Knut Wicksell

A Consistent Marginalist

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As has been correctly observed, there can be justice only among equals. Justice from above to below always smacks of condescension or contempt. Justice from below to above has only too often been synonymous with revenge.

—Knut Wicksell ([1896] 1967, 74)

ohan Gustaf Knut Wicksell was born on December 20, 1851, in Stockholm, Sweden. Wicksell may seem like an unlikely candidate for a symposium on underappreciated economists because his legacy and impact on economics broadly and the areas of marginal productivity theory, monetary economics, and public economics are acknowledged in most history of thought textbooks (Robbins 2000; Medema and Samuels 2003; Sandelin and Trautwein 2014). Yet Wicksell's impact on economics was, in many ways, indirect, and his name is therefore known among only a select few. Beyond the fact that he is little known, his unanimity principle for public decision making remains controversial and underappreciated. An essay reviewing his contribution to public finance in the context of his other work is therefore useful.

In his obituary following Wicksell's death, Bertil Ohlin (1926) highlighted three substantive areas of economic theory to which Wicksell importantly contributed: marginal productivity theory, public finance, and monetary theory. Ohlin (1926) argued that Wicksell was underappreciated even among economists of his

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time for two reasons: (1) English-speaking economics was woefully unaware of many of his contributions, because they were published in German, and (2) Wicksell was removed from practical life and had difficulty getting in touch with what Ohlin called "practical" economics. Ohlin blamed Wicksell's Austrian training for this lack of what we might today call policy relevance on Wicksell's part.

Most treatments of Wicksell's work more broadly begin with a description of his political activism, which preceded and inspired his formal training in political economy (Ohlin 1926; Sommarin 1930; Uhr 1951). Uhr (1951) suggested that Wicksell was a social reformer before he became an economist and that his economic training was motivated by a desire to perpetuate social reforms. Wicksell's position on population control was to advocate for the development and wider distribution of contraceptives. This position was motivated by a desire to abate poverty and resulted in Wicksell being labeled a neo-Malthusian. He had a distaste for the empiricism of the German Historical School and focused, in his own work, on a deductive mathematical method. He opposed institutionalized Christian religion and was a proponent of an expansion of the public sector, of free public schooling, population control, and universal suffrage but also qualified majorities, benefit taxation for public goods that benefited only some, and ability taxation only for those public goods that clearly benefited most citizens. Although his varied positions may make him appear an enigma from today's perspective, Wicksell was a consistent proponent of marginal benefit calculus and its application to both economics and politics. In what follows, I review his career more broadly. Then I summarize his contributions to marginal productivity theory, capital and interest, and monetary economics and highlight similarities in approach across his different contributions, which suggest that Wicksell was a consistent marginalist who consistently applied the logic of economic science across the different areas to which he contributed. Finally, I describe his contribution to public economics and in particular his articulation of the unanimity principle in greater detail, again highlighting how his contribution in this area was firmly rooted in a commitment to marginalism and a consistent application of the economic logic.

Wicksell's Academic Career and Social Reform Efforts

Wicksell joined the ranks of academic economists rather late in his life, at age fortynine, after prolonged studies that were interrupted only by his social activism. He initially studied mathematics at Uppsala University, receiving his first degree at the

^{1.} Bertil Ohlin (1926, 507) poked fun at John Maynard Keynes for not being aware of Wicksell's book Geldzins und Güterpreise. Quoting Keynes in his memorial to Marshall, Ohlin wrote: "It was an odd state of affairs that one of the most fundamental parts of monetary theory should, for about a quarter of a century, have been available to students nowhere except embedded in the form of question and answer before a Government Commission interested in a transitory practical problem.' If this surprise is justified, from Mr. Keynes' standpoint, what shall we say of the surprise felt in many quarters that a very full and comprehensive analysis has remained practically unknown among writers on monetary problems in Great Britain, only because it happened to be published in German?"

age of twenty-one in 1872. As he continued in his studies, he became very engaged in student activities and the social reform movement. He developed a reputation as a gifted speaker and even served as president of the students' association from 1878 to 1879. As a result of his success as a speaker, he was invited to lecture on different topics relating to social reform. On one such occasion in 1880, addressing the temperance organization on the causes of and remedies for alcoholism, Wicksell pointed to abject poverty as the primary reason why males, in particular, turned to alcoholism. He blamed excessive procreation as the primary cause of poverty and advocated for the development and use of contraception to stop what he thought was a trend of overpopulation. The content of his talk was summarized in the local newspaper, which created a public outcry against Wicksell. He subsequently came to be considered a neo-Malthusian and a moral nihilist (Uhr 1951, 833).

As a by-product of the upheaval he had generated with his public activism and lectures, Wicksell studied the population question more carefully, reading Malthus's Essay on the Principle of Population. Inspired by the book, he turned to the study of classical economics more broadly. He finished his second degree in mathematics in 1885 and then turned his attention to economics more fully, spending the next five years in England, Germany, Austria, and France (Sommarin 1930, 228). He obtained his doctoral degree in economics at the ripe age of forty-five, in 1895, and had to spend an additional four years after that studying law in order to be eligible for an academic appointment in political economy, which in Sweden, as in many other places at the time, belonged to the faculties of law. Starting in 1900, he served as assistant professor in political economy at Lund University, and he was promoted to full professor in 1904. His concerns regarding overpopulation and poverty remained, despite his training in economics, and he continued to publicly advocate for birth control and emigration. One talk he gave on the topic in 1908 even landed him in prison for two months for "violently offending the public against certain Christian beliefs" (Ohlin 1926, 510). During his time in prison, he published a special edition of his book on population, Die Lehre von der Bevölkerung. He retired from his position at Lund University in 1916.

Wicksell on Marginal Productivity Theory, Capital and Interest, and Monetary Economics

As outlined earlier, Wicksell made substantive contributions to several areas of economic theory, including marginal productivity theory, monetary economics, and public economics. Uhr (1951, 842) described Wicksell as "a founder of the marginal productivity theory" and explained that Wicksell reconciled insights from William Stanley Jevons and Carl Menger regarding marginalist analysis with Eugen von Böhm-Bawerk's analysis of capital and the Walrasian general equilibrium theory in a way that revealed multiple causal connections between different variables in these models. More concretely, Wicksell's insight into marginal productivity theory was

that producers maximize profit by producing where the marginal rate of technical substitution between input factors equals the price ratio between said inputs, which is, to this day, one of the fundamental insights taught to students in intermediate microeconomics courses (Uhr 1951). This insight is a direct application of the equimarginal principle to the production side of the economy, identifying the relevant choice variables (input price ratios and marginal rates of substitution) and their relationships in production equilibrium.

Beyond this important theoretical insight, Wicksell contributed to Austrian capital theory by extending Böhm-Bawerk's work on the topic. He articulated an explicit theory of interest as the marginal productivity of waiting and constructed a dynamic theory of the interplay between interest rates and capital accumulation, which was later extended into the Austrian theory of the business cycle by, among others, Friedrich A. Hayek (Uhr 1951, 848). With this, as with his contribution to marginal productivity theory, Wicksell again identified the relevant choice variables for economic actors in financial markets as well as the relationship between those variables in equilibrium.

Finally, Wicksell contributed to monetary theory by being the first to articulate aggregate demand and supply analysis and emphasizing the relationship between investment and savings (Uhr 1951, 852).

Across these different contributions to economics, a theme of consistent marginalist thinking emerges. Throughout all of his various contributions, Wicksell seems to have focused on the following logic of economic science. He

- a. identified the relevant choice variables for each economic problem (consumption, production, savings/investment),
- b. articulated the particular equimarginal principle that characterizes equilibrium, and
- c. gave an account of the dynamic effects of changes in the variables underlying the larger theoretical construct.

As a result, he was keenly aware of and able to articulate clearly

- the information relevant for individual choice in each situation (consumer preferences, technological possibilities, relative scarcities expressed in the form of factor prices, time preferences), which is contained in the variables describing equilibrium conditions, and
- 2. potential disturbances to the theoretical apparatus he had described.

This pattern of clearly articulating the relevant choice variables, the equimarginal principle inherent in those choice variables, and potential disturbances to equilibrium is the blueprint for most of Wicksell's work. Mats Lundahl (2015), building on Johan Åkerman (1933), even made the case that it extends to his theory of population, which had otherwise been considered doctrinaire and lacking in originality. As I will argue later in this essay, the same blueprint of identifying relevant choice

variables and their equilibrium conditions also applies to his theory of public finance articulated in *Finanztheoretische Untersuchungen*. His articulation of the unanimity principle as a tool for parliamentary decision making that would ensure equality between value and countervalue—that is, the marginal benefits of public goods production to the individual would equal marginal tax prices for the same individual—may have been his most original insight. It also remains his most underappreciated and controversial idea.

The Unanimity Rule: Consistent Application of the Logic of Economic Science

Knut Wicksell began his essay titled "A New Principle of Just Taxation" in his book *Finanztheoretische Untersuchungen* ([1896] 1992) with the declaration that although the title of his essay suggested a heterodox position, what he was actually doing was simply applying what has come to be known as the equimarginal principle to public service: "The principle as such is, in reality, nothing more than the benefit principle, the well-known principle of equality between Value and Countervalue." He continued that what was novel about his treatment of the principle of value and countervalue was simply the fact that he was applying it not only to public services and the individual's contributions for these services but also to parliamentary approval of taxes. His proposal was "to describe the conditions in which the Value and Countervalue principle could be used more or less automatically by parliamentary tax bodies" (Wicksell [1896] 1967, 72).

After a detailed discussion of the advantages of the benefits principle applied to public expenditures more generally, Wicksell turned his attention to the application of the principle to parliamentary decision making. He began this discussion with the assertion that "It is not necessary either from the theoretical or from the practical point of view that tax distribution should be so rigid and pre-determined, nor indeed that it should be independent of the approval of expenditure itself" (Wicksell [1896] 1967, 89). Wicksell essentially questioned the now common practice of considering the benefits and the costs of public expenditure projects in isolation. Instead, he suggested that there are significant advantages to considering both the specific tax prices and the benefits of a public expenditure project simultaneously. This assertion implicitly suggests that by focusing on the levying of taxes for public revenue as distinct from the discussion of public expenditure projects, parliamentary bodies have intentionally separated considerations of benefits and costs of public goods projects in a way that has prevented application of the benefits principle to public goods production. He went on:

Provided the expenditure in question holds out any prospect at all of creating utility exceeding costs, it will always be theoretically possible, and approximately so in practice, to find a distribution of costs such that all parties regard the expenditure as beneficial and may therefore approve it unanimously. Should this prove altogether impossible, I would consider such failure as an a posteriori, and the sole possible, proof that the state activity under consideration would not provide the community with utility corresponding to the necessary sacrifice and should hence be rejected on rational grounds. (Wicksell [1896] 1967, 89–90)

These few short sentences communicate the core of Wicksell's insight regarding a consistent application of the equimarginal principle, or the "principle of Value and Countervalue," as he called it, to the public sphere. His discussion suggests that most public expenditure projects cannot be justified unless they are able to command support from a majority of the constituents, because a failure to achieve unanimous support implies that the expected benefits from a public expenditure project do not exceed the costs in terms of additional taxation to the population. His discussion here is evidence that Wicksell was a consistent theoretical economist across all of his different contributions focusing on the equality of marginal benefits and marginal cost in equilibrium. As discussed earlier, this tendency of human systems to equilibrate and produce what he called economically just outcomes when the choice-relevant magnitudes are considered and allowed to equilibrate is consistent throughout all of Wicksell's work: population, marginal productivity of capital, monetary economics, and public finance.

Wicksell's proposal for unanimity in public decision making stemmed from his desire to design a system that was economically just in the sense that people should not have to pay for public goods and services in excess of the benefits they receive. Marianne Johnson (2010) quoted Wicksell as stating (as translated by Lars Jonung 1988, 509), "[M]y claim is now only that the degree of justice, which characterizes voluntary exchange, namely that nobody needs to pay more for a commodity than he believes it to be worth, should be adopted in public taxation." A unanimity rule provided the requisite institutional structure that would ensure that everyone's preferences were politically represented and no group, no matter how big or small, could be exploited by a majority as a result of limitations on the franchise or voting rules that allowed democratic preference domination.

Wicksell cared mostly about adopting a principle of public decision making that would ensure voluntary consent. His proposal of adopting a unanimity principle was guided by the insight that economic justice was realized when individual marginal benefits equaled individual marginal costs. He believed that only the unanimity principle could ensure representation of the preferences of all social groups and that it would make public decision-making processes more like private decision-making process in markets. This preference for economically just taxation is also revealed in his admission that minority rights of veto or approximate unanimity were reasonable alternatives for unanimity (Wicksell [1896] 1967, 108).

Unlike some of the most well-known later proponents of his unanimity principle, such as James Buchanan, Wicksell believed that a successful implementation

of his principle (of voluntary consent) would result in an increase in the number of activities undertaken by government:

If the distribution of taxes always rested on the principle of voluntary consent, it seems to me highly probable that many such activities which today can be undertaken only by private groups, would come to be incorporated into the operation of the state. The bitter opposition which now confronts the introduction of many very useful state institutions would largely disappear as soon as each individual could be certain that he would never be burdened with a larger share of their costs than he personally or his interest group had accepted through their representative in the legislature. (Wicksell [1896] 1967, 91)

Given that Wicksell seems to have had an Austrian process perspective on exchange as a type of human interaction paired with the understanding that aggregate outcomes of individual choice would at least meet a standard of economic justice (albeit not necessarily a welfare maximum), it does not seem far-fetched to interpret his belief that the public sector would expand if it were modeled on the logic of equilibrating the relevant choice variables (i.e., individual marginal benefit and individual marginal cost) as a belief that rational agents would latch onto and use a process of public decision making reflecting economic justice concerns more widely. Clearly, this had been the case with the market mechanism as a technology that expanded the scope for economic exchange.

Wicksell's theory was firmly rooted in Sweden's empirical historical reality wherein farmers, who were not otherwise represented in the Swedish parliament, nevertheless had the right to veto any imposition of new taxes (Wagner 1988, 158).

Despite this focus on economic justice, Wicksell also insisted on an inclusion of social justice concerns in public decision-making processes. He proposed mechanisms that would ensure a relatively more equal distribution of resources to allow for economically just outcomes. More specifically, Wicksell proposed confiscatory inheritance taxes, which would create a process of social leveling of opportunity, which he believed would yield greater overall utility for society than a free enterprise system (Johnson 2010). Buchanan justified his arguments in favor of redistribution (and inheritance taxes specifically) along similar lines (Gordon 1994) but also based on the fact that inheritances, as noncompensated transfers, represent rents, which come with all of the inefficiency costs of associated rent-seeking activities (Buchanan 1983).

Another way in which Wicksell's focus on economic justice and the equimarginal principle as a tool to achieve such justice is revealed is in his discussion of the enemies of political and economic justice (Silvestre 2003). Wicksell was particularly concerned with political injustice resulting from the following five sources: (1) the influence of a privately motivated executive; (2) the political power of the wealthy, who even with universal suffrage enjoyed undue influence by virtue of the fact that

they were overrepresented in "the whole legislative and tax approval machinery" (Wicksell [1896] 1967, 87); (3) the potential for a tyranny of accidental parliamentary majorities; (4) the potential for an inefficient spending spiral; and (5) obstructionism by a minority with veto power. All of these sources of political injustice ultimately result in a movement away from a consistent execution of the equimarginal principle in the public sphere and therefore represent movement away from what Wicksell considered economic justice (Buchanan 1952).

Conclusion

Knut Wicksell's contributions to economics spanned productivity theory, monetary economics, and public economics. Beyond his scholarship in economics, he also published on and publicly discussed population theory. Across all of his contributions, Wicksell was a consistent marginalist and faithfully applied the logic of economic science consisting in the principle of value and countervalue (the equimarginal principle). His faithful application of what he called the principle of value and countervalue was inspired by his belief that a system based on this principle would produce economically just outcomes in the sense that "each man received his money's worth" (Wicksell [1896] 1967, 75).

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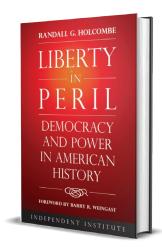
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