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The Austrian School in the NBER's Business Cycle Studies

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ABSTRACT: This paper is a review of Austrian School references in business cycle studies published by the National Bureau of Economic Research. The NBER's business cycle chronology is limited by its exclusion of the Panic of 1819, described by Rothbard (1962). Another limitation of most NBER cycle literature is a non-reliance on historical accounts. NBER cycle studies focus on the Hayekian version of Austrian business cycle theory (ABCT), an endogenous theory. They overlook exogenous Misesian and Rothbardian versions of ABCT. Business annals were used by Mises, Hayek, and Rothbard, and are part of the Austrian tradition. Annals appear in NBER cycle studies starting with Thorp (1926) and ending with Zarnowitz (1992).

KEYWORDS: Austrian business cycle theory, National Bureau of Economic Research

JEL CLASSIFICATION: B25, E32

INTRODUCTION

The National Bureau of Economic Research has published 32 "studies in business cycles" in its 90-year history. References to

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Austrian business cycle theory are fairly uncommon in the NBER's cycle studies.[1] The earliest reference, by Thorp (1926), includes research by Hayek and cites Mises (1915) as a source (p. 230) for Austria's business annals, a written, non-econometric historical account[2] of the 1912–13 period:

> 1912 Prosperity; recession; depression.
>
> Increasing activity and progress; Balkan War; autumn, plunges industry into deep depression; numerous failures; foreign trade very active.
>
> Severe monetary strain; active speculation, especially first half-year; bourse severely depressed, last quarter; Balkan moratoria cause difficulties.
>
> Excellent crops.
>
> Revival of emigration; uncertainty due to Balkan War; October.
>
> 1913 Depression; panic.
>
> Widespread inactivity; much unemployment; foreign trade declines sharply.
>
> Money tight; financial panic necessitates moratorium; bourse dull.
>
> Fair rye and wheat, excellent oat crops.
>
> Internal and external political troubles; record emigration; army mobilized for several months fearing Russian aggression.

Mitchell (1927, 1956) cites Hayek, Böhm-Bawerk and Röpke (1922, 1926),[3] but references to ABCT were infrequent in the ensuing eight

[1] One exception is Zarnowitz (1992), who cites Mises, Hayek (1933) and Haberler (1937, 1964).

[2] Rothbard (1963, 2000) features a historical account (pp. 111–12) of inflation in the 1920s. The NBER, after its 1920 founding, tried to identify business cycles by creating annals of the U.S. and England (1790–1925), France (1840–1925), Germany (1853–1925), Austria (1867–1925), and 12 other countries (1890–1925). (Moore and Zarnowitz in Gordon [1986, p. 743]) The annals were based on official documents, reports by contemporary observers and students of economic history, periodicals, pamphlets, and books.

[3] Mitchell cites Hayek in his introduction (p. 19) to Thorp (1926), and explains his contribution to the Austrian annals. Kauder (1965) discusses Mitchell and Hayek's correspondence. Mitchell cites Böhm-Bawerk in this passage (pp. 451–52): "As late as 1898, Böhm-Bawerk thought it necessary to argue that a theory of crisis "should

decades.[4] NBER researchers Mitchell and Burns (1946), using an inductive-measurement method,[5] include a 13-page discussion of Schumpeter (1939).[6] NBER researchers cited Schumpeter in studies published in each subsequent decade.[7]

Econometric critics including Koopmans (1947) attacked the inductive-measurement method, and by the early 1950s their efforts to introduce statistical measures bore fruit at the NBER.

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always form the last, or next-to-the-last, chapter in a system of economic theory, written or unwritten. The converse view, that ideas developed in the study of business fluctuations may lead to reformulations of economic theory, still strikes most economists as strange." Mitchell cites Röpke in this passage (p. 35): "The "real cyclical bacillus" he finds in periodic variations of the ratio between accumulation and consumption, which cannot be altered much without producing serious disturbances in the process of exchange. But these periodic variations in the volume of credit--changes which appear in discrepancies between the real and nominal rates of interest, in the liquidity of the credit-granting banks and in their operating policies." Mitchell may not have cited Mises (1912) because his work had not been translated into English in 1927.

[4] Haberler is among Austrians cited. Hultgren (1948, p. 73) cites Haberler (1941) on cost theories. Zarnowitz (1992, p. 16) cites Haberler (1937, 1964) on the underconsumption theory, which is termed "a theory of the crisis and depression rather than a theory of the cycle;" (p. 113) "the contemporaneous evolution of "classical" economists' views on unemployment and policies;" (p. 155) the link between "the stickiness of wages" and "the stagflation of the 1970s;" and (p. 169) endogenous business cycle theories.

[5] Mitchell and Burns, according to Rutherford (2004, p. 32) were among a particularly large concentration of institutional economists at New York's Columbia University. An element of institutional economics in cycle studies is its emphasis on empirical research and measurement. Mitchell saw quantitative and statistical work combined with policy experiments as "the closest approach to the methods of the natural sciences possible in economics (Rutherford, 1998, p. 19). Mitchell argued in an early essay (1896, p. 157), "Deductive reasoning is proverbially likely to lead the inquirer astray, unless its results are checked and corrected by inductive investigation." Austrians, by contrast, approach the business cycle as an exercise in deductive reasoning, not measurement. See Mises (1949, pp. 7–8); and Rothbard (1962, 1970, p. 26; and 1976, p. 22).

[6] Burns and Mitchell discuss Schumpeterian cycle theory and its use of waves, which also serve as the basis for empirical research in physics. Burns's papers at the Dwight D. Eisenhower Presidential Library in Abilene, Kansas also include two articles by Austrian Benjamin M. Anderson, Jr., published in 1929 and 1931 (Box 198).

[7] Burns (1969, p. 12) terms Schumpeter among the "small number of economists" that made "truly outstanding contributions to knowledge of business cycles." Other citations are by Abramovitz (1950, pp. 23, 494), Friedman and Schwartz (1970, p. 95n), Gordon (1986, p. 1), and Zarnowitz (1992, pp. xvi, 9, 31, 239).

Gordon (1986, p. 27) describes this methodological dispute, won by econometricians. Serious consideration of ABCT, which does not rely on econometrics, was one casualty. Haberler (1937) is an NBER business cycle study by a neo-Austrian published pre-dispute. Mitchell (1951, pp. 4–5) termed Haberler (1937), "an excellent beginning," while adding the following caveat: "the next stage in this investigation—the application, as far as possible, of quantitative tests to the various causal hypotheses" was a much more formidable undertaking." Mitchell suggested that Tinbergen (1939),[8] an econometrician, undertook this step, applying "multiple correlation analysis to test several hypotheses concerning the inter-relations among cyclical fluctuations in different activities."

Austrian economists, with rare exceptions, disappeared from NBER business cycle studies in the second half of the twentieth century.[9] One exception was Morgenstern (1963, pp. 261–72),[10] who warned about revisions in measurement. Cole (1969, p. 4) explains Morgenstern's warning in the following passage:

> On the other hand, the fact that a component is revised is no guarantee that it is more accurate. Indeed, one of the questions not explicitly considered in the earlier studies is whether or not the revisions actually improve the accuracy of the estimates. Though unlikely, it is nevertheless possible, as Morgenstern has emphasized, for the revisions to be perverse and augment measurement error.

[8] Mitchell terms Tinbergen (1939) "notable for its blend of statistical skill with theoretical finesse, and the cautiously stated conclusions are highly suggestive." The importance of developing refutable hypotheses" was stressed by Tinbergen at a 1951 NBER Business Cycle Conference.

[9] Mintz (1967) is another exception.

[10] Ekelund (1997) identifies Morgenstern with the Austrian School: "Oskar Morgenstern considered himself, first, last, and always, a direct descendant of and a worker in the Austrian tradition. In 1969, when he visited Texas A&M for several long stints, Morgenstern lectured to my "thought" classes on Austrian economics and its development in America." Morgenstern (1959) examines how cycles spread from country to country, concentrating in financial markets in major industrialized nations (U.S., Great Britain, Germany and France) in the gold standard era (1870–1949) and interwar period (1925–1938). Klein and Moore (1985, p. 285). See Zarnowitz (1992, p. 108) and Stock and Watson (1993, p. 280).

Chicago School economists including Cagan (1965) and Friedman and Schwartz (1970)[11] ignored ABCT, and other NBER researchers generally did not rely on economists using historical accounts in cycle research, except for Schumpeter.[12]

LIMITATIONS OF THE NBER'S CYCLE LITERATURE

Non-reliance on historical accounts is a limitation of most NBER cycle studies. ABCT's focus on the central bank's key role is another limitation: interest rates and the interaction of money and credit supplies are discussed, but the Federal Reserve escapes scrutiny. Zarnowitz (1992, p. 68) explains the Austrian emphasis on interest rates as a source of cyclical fluctuations in this passage:

> These received much attention in the literature from Wicksell and the Austrians to Keynes. Monetary intervention or excesses of credit creation were seen as causing interest rates to deviate from their equilibrium levels so that they fail to coordinate saving and investment decisions. Inconsistencies arise in the aggregate between the expectations of those who make these decisions and the expectations of the financial intermediaries. Monetarists opposed these ideas on the ground that investment and savings depend on the *real* interest rates, which cannot be affected by the banking system, except transitorily.

Zarnowitz (1992),[13] per Haberler (1937, 1964, p. 10) notes the importance of "the *interaction* of changes in money and credit with changes in economic activity:"

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[11] Friedman and Schwartz (1970, p. 95n) cite Schumpeter (1954, p. 288) on definitions of money, and his suggestion that John Law must be classed as a "theoretical metalist" (1954, pp. 321–22).

[12] The author is indebted to Dr. Joseph T. Salerno for the insight that Schumpeter was an Austrian in the Wieser-Hayek tradition. Schumpeter used historical accounts in cycle research, and was cited in all four NBER studies published in the 1980s: Moore (1983, pp. 262–63), Klein and Moore (1985, p. 6), Moore and Zarnowitz (1986), and Gordon (1986). Gordon (1986 NBER, p. 26) reports on the second major NBER conference on cycles. Schumpeter was also included in the first NBER conference (1949), whose proceedings were published in 1951. Schumpeter presented a defense of the historical approach to the analysis of cycles but died before he could revise his paper for the conference volume."According to Gordon, Mitchell agreed to discuss his forthcoming book (1951), but also died before the event began.

[13] The Hayekian version of ABCT is introduced (p. 31) in a section that reviews "Disparities and Common Elements in Some Early Theories" of self-sustaining

> It is clear that there are important disagreements among their theories, particularly with respect to the relative importance of monetary and real factors, long a major point of contention. But the dominant tone is one of awareness that what matters most is the *interaction* of changes in money and credit with changes in economic activity, particularly those connected with business investment. Most of the writers considered business cycles to be caused and conditioned by a number of factors and circumstances, and so their theories typically overlap and vary mainly in the emphasis accorded the different elements.[14]

Mises (1912, 1934, 1980) and Rothbard (1963, 2000) are explicit in identifying the central bank as the source of cycles, a point overlooked in the literature.

The NBER's cycle studies overlook exogenous Misesian and Rothbardian versions of ABCT. Rothbard (1963, 2000, p. 33) identifies Mises's theory as exogenous. Rothbard also maintained that cycles were exogenous to market forces.

NBER studies focus on the Hayekian version of ABCT, which is identified as endogenous. One example is Moore and Zarnowitz (1986, pp. 735–79), who cite Hayek in a footnote to the following paragraph that explains the difference between endogenous and exogenous cycle theories:

> [I]t is generally correct to see the early theories of business cycles as mainly endogenous, that is, concentrating on the internal relations of the economic system rather than on the effects of external shocks; as multicausal, that is, concerned with interactions of the real, monetary, and

cycles: "The classics of business cycle literature made lasting contributions to the description and analysis of the motion of industrialized market economies. They addressed the cumulative processes of inflationary expansions and deflationary contractions induced by bank credit fluctuations constrained by the availability of reserves under the gold standard (Hawtrey, 1913). The role of discrepancies between the market and the "natural" interest rates in this process was much explored following Knut Wicksell (1936 [1896]). At below-equilibrium market rates, excessive bank credit creation produces overinvestment in capital-goods industries and imposes "forced saving" on those whose incomes lag behind inflation" (Hayek, 1933).

[14] Zarnowitz says this is strongly confirmed by "numerous passages" in Robertson (1915), Mitchell (1927), Hayek (1933), and Pigou (1927). "For Schumpeter," he writes, "the basic mechanism of credit-financed innovations is of much greater intrinsic interest than the multitude of diverse "external factors," no matter how important the latter may be on any particular occasion."

> expectational factors; and as dynamic, that is, incorporating elements of long-term growth into the analysis of short-term instability.

The footnote reads:

> The characterizations above apply broadly to most of the principal contributions to the literature on business cycles in the period between the 1890s and the 1930s: Tugan-Baranovskii, Bouniatian, Aftalion, Pigou, Hawtrey, Robertson, Mitchell, Spiethoff, Schumpeter, and *Hayek*. [emphasis added]

Rothbard noted (1963, 2000, p. 33) the possibility of ABCT exogenous and endogenous theories in dismissing their relative unimportance to the overriding question of a cyclical theory's validity:

> Hayek believes that Mises's theory is somehow deficient because it is exogenous—because it holds that the generation of business cycles stems from interventionary acts rather than from acts of the market itself. This argument is difficult to fathom. Processes are either analyzed correctly or incorrectly; the only test of any analysis is its truth, not whether it is exogenous or endogenous. If the process is *really* exogenous, then the analysis should reveal this fact. The same holds true for endogenous processes. No particular virtue attaches to a theory because it is one or the other.

Zarnowitz (1992) cites more Austrians than any NBER study. His focus is on Hayek, noting similar views on the role of the price-cost movement shared with Mitchell; and Lucas's citation (1977, p. 7) of him as an "intellectual ancestor" who posed the problem of explaining the business cycle as part, not a contradiction, of the equilibrium theory.[15] Misesian and Rothbardian versions are overlooked.[16]

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[15] Zarnowitz (1992, p. 53) writes, "This was indeed Hayek's intent, but it is also correct to characterize his solution as a theory of monetary disequilibrium and an unstable cumulative process, with excessive credit creation causing distortions of relative prices and the structure of production (as Hayek 1933 and 1939 are commonly interpreted)."

[16] Zarnowitz (1992, p. 68) refers to "the real part of the theories of Hayek and Mises." Rothbard and Mises disagree about whether a cycle can occur under a 100 percent gold reserve standard. Mises (1949) discusses trade cycle theory in the book's section on the free market. Rothbard (1963, pp. 34–36) says Mises did so "because he believed that a boom–bust cycle could also be generated by an

APPLYING BUSINESS ANNALS TO THE NBER'S PRE-CYCLE CHRONOLOGY

Mises (1915), Thorp (1926), Burns and Mitchell (1946), Rothbard (1962a), and Zarnowitz (1992) all employ business *annals* in their research. By contrast, the NBER's Business Cycle Dating Committee, the unofficial arbiter of U.S. cyclical turning points, maintains a *monthly* chronology of expansions and recessions dating to December 1854.[17, 18] The chronology dates to Burns and Mitchell, who also present earlier "calendar year reference dates" (78, cols. 8, 9) that originate with Thorp.[19] These calendar years span two decades from 1834 to 1854. The unreliability and inconsistency of economic data, pre-1854, is the main reason Burns and Mitchell identify turning points in this 20-year period in an *annual*, rather than *monthly* basis.

Rothbard (1962a, p. 19) contends that the NBER, "within its own definitions, was correct in beginning its reference dates for American business cycles with the 1834–38 cycle and not earlier." But Rothbard is agnostic on the issue of whether pre-1834 annals should be included in the chronology, summarizing arguments for and against inclusion. He notes there are reasons for excluding the pre-1834 period from the cycle chronology: "A crisis occurring in the midst of a depressed period—as happened to much of manufacturing in 1819—is more a feature of early precyclical crisis as described by Mitchell.

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increase in gold money, provided that the gold entered the loan market before all its price-raising effects had been completed." Rothbard argues any "crisis" and temporary readjustment to malinvestments would be better termed irregular fluctuations than regular processes of the business cycle.

[17] The chronology is posted at: http://www.nber.org/cycles/cyclesmain.html.

[18] Cloos (1963a,b) is a critique of the NBER's cycle chronology by a Federal Reserve economist. See Zarnowitz (1963) for a rejoinder. Romer, (1994, 1999) chair of President Barack Obama's Council of Economic Advisers presents an alternative chronology. Vedder and Galloway (1991) question "statistical revisions" that serve "to distort the historical experience" in 1946, not the NBER's determination that a recession occurred between February and October 1945.

[19] The "first step toward identifying business cycles" undertaken by Burns and Mitchell (1946, p. 76) was "to identify the turns of general business activity indicated by" Thorp's annals, i.e., the same report that cited Mises's annals for Austria in the 1912–13 period.

Rothbard observes that "production and transportation" in pre-1834 America were "in a relatively backward state, with such a large proportion of production on the farms and in self-sufficient households," not a nascent manufacturing sector.

There are also reasons, according to Rothbard, for including the pre-1834 period:

> On the other hand, as the greatest and last major crisis before 1836, the panic of 1819 holds considerable interest for the study of business cycles and for the present day. It was an economy in transition, as it were, to a state where business cycles as we know them would develop.

These pre-1834 factors, Rothbard writes, included a "new shaky, banking structure "providing "a surge of bank notes;" "bank soundness, and bank failure;" and, for the first time, "urban unemployment."

A careful reading of Thorp (1926, pp. 113–25), Rothbard (1962a, pp. 4–19) and Gouge (1833, 1968, pp. 174–75)[20] reveal business annals describing similar economic conditions in the pre-1834 period. Both describe expansion of the money supply and credit in the years around the War of 1812. Thorp (p. 119) describes a "rapid expansion of bank notes" with "many banks formed" in 1812–1813. Rothbard (p. 4) observes a doubling of "bank notes outstanding" and an increase in the number of U.S. banks from 88 to 208 in 1811–1815. Both identify a suspension of specie payments outside New England in August 1814. Thorp and Rothbard disagree about the expansion's peak. Thorp describes depressed conditions starting in late 1815, while Rothbard says the boom continued into 1818, with peaks in many sectors. Both identify a credit contraction starting in 1818, with Rothbard (p. 12) noting a "severe monetary contraction, lasting through 1820" and leading "to a wave of bankruptcies throughout the country, particularly

[20] Rothbard (2002, p. 90) terms Gouge a "hard-money economist and historian." Gouge identifies contractions in the period after the Panic of 1819 in business annal format: (1821) "The effects of an expansion apparently commenced in the spring, begin to be felt in June or July, and by October the spirit of speculation is tolerably active;" (1825) "In July or August a violent reaction commences;" (1826) "The effects of the reaction are felt through the greater part of the year;" (1828) "Scarcity of money in May and September;" (1829) "Money is scarce till July;" (1831) "Reaction begins in October;" (1832) "Money scarce."

outside New England." Both observe revival starting in 1821. Rothbard (p. 16) notes that "the depression had begun to clear, and the economy was launched on a slow road to recovery." More importantly, Thorp and Rothbard agree on the onset of recession in 1818, followed by a severe contraction in 1819–1820 following excessive expansion of the financial sector, with revival in 1821. No other period, pre-1834, analyzed by Thorp or Rothbard or Gouge features a multi-year contraction.[21]

The following alternative cycle chronology for the pre-1854 era is created by including Rothbard (1962a) on the Panic of 1819, and Gouge (1833, 1968) on 1821–1834, to Thorp (1926) and Burns and Mitchell (1946) in the 1834–1854 period:

Table 1.

Peak	Trough
	Not Available
1818	1821
1825	1826
1828	1829
1831	1832
1833	1834
1836	1838
1839	1843
1845	1846
1846	1848
1853	December 1854

[21] Thorp noted recessions starting in 1825, 1828 and 1833. All were shorter than the Panic of 1819, and lasted less than two years. Gouge argued bank credit expansion led to economic booms followed by busts, and identified contractions in 1825, 1828, and 1832.

CONCLUSION

The NBER will continue as the unofficial arbiter of the U.S. business cycle chronology, widely followed within the economics profession and by popular financial media, unless the Austrian School presents a more compelling alternative. Analysis of data is compatible with Austrian economics as long as researchers recognize their limitations, a point made by Morgenstern (1963) in the NBER's own cycle literature. The Hayek (1933) version of ABCT is different than Mises (1912, 1934, 1980) or Rothbard (1962b, 1963), yet all permit the use of business annals and historical accounts. The use of annals and accounts are part of the Austrian tradition, which also features a complex, and correct theory of the cycle. The point is not to overthrow, in a clumsy, ham-handed manner, à la Cloos (1963) the government economist; the chronology assembled by a nonprofit organization during a 90-year period. Rather, the goal should be to complement the cycle chronology in those historical periods where the Austrian School possesses special insight.

Rothbard (1962a), the leading work within the economics profession on the Panic of 1819, is one example of special insight. The Panic of 1819 occurred over a multi-year period, starting in 1818 and ending in 1821, according to Rothbard and Gouge (1833, 1968), and qualifies for the chronology in terms of an annual basis that relies on annals, not the post-1854 period that attempts a monthly analysis.

No one disputes that a contraction occurred around the Panic of 1819. The only question, according to Burns and Mitchell, is whether the pre-1854 data is so unreliable and inconsistent that it excludes cyclical analysis. Burns and Mitchell maintained it warranted *inclusion* post-1834, but *exclusion* in earlier decades including the Panic of 1819. Rothbard and Gouge provide compelling counterarguments to Burns and Mitchell's judgment call about annual economic events in the earlier, pre-chronology period. None of the NBER's 32 business cycle studies published over a 90-year period indicate that Rothbard is incorrect about the existence of a Panic in 1819.[22]

[22] All 32 NBER cycle studies are listed in the bibliography.

Rothbard himself left open the question of whether this period qualified for the chronology. The answer to Rothbard's question ultimately depends on whether we look for guidance to the Burns-Mitchell interpretation, influenced by institutional economics and, succumbing later, to econometrics; or to an Austrian interpretation. The main reason for excluding the pre-1834 period from the cycle chronology, Rothbard notes is that it fails to meet the description of a cycle "as described by *Mitchell* (emphasis added)." The main reason for including the pre-1834 period, Rothbard observes, is the Panic of 1819's unique status as "the greatest and last major crisis before 1836," a period holding "considerable interest for the study of business cycles" until today. Complementing the chronology by including the periods before and after the Panic of 1819 is consistent with an Austrian interpretation.

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