



J. Adam Tooze. *Statistics and the German State: The Making of Modern Economic Knowledge.* Cambridge: Cambridge University Press, 2001. xviii + 314 pp. \$75.00 (cloth), ISBN 978-0-521-80318-2.



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The Abuse of Numbers

The generation and exploitation of social and economic knowledge by the state is one of the cardinal themes of modern German history. German states were innovators in systematic collection of data by bureaucratic offices and were among the first to apply the knowledge derived from statistics to policy. Some of the earliest guises of that role include the repopulation policies of the Prussian crown. More familiar will be the pioneering development of social insurance schemes of the 1880s as well as the systems of planning and surveillance of the twentieth century, all of which required the collection and tabulation of vast amounts of statistical data. Paralleling this theme is a vibrant tradition of heterodox economic and statistical thinking in Germany, which includes the German Historical School and its many offshoots. A lesser known but important part of that story is Germany's role in the development of economic statistics and aggregate models of the economy in the early twentieth century. In *Statistics and the German State*, J. Adam Tooze explores this process of statistical and macroeconomic innovation in Weimar and Nazi Germany. Focusing on "the relationship between efforts to govern the economy and efforts to make the economy intelli-

ble through systematic quantification" (p. 4), he argues that the systems of economic statistics much taken for granted today, specifically balance of payments figures, unemployment statistics, and national income accounts, had their origin in a brief period of intense statistical innovation confined to the first half of the twentieth century. It was at this time also that the economy came to be envisaged as an autonomous yet interconnected system of production, income, expenditure and consumption, that is, as a macroeconomic system responsive to monetary and fiscal policy. War, revolution, economic crisis, and unprecedented intervention in the economy were the midwives of these developments.

Rather than focusing on the prominent figures in the development of macroeconomics, Tooze seeks to recover the story of important but obscure contributors to this economic revolution in Germany in order to provide a more complete picture of the development of twentieth-century economics, one from which Germany has often been omitted. In so doing, Tooze aims to show "how the new macroeconomic theory formed the basis for an innovative programme of statistical investigation, heavily

sponsored by the Weimar state” (pp. 15-16). His broader claim is that “Germany must be counted alongside the United States, the Soviet Union, Britain, Sweden, and the Netherlands as an important site in the development of modern economic statistics” (p. 16). Rather than a simple story of diffusion of Keynesian ideas, then, the German case suggests a more general wave of innovation toward macroeconomics that included Berlin no less than Cambridge.

Chapter one reveals how the old federal statistical regime of the Wilhelmine era—curiously archaic in its inability to penetrate the industrial sector and in the weight it gave agriculture and artisans—came crashing down in the face of the combined challenges of a rapidly changed workplace, the rise of large enterprise, and the pressures of total war. Management of raw materials and related data collection were spearheaded by captains of industry and the military in the War Raw Materials Office, a process that completely sidelined the Imperial Statistical Office, whose data was in any case either inadequate or outdated. Bungled management of food supplies and wildly inaccurate estimates of agricultural production generated by the Statistical Office underscored the basic inadequacies of existing survey methods.

The second chapter recounts how German statistics rose from these ashes after the war to become a beneficiary of the centralization of power and the national system of economic administration that had emerged during the war, enshrined in the new Weimar Ministries for Economic Affairs, Labor, and Food and Agriculture. The central figure in this narrative is Ernst Wagemann. He headed the Reich Statistical Office as well as the state-sponsored Institute for Business-Cycle Research after the war. Serving an increasingly interventionist Ministry of Economic Affairs, postwar official statistics were forged into a tool to monitor the capitalist economy and thus were “reshaped into a recognizably modern form of economic knowledge” (p. 80). Postwar surveys of earnings and the compilation of a national cost of living index were similar innovations. These and other statistical novelties culminated in the creation of the Institute for Business-Cycle Research in 1925, the subject of chapter three. The Institute was a creature of the economic crisis of the immediate postwar years, charged with the task of monitoring the economy and identifying fluctuations in the business cycle. The Institute sought to disaggregate seasonal from cyclical fluctuations and establish a direct relationship between money, on the one hand, and output and trade balances, on the other. The tasks of the Institute thus included estimating and predicting the

economic outlook for policy-makers based on an explicitly macroeconomic model of the economy using time-series data. Tooze claims that this program “was a pioneering effort in empirical macroeconomics. The Institute and the Statistical Office helped to shape the intellectual universe that we still inhabit today” (pp. 104-105). Tooze thus believes that Wagemann has not been given his rightful place in the pantheon of economic thinkers who created modern macroeconomics (p. 110).

Wagemann’s theoretical significance has to do with his early development of an equation of exchange that amounted to a circular flow of aggregate economic activity in which the value of production equaled production costs and profit, which in turn was equivalent to total national income. This income was either consumed or saved and equivalent to the value of all goods produced for consumption or investment. Money figured in this model only as a unit of account. From a contemporary perspective, this is an entirely conventional form of national income accounting that forms the bread and butter of modern macroeconomics, yet Wagemann developed it in 1923, well before the “Keynesian revolution” of the late 1930s. While the originality of Wagemann’s work is open to question, there is no doubt about its usefulness to Weimar Germany in the 1920s. As Tooze puts it, Wagemann’s was “a classic modernist project: an attempt to create a practical economic science that would direct the state in its efforts to tame the fluctuations of the capitalist economy” (p. 130). The remarkable success of the Statistical Office and Institute for Business-Cycle Research in realizing Wagemann’s ambitions had much to do with the backing of important allies in the Reich Ministry for Economic Affairs, Ministry of Finance, and Reich Savings Commission, as well as the backing of the most important German business organization, the Reich Association of German Industry, and the German trade unions. Wagemann enjoyed unprecedented access to high quality business and labor statistics accompanied by a thoroughgoing rationalization and mechanization of data collection and processing. By 1927 Wagemann and his economists had refined their work sufficiently to be able to prescribe carefully-timed government expenditure to stimulate demand.

Chapter 4 explores the negative impact of the Great Depression and the Brüning government on Wagemann’s work and influence. The Institute disseminated dire warnings of depression and radical proposals for banking reform and reflation via an extensive palette of publications with a large readership, especially in industry. These were at odds both with the rosy pro-

nouncements of the Brüning government and its official policy of deflation, providing potent ammunition for the government's many critics. Not surprisingly, the government reacted with a series of painful austerity measures for the Statistical Office and Institute and concerted attacks on Wagemann's person. Meanwhile, Wagemann drifted into the orbit of the National Socialists. In the fifth chapter, Tooze recounts how Wagemann, the Statistical Office and the Institute weathered the Nazi seizure of power. Despite his contacts to the likes of Gregor Strasser and Gottfried Feder, Wagemann's economic heterodoxy ran him afoul of elements of the DNVP in Hitler's first cabinet, notably Alfred Hugenberg. Sacked from the directorship of the Statistical Office, Wagemann nevertheless had sufficient allies within the Nazi movement to spare him his position in the Institute. Far from representing a radical break with the past, the early years of Nazi rule in the realm of statistics and economic policy are depicted by Tooze as ones of considerable continuity with Weimar-era trends, notably the increased centralization of national economic governance, consolidation of Reich and state statistical offices, expanded business reporting, and experimentation with reflationary fiscal policy. Indeed, the Statistical Office and Institute retained considerable autonomy to innovate. What is more, massive rearmament opened up new vistas of statistical opportunity to realize ambitions long thwarted during the Weimar era. The gargantuan census of industrial production organized by Wilhelm Leisse and the attempts to trace the flow of all transactions throughout the economy by way of input-output tables spearheaded by Paul Bramstedt were but two examples of opportunities seized. A countervailing trend to economic policy centralization was, however, the vast profusion of Nazi Party and state agencies, each with their own remit and hunger for data. Nevertheless a series of bilateral agreements between these agencies and the Statistical Office coordinated data gathering and gained for the Office an unprecedented range of economic statistics.

The trend of continuity and enhanced opportunity for macroeconomic and statistical projects tied to centralized economic control would be short lived, a victim of both the cumulatively radicalizing and polycratic tendencies of the Nazi regime and factional politics driven by ambition and opportunism within the statistical establishment. In chapter 6, Tooze reconstructs and analyzes this process, focusing on the power struggle between Goering and Hjalmar Schacht in 1937, the outcome of which heralded new opportunities for those economists and statisticians like Leisse who had hitched their fate to Goering's

ascending star. Leisse gained his own statistical fiefdom, the new Reich Office for Military-Economic Planning. Less politically astute statisticians and economists lost out. Leisse's office, with its fantasy of total centralized control based on physical balances, became hopelessly bogged down and ineffectual, failing to draw up mobilization plans for key raw materials by the time the war began. It was disbanded in 1940. More effective and sinister were the totalitarian statistical initiatives of Walter Gräbvell's Central Statistical Committee, which focused on comprehensive surveillance of firms through a decentralized and continually updated industrial reporting system that eventually included no fewer than 80,000 firms.

In his final chapter, Tooze takes the story of German statistics through the war years. The ascent of Fritz Todt and then Albert Speer and the creation of a central planning committee for armaments (Zentrale Planung) offered new opportunities for ambitious statisticians like Gräbvell and Wagemann to develop a "comprehensive information system for central planning" (p. 253). Wagemann and his Institute (renamed the German Institute for Economic Research [DIW]) reentered the political limelight in these years, applying the knowledge gained from business-cycle research in the 1920s to the task of central planning in wartime and thus gaining a position of privilege in Speer's ministry. The key to its success was the comprehensive view it took of the economy. Every area of production was subsequently subordinated to a steering area (*Lenkungsberreich*) directed by a Reich Agency, while fulfilling the actual plans was left to business groups within the respective steering areas. Tooze attributes the surge in German wartime production after 1942 not only to rationalization at the level of the firm but also to "a crude but effective system of central economic planning" (p. 272) which must be credited to the efforts of energetic personnel in the DIW and Zentrale Planung, and not least, to Wagemann's macroeconomic model of a circular flow. The work done to rationalize Nazi Germany's planning system in the last years of the war was not so much a departure as a culmination of the statistical and macroeconomic work of business-cycle research begun in the early years of the Weimar Republic. Nevertheless, Tooze highlights the inexorable permutation of this planning system in war into forms that bore uncanny resemblance to Stalinist central planning; in their overarching drive to central control and surveillance, Nazi economic planners were creating a system that would have ultimately destroyed the autonomy of the private sector.

Tooze's monograph is based on an impressive range of archival sources, including the personal papers of

economists and statisticians, federal and state ministerial papers, and much material from company archives. He also tells his story with great competence, and despite its technical nature, with remarkable clarity and fluidity. If this book has one vice, it is its rambling, thirty-nine-page introduction, which indulges numerous tangents: the increasing measurability of the modern economy; the expansion of and crisis of the interwar German state; the role of official statisticians vis-a-vis the private sector, civil society and state elites; and not least, new technologies of data collection and processing. While these and other topics have an undoubted relevance to the subject as context, they could have been introduced and integrated into the narrative far more effectively. Missing from the introduction is some navigation through the arguments of the book. A historical subject as complex as the emergence of modern economic statistics and macroeconomics would have been far better served by a more disciplined and coherent introduction. A related problem is Tooze's casual historiographical contextualization of his project. The "early history of statistics" is *not* "a field that has recently begun to attract historians" (p. 2). Such research has in fact been underway since the 1960s. Significant literature that has helped to shape our current understanding of the relationship between empirical research, statistics, and policy in Germany is missing from this study or unacknowledged.[1] More recent relevant contributions, including Ted Porter's very important work on the rise of statistical thinking, David Lindenfeld's history of the German sciences of state, and Stephen Stigler's work on the history of statistical methods, which together mark significant milestones in the ongoing development and refinement of this historiography, are likewise missing from Tooze's discussion.[2]

Following the work of Detlev Peukert, G tz Aly, and Karl-Heinz Roth, Tooze interprets National Socialism as a pathologically modern system enabled by the technical expertise of statisticians and economists. It is to his credit that Tooze embraces this perspective critically, explicitly distancing himself from the technologically determinist and reductivist strands in these arguments. In this respect it is unfortunate that Tooze's discussion of National Socialism was not informed by the important work of Michael Burleigh on the psychiatric profession and *Ostforschung*, Ulrich Herbert's biography of Werner Best, or Jeffrey Herf's work on reactionary modernism, which would have lent the engagement with the "modernity" of the Nazi system and its ambitious technocrats needed conceptual precision, greater analytical sophistication, and a valuable comparative dimen-

sion.[3] This somewhat casual discussion of the historiography of Nazism as it relates to its technocratic elites and the problem of modernity parallels the rather cursory engagement with the historiography of statistics and empirical social research outlined above.

These criticisms aside, there is no doubt that Tooze's impressive volume succeeds in its broader aim to "establish interwar Germany as a major site of conceptual and empirical innovation in the realm of modern economic knowledge" (p. 290). He is also surely right that we gain much by broadening our perspective beyond the canonical figures in the history of macroeconomic thought. In this respect the author does indeed break fresh ground. Whether Germany is as important or significant as Britain or Scandinavia in that history, or whether Wagemann deserves the sort of attention that Keynes, Frisch, Haavelmo, or Tinbergen have received will remain a matter of opinion. But readers will gain valuable insights into the historical context and interconnectedness of the macroeconomic revolution that unfolded in the West in the first half of the twentieth century, a revolution that has had a profound impact on the lives of millions of people in war and peace. Tooze provides a detailed understanding not only of the role of statisticians and economists in German economic policy before 1945 but also a valuable historical reminder of the dangers of opportunistic technocrats loosened from legal moorings and rational political checks.

Notes

[1]. Anthony Oberschall, *Empirical Social Research in Germany 1848-1914* (Paris: Mouton, 1965); Ulla G. Sch fer, *Historische National konomie und Sozialstatistik als Gesellschaftswissenschaften* (Cologne: B hlau Verlag, 1971); Susanne P. Schad-Somers, *Empirical Social Research in Weimar-Germany* (Paris: Mouton, 1972).

[2]. Theodor M. Porter, *The Rise of Statistical Thinking 1820-1900* (Princeton: Princeton University Press, 1986); David F. Lindenfeld, *The Practical Imagination: the German Sciences of State in the Nineteenth Century* (Chicago: University of Chicago Press, 1997); Stephen M. Stigler, *Statistics on the Table: The History of Statistical Concepts and Methods* (Cambridge: Harvard University Press, 1999).

[3]. Michael Burleigh, *Germany Turns Eastwards: A Study of Ostforschung in the Third Reich* (Cambridge: Cambridge University Press, 1988); Michael Burleigh, *Death and Deliverance: "Euthanasia" in Germany c.*

1900-1945 (Cambridge: Cambridge University Press, 1994); Ulrich Herbert, *Best: Biographische Studien Ã¼ber Radikalismus, Weltanschauung und Vernunft, 1903-1989* (Bonn: J. H. W. Dietz, 1996); Jeffrey Herf, *Reactionary Modernism: Technology, Culture and Politics in Weimar and the Third Reich* (Cambridge: Cambridge University Press, 1984).

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