and programs; they too seek to maximize their own utilities. Just as consumers purchase goods until each good's marginal utility per dollar spent is the same, politicians cannot maximize their chances of reelection unless they satisfy their own equi-marginal principle: the marginal political benefit per dollar spent must be the same for all line items in the public budget (Winer and Hettich 1998).

Unlike actors in ordinary markets, however, income constraints often fail to bind the behavior of public officials. In the public sector, budget constraints tend to be "soft" (see, e.g., Kornai 1979, 1986, 1998; Kornai et al. 2003). Even if the budget constraint is "hard"

¹¹ The same principle applies in neoclassical production theory. A producer minimizes total cost (equivalently maximizes profit, given the prices at which outputs can be sold) by hiring inputs (land, labor and capital) up to the point at which the marginal product per dollar spent on them is the same.

and a statute requires that tax receipts be dedicated exclusively to certain expenditure items, the revenue can be redirected elsewhere at the legislature's discretion. Money is fungible. Especially when a tax is earmarked for an ongoing spending program, the "new" revenue can replace money from the general fund currently financing that program, freeing it for reallocation elsewhere so as to equate marginal political benefits with marginal political costs across the public budget as a whole.¹²

Pigou himself recognized the importance of behavioral symmetry. At least some of the limits of public administration are mentioned in *The Economics of Welfare*. For example, Pigou first asks whether an externality is Pareto-relevant and then points to the absence of saints in public office:

It is not sufficient to contrast the imperfect adjustments of unfettered private enterprise with the best adjustment that economists in their studies can imagine. For we cannot expect that any public authority will attain, or will even whole-heartedly seek, that ideal. Such authorities are liable alike to ignorance, to sectional pressure and to personal corruption by private interest. A loud-voiced part of their constituents, if organised for votes, may easily outweigh the whole. (Pigou 1932, p. 332)

The public choice tradition that Buchanan developed takes those insights much further. Pigou stops short in carrying his critiques of public intervention to their logical conclusion. Although he goes so far as to quote from a report on utility operations that, "Every public official is a potential opportunity for some form of self-interest arrayed against the common interest" (Pigou 1932, p. 333), he views special pleading as surmountable by proper design of the administering office. His short chapter concludes with a recommendation that externalities be corrected by commissions whose members are insulated from electoral pressures by long tenures and by selection methods based on their skills and knowledge of the relevant industry (Pigou 1932, p. 335). Of course, such commissions only shift the locations at which special-interest influence will be brought to bear.

To illustrate the heart of the problem, consider Pigou's use of roadways as an example of an externality-generating activity (traffic congestion) and as a justification for motor-fuel taxes. Knight (1924) emphasized Pigou's failure fully to consider the role of property rights in internalizing externalities. Knight rightly points out that the externality is rooted in the public provision of an impure public good. Each driver is another's traffic and contributes to congestion.

Knight argues that a private road owner would have an incentive to establish a pricing system (tolls) that internalizes the externalities that drivers impose on one another.¹³ That same problem confronts public administrators in attempting efficiently to provide road capacity and price access to it so that congestion and travel time are set at their socially optimal levels. The information at their disposal, however, arguably is less accurate, and their incentives to use it weaker, than those of the owner of a private road. Private roadways represent an alternative to public provision; they are not necessarily an example of

¹² Even when public budget balance is maintained, if dedicated funds free public revenue for uses other than financing the targeted program, earmarked taxes nevertheless can fail to accomplish the stated aims of their proponents. The next section discusses that point further.

¹³ Buchanan (1956) questioned and revealed limits to Knight's position, but they extend far beyond the scope of this paper.

“market failure”.¹⁴ Public infrastructure provision may be, however, a good example of the need to connect spending and taxing decisions closely.

3 Bridges in need of repair

Wicksell’s ideas about pairing taxes with the expenditures they will finance plainly are not adhered to closely—either today or throughout history. As a result, the normative properties of his new principle of just taxation, namely balanced public budgets and Pareto-optimality (under a rule of unqualified unanimous consent), are not achieved in actual practice. The incentives of self-interested politicians and policymakers that lead them to reallocate earmarked tax receipts to other, unrelated spending programs demolish the bridge James Buchanan wanted to build between the two sides of the public budget. The broken bridge transforms his positive sum, voluntary-exchange paradigm of governance into a negative-sum regime of predatory taxation.

In what follows, we discuss examples of tax earmarking schemes in the real world of public finance. Often justified as means of financing programs ostensibly benefitting the targeted taxpayers, the reality is that earmarking simply has been adopted as a way of raising additional revenue for expanding the size and scope of the state.

3.1 Whiskey and the public debt

America’s Revolutionary War left a new country free of interference from the British Crown but shackled it with substantial debt. Originally, each of the original 13 states was responsible for the debts it had incurred in supplying and provisioning troops to the Continental Army. After independence was secured, Alexander Hamilton, serving as the nation’s first Secretary of the Treasury, made a convincing case for consolidating the states’ Revolutionary War debts into the accounts of the new federal government.¹⁵ Concluding that import duties, the nation’s chief source of income, already were as high as prudence allowed, Hamilton sought additional revenue to begin paying down the public debt (Chernow 2004). He advocated the passage of a selective excise tax on whiskey, which, according to him, would not only provide the funds needed to finance the war debt, but also would help counteract Americans’ propensity to overconsume distilled spirits (Hogeland 2006). The tax went into effect in 1791 (Shughart 2018, p. 23).

Although Hamilton believed that the whiskey tax targeted a “luxury” good, it actually had a regressive effect that would ignite the Whiskey Rebellion in Western Pennsylvania. Many farmers located thereabouts distilled whiskey from grains that were bulky and expensive to transport to eastern markets over rough mountainous roads. Moreover, whiskey often served as compensation in kind for farm workers and was even bartered

¹⁴ Harold Demsetz (2011) points to this disagreement between Knight and Pigou as an example of how the inexact definition of “externality” in practice and policy has overextended the definition of externalities. Demsetz (2011, p. 13) cautions that externalities occur only when resources are inefficiently allocated and argues that “the category of problems that we call externality problems now includes a great many that are not strategic in nature”.

¹⁵ Nearly the entire debt from the Revolution was assumed by the federal government through Hamilton’s consolidation plan (Edling 2007, p. 288). Trescott (1955) explains the complexities of the debt-relief program and documents the extent of relief by state after the Funding Act’s implementation in 1790.

where currency was scarce on the frontier. Hamilton's luxury tax was transformed into an income tax for the recipients of payments in spirits. Revenue-collection problems were compounded further because the whiskey tax had to be paid in money, further burdening cash-strapped farmers (Hogeland 2006; Slaughter 1986).

The tax also imposed heavier burdens on smaller whiskey distillers. The tax was assessed in two ways, either as a flat fee or as a per-unit charge. The first of those methods advantaged major whiskey distillers in the East over their smaller western counterparts because the former could spread the flat tax over larger volumes of output. It is unclear whether that competitive advantage was the result of an intentional lobbying effort by eastern producers, but the historical record indicates that the larger producers provided political support for Hamilton's selective whiskey tax (Slaughter 1986).

The bridge between taxing and spending was broken at several points in the story of the nation's first selective excise tax on whiskey, damage that a fiscal process based on Wicksell's and Buchanan's exchange-contractarian paradigm may have prevented. First, whether intentionally or not, the tax disproportionately burdened some taxpayers. Second, the tax did not take local conditions into account. Individuals who relied on whiskey as a form of currency perceived the levy as an income tax rather than as a luxury tax. Third, and perhaps what is most important, imposing a tax on whiskey to pay down the federal government's general war debts does not package the benefits of the collective good of national independence to its financing, even if the policy had been adopted *ex-ante* instead of *ex-post*. Hamilton's tax on whiskey singled out a subset of the population—the consumers and producers of distilled spirits—to pay debts incurred by the nation as a whole during the Revolutionary War. The original 13 states first spent money to secure independence from the British Crown. Only later did Alexander Hamilton find a way to finance that spending. The two sides of the public budget were voted on at different times and places, not as a package subject to collective approval or rejection.

Americans sought independence from British rule in large part because of grievances over the "hateful excises" imposed on them during colonial times by King George III, which applied to purchases of, among other items, tea, paper, and playing cards (Shughart 2018, p. 21). Hamilton's war-debt funding plan established precedent in the new nation both for excise taxation and for delinking taxing and spending decisions.

3.2 Sugar-sweetened beverage taxes for your health and for the children

Berkeley, California, became the first US city to enact a tax on sugary drinks in 2014, passing a one-penny per ounce tax on such beverages sold within Berkeley's city limits. As of late 2019, a total of eight American cities and Cook County, Illinois, had imposed a selective sales or excise tax on sugary soft drinks.¹⁶ All of those taxes emerged from similar political processes. Public health advocates began the process by arguing that soda consumption is a major contributor to individual health problems, such as obesity and Type II (adult onset) diabetes. They then referred to simple Pigouvian analysis showing that taxing a good or service discourages its consumption. Finally, soda taxes were offered as a solution to the identified health problems.

Of course, such a policy recommendation ignores Pigou's support for selective taxes as a way of aligning the private costs and benefits of an activity with its social costs and

¹⁶ Cook County repealed its soda tax only a few months later in response to public outcry.

benefits: most of the health problems selective taxation's advocates cite are not externalities, but internalities. The health costs of consumption fall largely on the consumers themselves rather on others. The overconsumption of sweets like sugary sodas does not, for example, create a third-party effect that harms individuals who do not consume soft drinks. If a sugary soda drinker gains weight and consequently finds it harder to become employed or be promoted on the job, misses work to seek medical treatment for obesity or diabetes, or is prescribed therapeutic drugs, the associated costs are borne by the soda consumer. Such private costs of overconsumption are internalized by the rational consumer, who then weighs them against the private benefits of soda drinking, equating them at the margin and thereby determining the utility-maximizing quantity of soda to consume, given her income, preferences and the prices of sugary soda and other goods. The costs of soda consumption are externalized (become social costs) only to the extent that they are shifted to taxpayers through publicly provided health insurance programs (e.g., Medicaid, Medicare), public hospitals, and other subsidized public health services. Soda consumption by itself does not generate any Pareto-tax-relevant externality. An externality, if it exists, is created by the institutions of public healthcare finance, not by individuals' consumption choices.¹⁷

Selective soda taxes nevertheless have become a reality in recent times. The empirical record on the effects of such taxes on consumer behavior is mixed. It is not clear that soda taxes reduce soda drinking significantly and therefore cause people to choose healthier options. After the tax was enacted in Berkeley, for example, purchases of soda declined within the city's limits. Beyond those borders, however, soda purchases increased as consumers simply avoided the tax (Silver et al. 2017). Cross-border shopping has been a common (and predictable) experience in other places adopting soda taxes. After a soda tax was imposed in Seattle, Washington, for example, some local shops began disclosing the after-tax increase in retail prices and recommending other retailers where customers could buy untaxed soda. Additional studies have shown that soda taxes are unlikely to induce healthier choices as consumers simply substitute towards other sweets (Zhen et al. 2013).

Aside from the empirical consequences of soda taxes, the exchange-contractarian paradigm supplies other objections. Taxing and spending decisions are delinked, thus contradicting Wickseil and Buchanan's concern for process. Soda taxes often are earmarked for financing existing public spending programs and soda tax revenue is diverted to uses other than addressing health concerns related to sugar consumption.

Philadelphia's soda tax is a good example of governmental use of tax revenue for purposes not obviously related to programs that taxpayers would agree to or even benefit from. The city's soda tax was offered to voters primarily as a way of raising additional money to fund early (preschool) education and for financing improvements to city parks, libraries and recreation centers. Not only does a tax on soda bear little relation to early public education or the other cited uses, meaning that soda taxpayers are unlikely to benefit from the programs they are required to finance, but their money has not even been spent as the tax's proponents promised it would be spent. After the tax was went into effect, Philadelphia's Controller reported that nearly three-quarters of the new revenue has gone into the general fund that supports basic governmental operations and functions (Tanenbaum 2018). Only about 21% of the receipts from the soda tax actually has been allocated to preschool education.

¹⁷ For a discussion of the policy challenges involved with using Pigouvian policies to rectify externalities caused by policy interactions, see Browning (1999), who is concerned with fiscal externalities created by public policy. His chief example is the socialization of the healthcare costs of smoking.

Although a counterfactual cannot be proven, it is not impossible for soda taxes to be enacted in a process consistent with the contractual-exchange paradigm. If Philadelphia's voters had been given the opportunity to consider a new soda tax earmarked for early education and other specific purposes, a qualified majority in favor of the bundle of spending programs and a tax dedicated to financing it may have been forthcoming. On the other hand, although agreement by soda drinkers to a proposal requiring them to pay for programs benefitting parents with young children, city park and library patrons is conceivable, consensus on using soda tax revenue for general fund spending is doubtful. No one will ever know, however, because the ballot question never was posed in the form Wicksell and Buchanan would have asked it.

3.3 “Green” dollars spend anywhere

Similar politically opportunistic reallocations of revenues generated by earmarked taxes and fees can be found in many environmental policies and programs. Public “green benefit” funds have been created that are financed by fees collected from private-sector companies in return for the “right” to emit pollutants or as penalties for failing to comply with various environmental regulations. The balances in those funds ostensibly are intended for financing the cleaning up of existing polluted sites (Superfund is an example) and for other programs meant to yield environmental benefits.

The Abandoned Mine Lands (AML) fund is financed by a selective federal tax on surface mining operations. It was designed to pay for reclamation of abandoned mines, returning the land to its previous condition. In part because Congress failed to appropriate most of the fund's balance for its intended purpose, mining interest groups saw an opportunity to redirect monies from it to more parochial ends. Instead of financing the cleanup of abandoned surface mine lands, millions of dollars from the AML fund have been dispersed to support unionized miners' pension and healthcare programs (Yonk et al. 2019).

State-level renewable portfolio standards (RPS) supply another relevant example. Such policies require public and private utilities to generate specified percentages of their electricity outputs with renewable energy sources rather than fossil fuels. Depending on the structure of the RPS (the requirements vary by state), utilities that fail to comply with the policy pay into a fund usually intended to support green energy initiatives. Frequently, however, state legislatures siphon those funds to finance other spending programs. Connecticut's legislature, for instance, has used the monies to cover a general state budget deficit (Appel, Kessler and Silverman 2016; Cimons 2017).

Given broad public support for renewable energies, it is not inconceivable that voters would agree to finance green benefit funds or research into alternatives to fossil fuels in a Wicksellian process that earmarks fees paid by utilities (and their customers) for environmentally friendly public programs. It nevertheless is clear that taxing for one purpose and then redirecting those funds to others is incompatible with the exchange-contractarian approach to public finance.

3.4 Gas taxes fueling public-sector pensions

The benefit principle is a widely accepted norm of orthodox public finance. In contrast to the norms of horizontal and vertical tax equity, it says that tax burdens should fall on the shoulders of the individuals or households who benefit from the provision of a public good or service and that tax burdens should be scaled to the benefits received: individuals who

receive larger benefits from a public spending program should contribute larger shares of the costs of financing it. The benefit principle broadly is consistent with Wicksellian ideas, provided of course that the program generating the benefits and its financing method are voted on concurrently.

In the parlance of more contemporary public finance, taxes to finance the provision of public goods and services benefitting identifiable taxpayers are called “user fees”. The prices of admission tickets to publicly sponsored symphony orchestra performances or operas; the fares paid by public transit passengers; entry fees to national parks, public zoos, and museums; and tolls for driving on interstate highways are examples of such user fees. Selective excise taxes on motor fuels (gasoline and diesel) are, perhaps, the most familiar application of the user-fee rationale.¹⁸ The taxes collected at the pump are, in most states and at the federal level, deposited into highway “trust funds”; the revenue almost always is earmarked for building and repairing the infrastructure (roads and bridges) from which drivers benefit directly. Excise tax payments vary with use: the more miles people drive on the public highways per day or per week, the more fuel they buy and the higher are their gasoline tax bills. The link between benefits received, taxes paid, and infrastructure spending is strong.

Or, that link would be strong if the monies deposited by taxpayers into highway trust funds actually were spent on road-and-bridge infrastructure. It frequently is not. Legislatures at all levels of government routinely “raid” highway trust funds, diverting the balances to finance other spending programs, such as public transit systems, which operate chronically in the “red”, and to build high-speed rail connections between major city pairs. Although those spending initiatives may relieve highway congestion by getting some vehicles off the road, they do little to keep the infrastructure used by motor-fuel taxpayers in passable condition.¹⁹

When governments find themselves short of funds in one taxpayer-funded program area, raising taxes on motor fuels has become a politically expedient way of generating additional revenue. California, for example, raised its excise tax on gasoline in 2016 partly to finance a budget deficit in the Highway Patrol’s pension fund (Varghese 2016). As one state senator observed at the time, “Everyone will think we’re fixing roads, but that money is going to be diverted into pension plans.” Such creative public accounting can be explained by voter ignorance (“fiscal illusion”): taxpayers quickly become aware of higher after-tax fuel prices,²⁰ but they rationally fail to monitor how the new revenue is spent (see, e.g., Buchanan 1976; Wagner 1976).

As another instance of political revenue-shifting, the District of Columbia’s city council imposed a tax in June 2018 on ridesharing services, such as Uber and Lyft, to finance

¹⁸ One might add the federal excise tax on automobile and truck tires and state vehicle registration fees to the user-fee list.

¹⁹ In the context of infrastructure, Bastiat ([1850] 1964) teaches us that politicians will prefer spending money on new roads and bridges, which readily be seen and rewarded by voters, over spending on repairs and maintenance, which, because infrastructure deteriorates slowly over time, is less visible, at least until drivers begin hitting potholes and damaging tires or axles. The American Prairie Reserve supplies another example: the maintenance backlog of the National Park Service is monumental, suggesting an institutional failure of the federal oversight of national parks or indicating the inability of user fees by themselves to generate revenue sufficient for maintaining public lands.

²⁰ Because the demand for gasoline is very inelastic, most of the burden of a tax on it is shifted forward to consumers in the form of higher prices at the pump. On average, a 10% price increase leads to a 5% reduction in quantities purchased (Hoffer and Shughart 2018, p. 62).

repairs to the crumbling Metro subway/rail commuter system (Siddiqui 2018). That plan not only taxes a competitor to benefit a rival transportation provider, but does not help contribute to the maintenance of, or improvements in, the public infrastructure that the ridesharing services use. The tax generates no benefits for Uber's and Lyft's drivers and passengers, who might have agreed to pay it if the revenue had been earmarked for the District's roads needing expansion or repair. Ridesharing services plainly do impose costs on the public thoroughfares in the forms of wear and tear and, if they increase traffic on net balance, road congestion. The city council's selective tax does not require them to help defray those costs, however. The tax instead requires private ridesharing services to contribute to the financing of a separate public transit system.

Exchange-contractarian approaches to public finance justify user fees and similar policies that connect the revenue and expenditure sides of the public budget closely. Implemented in ideal form, the benefits received by individuals from publicly financed programs and policies align with their shares of the costs of program provision. But this is not an ideal world. Although interjurisdictional competition (Tiebout 1956) helps close the gap between individual valuations of public goods and their tax "prices" (because citizens dissatisfied with the combination of the collectively consumed goods offered by one jurisdiction, along with the taxes levied to pay for them, can move to another jurisdiction), such "voting with the feet" is undermined when politicians opportunistically divert tax revenue from its ostensible destination to unrelated uses. The voluntary foundations of governance unravel when governments exercise their coercive powers to redistribute income away from some taxpayers to finance benefits for others.

3.5 Tobacco taxes up in smoke

Selective excise taxes on cigarettes and other tobacco products count amongst history's Big Three "sin taxes" (the other two being levies on alcohol and gambling). Such taxes originally were justified as targeting the overconsumption of goods that more abstemious people object to on moral grounds. Revenue considerations never have been far out of the public finance picture, however. The demands for tobacco products, like those for alcohol and games of chance, tend to be quite inelastic. Because consumers don't reduce their purchases of such goods markedly in response to increases their prices, sin taxes reliably inject monies collected from "sinning" taxpayers into the public budget.

Cigarettes have been called "coffin nails" for more than a century, but it was not until the Surgeon General of the United States issued a report titled *Smoking and Health* in the early 1960s linking cigarette smoking to lung cancer that arguments defending tobacco taxes as promoters of the general welfare essentially no longer could be contested.²¹ Of course, cancer and the other possible adverse health consequences of tobacco consumption, including heart attacks and more frequent absences from work associated with smoking-related upper respiratory ailments, largely are internalities, becoming Pareto-relevant externalities only to the extent that smokers impose costs on non-smokers. Such externalities find support in claims that exposure to secondhand or environmental tobacco smoke may impair the health statuses of non-smoking bystanders.

²¹ The US Department of Health, Education, and Welfare (now Health and Human Services) declared in 1964 that "Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action" (quoted in Hoffer et al. 2014, p. 49).

However, the principal justification for imposing corrective taxes on tobacco, at least in recent times, is that tobacco use burdens public-sector budgets. Taxpayers in general shoulder some of the costs of treating patients, especially the poor and the uninsured, suffering from smoking-related diseases seeking care in public hospitals or nursing homes, or enrolled in public health insurance programs like Medicare or Medicaid.²² On the other hand, Viscusi (1994) reports evidence that, on a per-pack basis, the excise tax rates imposed on cigarettes by US states already exceed plausible estimates of the external costs of smoking.

In any case, arguments emphasizing uncompensated burdens imposed by cigarette consumption on public budgets by cigarettes underpinned a lawsuit filed in 1994 by the attorney general of Mississippi against the major US tobacco companies seeking reimbursement for cumulative smoking-related healthcare expenses prior to that year. The attorneys general of three other states, Minnesota, Florida, and Texas, filed similar lawsuits in 1998, contending, as Mississippi had, that,

cigarette manufacturers, wholesalers, distributors, and other parties involved in placing cigarettes into the “stream of [interstate] commerce,” despite allegedly knowing that cigarettes were hazardous even when used as intended, that some smoking-related health care costs would be shifted to the taxpayers, and “that the State itself thereby would be harmed.” (Shughart and Stevenson 2006, p. 712)

Making similar claims, the remaining 46 US states also sued the tobacco companies and in November 1998 finalized an out-of-court settlement with them—the so-called Master Settlement Agreement (MSA)—thereby ending the litigation (Mississippi and the other states settled without trial separately.) The terms of the 1998 MSA obliged the defendants to pay out more than \$246 billion over 25 years to compensate the states for costs incurred in the past related to treating smoking-related disease (Shughart and Stevenson 2006, p. 712). The states, in turn, said that the money would be spent on smoking-cessation and anti-smoking educational programs to reduce cigarette consumption in the future.

Consistent with Winer and Hettich’s (1998) equi-marginal principle of public finance, however, the states did not dedicate the MSA’s revenue windfall exclusively to the programs for which the plaintiffs were awarded damages. Doing so would upset the status quo budget equilibrium because the marginal political return per dollar spent on smoking-cessation and anti-smoking education efforts now exceeded the marginal political returns to other current and planned future expenditure items. State legislatures therefore rationally reallocated MSA funds to unrelated public budget categories. Although the distribution of the monies differed markedly from state to state, as of the early 2000s, on average, approximately 43% of the new revenue generated by the MSA was directed into the states’ general funds and spent in ways not contemplated by the settlement (Gross et al. 2002; McKinley, Dixon and Devore 2003; Shughart and Stevenson 2006, pp. 725–726).

3.6 State-sponsored lotteries

State-run lotteries frequently were created to finance roads, bridges, canals, and other public works in the early days of the American constitutional republic. That method of public

²² As mentioned earlier, such an externality is created, not by cigarette smoking per se, but rather by the institutions of public healthcare finance.

finance reached its zenith in 1831. Owing to evidence of widespread corruption on the part of public officials and lottery operators, however, lotteries virtually had disappeared by the first rebel guns were fired on Ft. Sumpter in April 1861. The State of New Hampshire reintroduced the state-sponsored lottery in its modern form 102 years later (Jackson et al. 1994).

Thomas Jefferson (1826) liked lotteries as a means of public finance, calling them “a salutary instrument and a tax ... laid on the willing only, that is to say, on those who can risk the price of a ticket without sensible injury, for the possibility of a higher prize.” The “lottery tax” is computed as the percentage of total ticket sales (the “handle”, in gaming industry parlance) *not* paid out in prizes to lottery players. The revenue from lottery ticket sales retained by the state and not allocated to covering the expenses of operating the games—often contracted out to private-sector gaming companies—either goes into the general fund, or, more commonly, is earmarked for financing a specific public spending program.

Politicians and policymakers have justified many of the state-run lotteries created since 1963 as ways of generating additional funding for ostensibly cash-strapped public schools, which in many states and localities are financed chiefly by property taxes. Borg and Mason (1990, p. 301) observe, however, that, “lottery revenues provide the legislators of each of the states with a procedure that camouflages their inability to raise sufficient tax revenue to adequately provide for the public-school systems in their states.”

An important empirical question about lotteries implemented to fund K-12 public education (or any other earmarked tax, for that matter) is, does the revenue thereby generated actually lead to increases in total spending on the targeted budget item, or not? Because public revenue is fungible, it is conceivable that a \$1 increase in dedicated lottery funds causes less than a \$1 increase in public education spending. Such an outcome would materialize if politically self-interested legislators rationally reallocate some of the pre-lottery public education budget (financed by other revenue sources²³) to programs producing higher marginal political returns per dollar spent.

The empirical evidence is mixed on how much money is diverted from educational appropriations after lotteries inject additional revenue into state budgets and on how the windfalls are spent. Miller and Pierce (1997), for example, find that states implementing lotteries earmarked for education spent more on the targeted programs initially, and that while total educational spending itself did not fall as time passed, the rate of increase in appropriations eventually declined by as much as half. Other studies find that only a small fraction of lottery money is diverted, by around 20 cents for each dollar raised, according to Novarro (2005). Garrett (2001), in contrast, argues that lotteries simply provide ways for revenue-maximizing state governments to generate new sources of funds to be spent at legislative discretion.

²³ The State of Utah, for example, earmarks all of the revenue raised by the state’s personal income tax for financing public K-12 education; public institutions of higher learning later were added to the list of beneficiaries. (Primarily for religious reasons, Utah does not operate a state-run lottery.).

4 Not to promote the general welfare, but for political gain

If, as the theory and evidence summarized above suggests, orthodox theories of public finance fail to explain why the revenue generated by earmarked taxes or user fees often is diverted to purposes other than those “intended” by their proponents, why are such taxes and fees adopted in the first place? A straightforward answer would be available if voters actually were confronted with up-or-down decisions on Wicksellian tax-and-spending packages that could be vetoed in full if a qualified minority objected either to the tax or to the spending program it was dedicated to finance. As we have seen, however, the revenue generated by most earmarked taxes nowadays is dedicated to spending programs already ongoing and not subject to rejection at the time a new tax or fee for funding it is proposed.

A complementary explanation for the popularity of tax-earmarking in the modern era can be found in the coalitions of “bootleggers and Baptists” that often achieve success in the political process (Smith and Yandle 2014). The bootleggers are special interests that gain from a tax or regulatory policy that generates revenue for programs they support or are employed by, such as road contractors, public transit systems, or environmental groups. The Baptists supply moral grounds (“camouflage” is Borg and Mason’s 1990 word) justifying a new tax or an increase in an existing one (e.g., excise taxes on gasoline and diesel fuel to improve air quality). The combination of moral suasion and lobbying by groups benefitting from a new revenue source, especially one that is dedicated to financing programs adding to the groups’ bottom lines, virtually is uncontested. Moreover, even if the purposes for which the taxes originally were earmarked end, the tax will live on as long as the supporting coalition hangs together.

Even if the ideas James Buchanan transmitted from Knut Wicksell to later generations had fully been grasped by public finance scholars, however, the problem still would remain of binding governments to allocate earmarked revenues solely for financing the programs to which they were dedicated. According to Buchanan (1991), earmarking can enhance economic efficiency if the tax base is complementary to the spending program to which the revenue is dedicated; he offered excise taxes on gasoline for maintaining public roadways as an apt example. We saw earlier, however, that politicians opportunistically divert balances in highway trust funds financed by taxes on motor fuels to unrelated spending programs.

As yet another example, the Federal Lands Recreation Enhancement Act changed the rules for distributing fees collected from visitors for entry to national parks, allowing 80% of the revenue so generated to remain in the budgets of individual park managers to finance maintenance and repairs of structures and grounds (Regan 2017).²⁴ The maintenance backlog of the National Park Service nevertheless exceeds \$11 billion.²⁵

Institutional constraints on the distribution of earmarked tax revenue do not seem feasible in polities wherein public monies flow to politically connected interests (Blau et al. 2013; Vaishnav et al. 2017; Blau 2017; Yonk and Smith 2018). Doing so requires restoring the exchange-contractarian framework Buchanan adapted from Wicksell. If not, mutual gains are ignored, and taxation becomes predatory:

²⁴ The remaining 20% of revenue from park entry fees and concessionaire agreements goes to the general fund of the National Park Service.

²⁵ U.S. Congressional Research Service, *Deferred maintenance of federal land management agencies: FY2009–FY2018 estimates and issues*, April 2019.

The exchange framework tends to promote a constructive attitude toward governmental process, an attitude that accentuates the cooperative aspects, that underlines the prospects for mutuality of gain for all citizens. The alternative framework may lead citizens and their political spokesmen to accentuate the profit-and-loss aspects of political competition, to promote a willingness on the part of a dominant coalition to impose its will on its minority opposition, and conversely, to generate in the minority an acceptance of a quasi-Marxist and exploitative view of governmental process. (Buchanan 1976, p. 29)

5 Concluding remarks

Many public policies are negative-sum games, especially but not exclusively so, those that memorialize tax-and-spending initiatives in governmental budgets. Influenced heavily by the work of Knut Wicksell, James Buchanan explained why that is so by emphasizing that the actual world of public finance differs sharply from the blackboard models adopted by orthodox public finance economists. In those models, socially optimal taxes, tax rates and income-transfer programs are deduced by solving hypothetical constrained optimization problems, all the while ignoring the reality that such policies are determined in political processes peopled not by benevolent despots but by rationally self-interested individuals animated by the goals of reelection or reappointment to public office.

Wicksell's "new principle of just taxation" envisioned separate bundles of proposed public spending programs and taxes earmarked to finance them subject to approval or rejection by qualified voting majorities. In that way, the benefits and costs of publicly provided goods and services would align more closely with individual preferences; public budgets would remain in balance. James Buchanan adopted Wicksell's new principle in order to emphasize the importance of building a bridge between the two sides of the public's fiscal account, thereby imposing discipline on government's taxing and spending powers. Forging connections between public revenues and expenditures also helped Buchanan build a bridge between the fields of public finance and public choice.

The present paper examines the foregoing ideas in the context of selective consumption taxation. The revenues from traditional "sin" taxes on alcohol, tobacco, and gambling, as well as the excise taxes imposed on gasoline, state-sponsored lottery tickets, and sugar-sweetened beverages, ostensibly are dedicated to financing programs that provide benefits to the taxpayers themselves (construction and maintenance projects for road users, for instance) or that promote the general health and welfare (e.g., treatment for obesity- and smoking-related diseases or financing preschool education). A review of the evidence on the distribution of earmarked tax revenue suggests, however, that politicians and policy-makers routinely divert those revenues to unrelated budgetary line items.

Although financing public programs with earmarked taxes or user fees can in principle enhance public sector efficiency by connecting benefits received directly to taxes paid, the connection is broken when tax receipts are reallocated to finance more pressing spending priorities. Such political opportunism operates when corrective taxes are justified as ways of internalizing the externalities of consumption or, in the past decade or so, of correcting the harms consumers impose on themselves (so-called internalities).

Barring reconstruction of the bridge between the two sides of the public budget Buchanan wanted to build by reconnecting revenues with expenditures, rent seeking into the public's finances will continue to flourish. Lobbying by individuals and groups

benefiting directly from taxpayer-financed spending programs, attempting to avoid shouldering the costs of program provision, or both, characterizes the modern democratic state, partly as a result the erosion of generality norms (Warren 1932; Adams 1998, 2001; Wagner 2017).

It is true that the main aim of a Pigouvian tax is to “correct” an externality (or internal-ity), not to raise revenue for the public sector. Achieving that aim in practice would seem to require that any revenue raised by a corrective tax *not* be returned directly to the individuals who pay the tax. Doing so would mute the behavioral changes claimed by policymakers as justification for imposing selective taxes in the first place. Pigouvian taxes *do* of course generate revenue. A full analysis of the welfare effects of such taxes demands acknowledging Wicksell’s and Buchanan’s recognition of the reality that the disposition of the proceeds of taxation as well as the tax rates themselves are determined in political processes rather than by the theoreticians of public finance.

We don’t know how a Wicksellian public finance bridge can be rebuilt, except perhaps by voters imposing effective constitutional constraints on how earmarked tax revenue actually is spent. Appreciation of the ways in which earmarked taxes and user fees camouflage expansions in public spending and contribute to public budget imbalance nevertheless explains in part why James Buchanan was critical of orthodox public finance and provides valuable insights into the overpowering political forces ignored by the field’s practitioners. Rereading Buchanan’s early contributions to the literature of public finance locates clearly the origins of the public choice and constitutional political economy research programs.

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