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DOI:
10.1080/09672567.2016.1192842

Citation for published version (Harvard):
Backhouse, R & Boianovsky, M 2016, 'Secular stagnation: the history of a macroeconomic heresy', *European Journal of the History of Economic Thought*, vol. 23, no. 6, pp. 946-970. https://doi.org/10.1080/09672567.2016.1192842

The European Journal of the History of Economic Thought

ISSN: 0967-2567 (Print) 1469-5936 (Online) Journal homepage: http://www.tandfonline.com/loi/rejh20

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To cite this article: Roger E. Backhouse & Mauro Boianovsky (2016) Secular stagnation: The history of a macroeconomic heresy, The European Journal of the History of Economic Thought, 23:6, 946-970, DOI: 10.1080/09672567.2016.1192842

To link to this article: http://dx.doi.org/10.1080/09672567.2016.1192842

Published online: 02 Jun 2016.

Euro. J. History of Economic Thought, 2016
Vol. 23, No. 6, 946–970, http://dx.doi.org/10.1080/09672567.2016.1192842

Routledge
Taylor & Francis Group

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Roger E. Backhouse and Mauro Boianovsky

1. The re-discovery of secular stagnation

On 8 November 2013, at an IMF conference in honour of Stanley Fisher, Lawrence Summers revived the doctrine of "secular stagnation", an expression introduced by Alvin Hansen (1934, 1938, 1939). His reasons were that massive financial expansion before the 2007–2008 crisis had not produced any signs of overheating in the real economy, and once the crisis was resolved, there was no upturn in the economy. He suggested that this experience was consistent with a negative Wicksellian natural rate of interest, implying that full-employment saving exceeded investment at any non-negative interest rate.

By 2013, the doctrine of secular stagnation had largely dropped out of economic discourse. The timing of interest in secular stagnation is shown by Figure 1, which plots the use of the term in *JSTOR*. It was used increasingly frequently until 1950, after which its use declined (with a brief upward blips around 1960 and in the 1970s). If accounts were taken of the increased number of economics articles published, the decline would be even more dramatic. The number of instances was tiny but the term never disappeared.[1]

Hansen used the term to refer to a historical trend, rooted in American experience. It was a thesis about the consequences of economic maturity, his claim being that the closing of the frontier, a slowdown in the rate of population growth, and a lack of new capital-using inventions had reduced

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Revised version of a paper prepared for the Blanqui Lecture (Meeting of the European Society for the History of Economic Thought, Rome, 14 May 2015).

1 This is consistent with count in Fogel (2005), which concluded that the topic had largely disappeared from the macroeconomic research agenda.

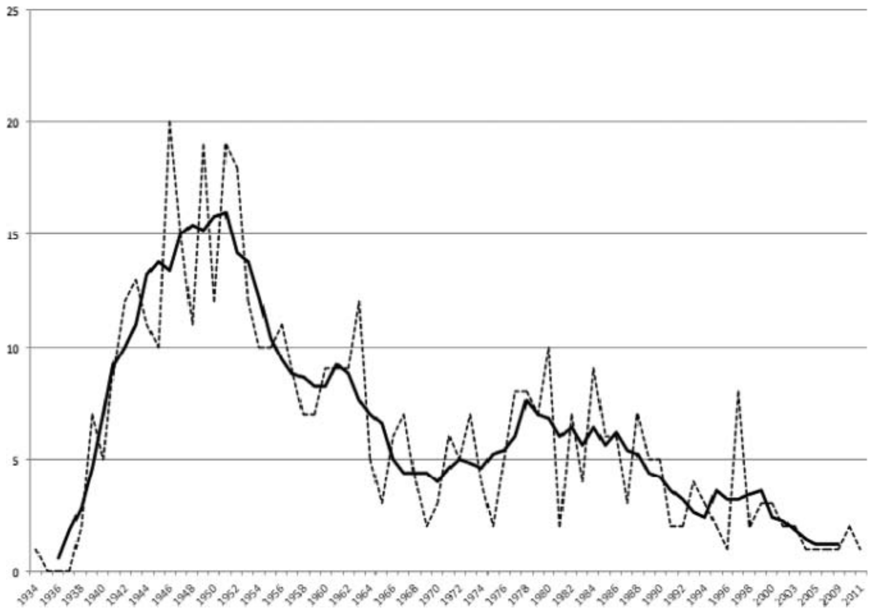

Figure 1 Economics articles using the phrase "Secular stagnation" in *JSTOR*, 1934–2011.
***Source:* dfr.jstor.org, search for "secular stagnation" in "Economics." 29 April 2015. The solid line is a five-year moving average.**

the opportunities for the investment that was needed to sustain full employment. Though his students – Evsey Domar, Everett Hagen, and Paul Samuelson – used the term secular stagnation to refer to a theoretical possibility, the idea that economic maturity might be associated with stagnation was taken up by Josef Steindl (1952) and Ingvar Svennilson (1954). The empirical dimension of Hansen's secular stagnation thesis was critically examined by George Terborgh (1945), provoking a brief controversy. During the 1950s, the notion that the United States was a mature economy became well established, but by 1960 the association of maturity with stagnation was lost. Economic maturity was now associated with prosperity: with the "affluent society" (Galbraith 1958) and "high mass consumption" (Rostow 1960), in a sense a return to Mill's classical notion of full-employment stationary state that Hansen had criticised. Economists might sometimes discuss secular stagnation but it was now firmly divorced from the idea that it was a feature of a mature economy. It was only after the end of the Cold War that this changed.

The idea that there may be limits to economic expansion has a long history. Adam Smith (1976, I.ix), unaware of the profound economic changes that were to take place in Britain, wrote of countries achieving their "full complement of riches", with consequent low rates of interest. This perspective was shared by Malthus and Ricardo who saw the problem as a shortage of fertile land. Though attitudes varied, the notion that growth was eventually headed towards a stationary state on account of scarce natural resources was widely held (see Robbins 1930, pp. 196–200). Karl Marx held a different view of the constraints facing capitalist economies but shared the classical vision of a downward tendency in the rate of profit, which would put the system under increasing strain. Paul Sweezy (1942), who interacted with Hansen at Harvard, elaborated the Marxian approach to stagnation, combining it with some features of Hansen's framework. At the beginning of the twentieth century, J.A. Hobson, like (some versions of) Marx, came close to the notion of secular stagnation in that he linked under-consumption to the growth of machine production and maldistribution of income. However, despite these important antecedents, picked up by some writers, including Schumpeter (1942, Part II), Steindl and Svennilson, it is Hansen's work that marks the beginning of modern discussions (see also Penrose 1968), of which the latest episode is the one initiated by Summers (2013) and continued in the e-book edited by Teulings and Baldwin (2014), a session at the American Economic Association (AEA) (Eichengreen 2015, Gordon 2015, Summers 2015) and an article in *Foreign Affairs* (Summers 2016).

The revival of interest in secular stagnation has prompted historical studies of Hansen's thesis and the controversies surrounding it (Dockès 2015, Hein 2015, O'Rourke 2016).[2] Pierre Dockès (2015) has focused on the controversy involving Terborgh and Hansen, and Sweezy and Schumpeter. Kevin O'Rourke (2016) has looked at the development of Hansen's thesis in the context of the economic history of the time. Eckhard Hein (2015) has called attention to Steindl's (1952) heterodox approach, omitted in the modern revival. In contrast, we focus on one specific tradition in stagnation theory – Hansen's introduction of the concept he called secular stagnation and its re-elaboration and transformation by his students and colleagues and, more recently, by Summers.[3] We shall see that Summers's characterisation of Hansen's secular stagnation in terms of a

2 Before the recent surge of interest, Fogel (2005) discussed the issue from the perspective of economic history. Rosenof (1997) is useful on the political context for Hansen's work.

3 In Backhouse and Boianovsky (2016), we discuss the relation between these theories and theories based on inequality, such as those of Hobson and Piketty.

negative (Wicksellian) natural rate of interest goes back in part to Lawrence Klein (1947a), who in his turn was reacting to A.C. Pigou's (1943) interpretation of Hansen precisely on those terms. Although Wicksell's natural rate has become part of mainstream macroeconomics, Summers's idea of secular stagnation may be regarded (as Summers does) heretical, since it is hard to justify a negative rate of interest in a Ramsey word.

2. Alvin Hansen and the origins of the stagnation thesis

> Up to and including 1880 the country had a frontier of settlement, but at present the unsettled area has been so broken into by isolated bodies of settlement that there can hardly be said to be a frontier line. In the discussion of its extent, its westward movement, etc., it can not, therefore, any longer have a place in the census reports. (Superintendent of the Census for 1890, quoted in Turner 1921, p. 1)

According to the historian Frederick Jackson Turner, this short piece of bureaucratic prose marked a historic moment in the American society. Up to that point the history of the United States had been dominated by its Westward expansion. "The existence of an area of free land", Jackson wrote, "its continuous recession, and the advance of American settlement western, explain American development" (Turner 1921, p. 1). The thesis of the end of the frontier became an important part of American public discourse.

Born in 1887 in rural South Dakota, Hansen came from the frontier that according to Jackson was ending. He became a specialist in business cycle theory. His early work, *Cycles of Prosperity and Depression* (1921) was empirical. Believing that Hobson had successfully rebutted the charge that under-consumption was impossible, Hansen explained cycles of prosperity and depression as the result of changes in money and credit. From the beginning he sought a dynamic theory and made much use of the accelerator, which showed that a slowing down of the growth of consumption could lead to an absolute fall in investment.

During the 1920s, he began to see fluctuations in investment, driven by population changes and waves of innovations, as the cause of the cycle.[4] Monetary factors still played a role, but they merely served to magnify other forces rather than being an independent factor. Hansen took from Albert Aftalion the idea that the price level is determined by the level of money income in relation to the quantity of goods and services being produced and from Arthur Spiethoff, the idea that there were certain investment opportunities available and once these were taken up, investment would fall off, causing a downturn. The price system played a dynamic role,

4 This account of Hansen draws on Mehrling (1997, pp. 96–101).

assisting the movement of resources into sectors with greater investment opportunities. A free enterprise system tended towards full employment because price flexibility encouraged a healthy level of investment and a high level of spending. However, despite this, the business cycle was an inevitable feature of a dynamic, growing economy with rapid technological change. Only if the economy matured and accumulation slowed down would the cycle become a thing of the past. These ideas conditioned Hansen's response to the Great Depression: it was particularly deep because it was the result of large monetary and technological shocks happening together.[5] Recovery required innovation and technological advance that would lower costs, raise profitability, and stimulate investment.

Hansen's (1932, pp. 32–4) description of the stationary state, with no population growth, as bliss was the same as J.S. Mill's. However, although he focused on monetary policy and adjustment to technological change through the price mechanism, Hansen never abandoned the idea that the flow of spending was important, talking of the "three faucets" though which purchasing power entered the economy: business spending, consumer spending, and government spending. It might sometimes be necessary, he believed, for government to take responsibility for maintaining the flow of purchasing power. In the late 1930s, Hansen added a further element to his theory, now under the influence of J.M. Keynes (1936, 1937). The central point of his 1938 AEA Presidential Address, "Economic progress and declining population growth", was that population growth was declining and that this would lead to a large fall in investment unless there was a rise in technical progress (Hansen 1939, p. 10). The accelerator was central to this argument, for what mattered was not the level of economic activity but its growth rate. It would be possible to compensate for a decline in private investment by increasing public investment "in human and natural resources and in consumers' capital goods of a collective character" (Hansen 1939, p. 12), but such compensation could be no more than partial. If government spending were taken too far, it might alter the cost structure so as to prevent the achievement of full employment.

This explanation fitted well into a long view of American economic history. The expansion of the frontier had sustained investment for a century. After the closing of the frontier, demand for investment came from technological advance: motor vehicles and electricity stimulated the building of a vast infrastructure, sustaining demand in the 1920s. The Great Crash of 1929 may have originated in finance and the collapse of speculation, but its consequences were severe because the stimulus from these industries was at an end. Declining population growth and the absence of new

5 See Mehrling (1997, pp. 107–10).

industries meant a dearth of investment and a period of stagnation. The immediate origins of the crisis might be short-term, but its severity was the result of long-term structural factors (see also Lekachman 1966, pp. 131–7). Hansen took the idea of the New Frontier quite literally (see Hansen and Perloff 1942, p. 7).

Hansen (1939, p. 4) defined the "essence of secular stagnation" as "sick recoveries which die in their infancy and depressions which feed on themselves and leave a hard and seemingly immovable core of unemployment". He saw the concept as rooted in J.S. Mill's notion of the stationary state, suggesting that the term "mature economy" described Mill's formulation of the stationary state as a low-investment but high-consumption economy (Hansen 1941, p. 310; see also Schumpeter 1954, p. 570). However, unlike Mill's stationary state, Hansen's secular stagnation featured *chronic unemployment.* Classical economists, he argued, may have been right about the stationary state, but "they were wrong in assuming that the price system could also ensure a propensity to consume compatible with this investment situation so as to produce full employment" (Hansen 1939).

Apart from the classical notion of the stationary state and its limitations, Hansen's idea of secular stagnation was influenced by Keynes's article on population growth in the *Eugenics Review* (1937) and by Hawtrey's (1937) distinction between "capital deepening" and "capital widening". Although he mentioned Keynes (1937) only briefly, in connection with the relative historical stability of the capital–output ratio, Hansen (1939) may be seen in part as elaborating Keynes's theme.[6] The perverse economic impact of declining population growth attracted the attention of British economists in the late 1930s, including Brian Reddaway and Roy Harrod, whose dynamics (Harrod 1939) would catch Hansen's attention only after Harrod (1948). Hansen would later refrain from further reference to Keynes (1937), which contained an incipient formulation of Harrod's distinction between the natural and warranted growth rates. Hansen did not associate Keynes with the stagnation thesis.[7]

Hansen (1939, 1946a) distinguished sharply between movements along the marginal efficiency curve associated with changes of the rate of interest, and upward shifts of the curve due to population growth and technical progress, the latter being what mattered for avoiding secular stagnation. Without population growth and innovation, a "constant level of the rate of interest, no matter how low, would ultimately result in zero net

6 Hansen made notes on Keynes's article. See Barber (1987, p. 203, n. 46) and Mehrling (1997, pp. 133–4).

7 This has been a controversial issue in history of thought. See Schumpeter (1954, pp. 1172–3) and Guthrie and Tarascio (1992).

investment": "under-employment equilibrium" is not the result of an elastic liquidity preference schedule but of limited investment opportunities and an inelastic marginal efficiency schedule (Hansen 1946a, p. 185).

Hansen's framework is clarified by comments he made on an unpublished paper by Samuelson.[8] The "real problem", missed by Samuelson in Hansen's view, was the transition from a rapidly growing society in which saving and investment are high to one in which saving and investment are low. It was about the *transition* from one equilibrium position to another, not a comparison of two equilibria. Hansen further criticised Samuelson for assuming that investment depended on the level of consumption. "Consumption," he wrote, "determines only replacement capital and not new capital. The real determinants of new investment are new products, new ways of producing goods more economically, and growth."

Hansen's secular stagnation concept had nothing to do with the notion – often ascribed to Keynes – that the problem is caused by the fact that "rich people save proportionally more", so that the marginal propensity to consume is lower than the average propensity, with a declining ratio of consumption demand to income as income grows.[9] Hansen (1941, pp. 233–4; see also Samuelson 1943) argued that for both theoretical and empirical reasons (referring to Kuznets 1941), the typical Keynesian consumption–income schedule did not hold for long-run secular changes in real income, but only when large changes in income take place within a relatively short period of time over the business cycle.

Theoretical criticism of Hansen's ideas came in two contrasting forms. Frank Knight (1936, 1944) completely rejected the concept of the "stationary state", on the grounds that there is no tendency to diminishing returns to capital accumulation.[10] The notion that the rate of return on capital tends to zero was also rejected by Henry Simons (1942), but on the somewhat distinct grounds that the demand for durable assets increases rapidly at very low but positive interest rates, an argument he attributed to Gustav Cassel (1903). A.C. Pigou (1943), on the other hand, accepted the classical notion of the stationary state but rejected Hansen's reformulation, introducing, as a reaction to Hansen (1941), the hypothesis that the saving function should include real money balances as an argument.[11] According to Pigou, Hansen's stationary state with unemployment featured a negative equilibrium full-employment rate of interest (Wicksell's

8 Hansen to Samuelson, 27 February 1940 (Samuelson Papers, Duke University).

9 See, for example, Branson (1979. pp. 185–6).

10 On Knight's reasons, see Patinkin (1973 [1981]).

11 The idea is in Haberler (1941). Patinkin (1948, 1956) developed it as the "real balance effect".

natural rate, although Pigou did not refer to Wicksell), whereas the market money rate of interest could not fall below zero. As pointed out by Pigou, under the classical assumption that saving is made only for the sake of the income it is expected to yield in the future, in the long-run equilibrium of the stationary state the rate of interest must be equal to the rate of discount of the "representative man". In order to account for a negative natural rate, Pigou assumed that savings are made also for other motives (such as the "desire of possession as such"), which are inversely related to real cash balances. Downward price flexibility, therefore, should be able to bring about a shift of the full-employment saving function until it intersected investment demand at a positive interest rate.

George Terborgh's *Bogey of Economic Maturity* (1945) offered an empirical criticism of the secular stagnation thesis. Published by the Machinery and Allied Products Institute, a federation of trade associations in the industrial equipment sector, this book was well received by businessmen in general, who regarded it as the antithesis of New Deal Economics. Terborgh claimed that the decline in the rate of population growth and the closing of the geographical frontier had taken already place by the end of the nineteenth century, without causing depression. Moreover, a slowing down of population growth changes the age structure and reduces saving counteracting any fall in investment. He also challenged the view that an increasing proportion of innovations were capital-saving (see Samuelson, 1948, pp. 421–3). Hansen (1946b) rejected Terborgh's empirical evidence, and stressed that the main point of the stagnation thesis was not that economic stagnation is unavoidable, but that proper economic policy should be able to bring about a full employment growth path (see Rosenof 1997, Chapter 5, Dockès 2015, pp. 977–9).

3. Keynesianism and secular stagnation

When Hansen (1936) critically reviewed Keynes's *General Theory* he described Keynes as offering a theory of "underemployment equilibrium", *not* of secular stagnation. A decade later, after he had come to see the usefulness of Keynes's concept of the multiplier, Hansen (1946a, p. 184) asserted that Keynes (1936) took for granted the "real factors" that determine the marginal efficiency of capital in a "dynamic society" and which were central to his own theory.[12] In Hansen's view, Keynes (1936) focused

12 On Hansen's "transformation" into a Keynesian economist in the late 1930s, see Barber (1987) and Mehrling (1997). In his 1936 review, he wrote of "secular unemployment" and of "stagnation", but did not use the term "secular stagnation".

on the "psychological" and "institutional" aspects of investment and the rate of interest, while the "real" or "objective" factors – such as technical progress and demographic dynamics – were "passed by almost unnoticed". It baffled Dudley Dillard (1955, p. 328) that Hansen's *Guide to Keynes* (1953) did not even discuss the relation of Keynes's ideas to the stagnation hypothesis, which is not mentioned in that book. Apparently, Hansen found it difficult to express that hypothesis in terms of the static IS-LM model, which he helped creating together with John Hicks (see also Boianovsky 2004). However, though Hansen did not do so, others, including several of Hansen's students, were increasingly seeing secular stagnation as a Keynesian idea.

Though memories of the depression were never far away, the context for this reinterpretation of the idea of secular stagnation was fear that cuts in military spending at the end of the Second World War would cause depression. Samuelson and Hagen (1943) argued that a return to "normalcy" was impossible. Though they cited Keynes's *Economic Consequences of the Peace* (1919), they followed Hansen's analysis: depression would become more common because saving was rising and new industries were needed to drive investment. Though Hansen rapidly became more optimistic, Samuelson remained cautious and in his textbook he devoted several pages to secular stagnation (Samuelson 1948, pp. 418–23). It was not till the fourth edition (Samuelson 1958, p. 349) that it was reduced to a short paragraph summarising Hansen's theory followed by an even shorter paragraph outlining the alternative case where population growth and rapid innovation led to an excessive level of investment. "Secular stagnation" and "secular exhilaration" had become two analytical possibilities. In the 1960s, he used the idea to explain "A decade of sluggish growth and rising unemployment" in which unemployment rate had been higher at each successive cyclical peak (Samuelson 1961, p. 392). Secular stagnation was, for Samuelson, part of an argument that, under some circumstances, the budget should not be balanced and disappeared only when William Nordhaus became a co-author (1985).

Domar addressed the connection between stagnation and debt. If the gap between private investment and saving had to be filled by government spending, the result would be growing debt, on which interest would have to be paid, raising the question of what would happen to the burden of debt (Domar 1944). Domar showed that in a steadily growing economy the public debt could grow indefinitely, as long as it grows no faster than income. In "Capital expansion, rate of growth, and employment" (Domar 1946) he took account of productive capacity. Because investment was linked to both the growth rate of productive capacity and the level of income, Domar could show that there was an equilibrium rate of growth, at which income would grow at the same rate as productive capacity. Deriving his version of what is known as the Harrod–Domar equation, he concluded that equilibrium over time required growth at rate $\alpha\sigma$, where σ and α are the potential social productivity of investment and the propensity to save. Secular stagnation was what happened when investment grew more slowly than this, causing an increase in unused capacity and unemployment. Though Domar acknowledged the importance of Keynes, he attached more importance to Hobson – "Hobson's writings contain so many interesting ideas that it is a great pity he is not read more often" (Domar 1947, p. 51) – and never abandoned his Hansenian roots, criticising Keynes for being too attached to "the desert of the stationary state" and neglecting the dual character of investment (Domar 1957, p. 6, 14).

The heretical "problem of capital accumulation" – the inability of the economy to absorb capital at a rapid rate – exists only if the possibilities for capital-deepening are limited. As noted by Domar (1948), this was the essence of the view, rejected by Knight and Simons, but shared by Marxists, under-consumptionists and Keynesians. Such a view was based on the assumption of a stable capital–output ratio, implied in Hansen but explicit in other authors such as Sweezy and Harrod.[13] In contrast, from the perspective of the Knight–Simons position, investment opportunities are unlimited, and the problem does not even exist (see also Boianovsky 2015).

Economists in Hansen's circle tried to clarify what stagnation meant. Alan Sweezy (1943, p. 69)[14] argued that "stagnation" meant wasted productive capacity and unemployment caused by excess saving and did not imply a cessation of technical progress, entrepreneurial initiative, or private investment. The 1930s provided a striking example of "stagnation" accompanied by a "highly dynamic economic and social development". Technological progress was rapid but not sufficient to generate a level of demand that would keep capacity fully utilised. He considered the term "secular stagnation" misleading in that it suggested a general loss of potential for economic growth, which did not reflect Hansen's meaning (Sweezy 1972, p. 121). Claiming that Hansen's stagnation thesis was largely an oral tradition, Higgins (1948, 1950, 1959, Chapter 7) sought repeatedly to formalise

13 Samuelson (1964, p. 743), in a new chapter on growth, ascribed to Hansen the notion that the capital–output ratio is a technical constant and that any attempt to accumulate capital beyond the rate required by the annual growth of output will soon be unsuccessful due to excess capacity. Samuelson contrasted that with Solow's neoclassical growth model.

14 He was Paul Sweezy's elder brother. Both had been at Harvard, with Hansen and Samuelson, in the late 1930s.

the concept as a theory of "increasing deflationary gap" or "increasing unemployment" instead of "secular stagnation".

In contrast, Lawrence Klein (1947a, pp. 84–5; 206–13), in a PhD thesis supervised by Samuelson, picked up the negative (Wicksellian) natural interest rate from Pigou (1943) and turned it into a main feature of Keynesian economics. The probability of a negative natural rate of interest depended on the interest-inelasticity of both saving and investment functions, which he considered empirically well established. The contrary view, of investment as infinitely elastic, pertained to the world of Say's law. He defended the stagnation thesis against Pigou and traced it back to the Marxian hypothesis of the declining rate of profit (Klein 1947b, pp. 127–9). It is worth noting that Samuelson would not use, in his discussions of secular stagnation, Klein's negative equilibrium interest rate concept.

Writings such as these explain why, by the end of the 1950s, if not earlier, the idea of secular stagnation had come to be associated with Keynesian economics and the final chapter of the *General Theory* in which Keynes speculated on the "euthanasia of the rentier". Samuelson's textbook was seen as Keynesian. Gardner Ackley's (1961, pp. 509–12) widely used macroeconomics textbook contained a section "Keynes and the stagnationists" in which he criticised both Keynes and Hansen for overlooking the fact – elaborated by Domar (1946) – that income growth can prevent capital saturation. Domar's theory came to be bracketed with Harrod's Keynes-inspired theory.

Harrod (1948, pp. v–vi) stated that "sooner or later we [UK] shall be faced once more with the problem of stagnation, and that it is to this problem that economists should devote their main attention". That was explained in Harrod's model in terms of the relationship between the natural, warranted, and actual growth rates. If the warranted rate is above the natural rate, the actual rate must be below the warranted rate for most of the time, "and the centrifugal forces pull it further down, causing frequent periods of unemployment", which he described as a "dynamised version of the stagnation thesis" (Harrod 1959, p. 455). Harrod's concept of the "natural rate of growth" – which is only implicit in Domar – as the sum of the rate of growth of population and (neutral) technical progress caught Hansen's attention. Hansen (1951, pp. 477–83) essentially subscribed to Harrod's model of unstable growth in a book that made only passing reference to secular stagnation. He saw Harrod's approach to the determinants of investment outlets as close to his own. Higgins (1950, p. 266) also suggested that Harrod's model was in many respects "an alternative formulation of the Hansen thesis". By the mid-1960s, even Hansen claimed that "'secular stagnation' was another name for … Keynesian 'underemployment equilibrium'", as both are based "fundamentally upon the same foundational stones" represented by the difficulty in matching savings and investment, as determined by the long-run behaviour of population growth, technological progress, and discoveries of natural resources (Hansen 1966, p. 7, Rosenof 1997, p. 51).

4. Alternative theories of stagnation

Hansen's was not the only theory of stagnation. A similar notion could be derived from the idea, widely used in the 1930s, that there were 50-year "Kondratiev" cycles in economic activity. A Kondratiev downturn might, till the upturn, be hard to distinguish from secular stagnation. So too might the lulls between Schumpeterian waves of innovation. But this was as much a description of the problem as an explanation. Apart from the Marxian approach supported by Paul Sweezy and Klein, Schumpeter and Steindl put forward distinct explanations of the lack of dynamism of capitalism. Steindl, like Schumpeter, was concerned with the potentially depressing consequences of the shift of capitalism from competition to oligopoly. Whereas Schumpeter's *Capitalism, Socialism and Democracy* (1942) was widely read, Steindl's *Maturity and Stagnation* (1952) did not attract much attention until the 1970s, and then mostly by heterodox economists.[15] The timing of Steindl's book did not help, as the American economy, stimulated by spending on the Korean War, was experiencing a period of economic growth. Whereas Steindl took Hansen (along with Kalecki) as a starting point, Schumpeter (1942, 1943) rejected what he called Hansen's "theory of vanishing investment opportunity". Instead, Schumpeter (1943, p. 119) argued that the capitalist process itself produces "anti-capitalist policies": a distribution of political power, an attitude of the public mind, and an orientation of the political sector that "are at variance with its own law of life."

Instead of searching for causes "which are in themselves puzzling and mysterious problems, like the development of technology and the trend of population", Steindl (1952, p. 192; see also pp. 168–9, for references to Hansen) looked at the growth of oligopoly as the explanation of the apparent decline in the rate of growth of the American economy since the end of the nineteenth century. According to his microeconomic model, this

15 An exception to this neglect was Hansen (1954). On Steindl, see Lee (1999), Dutt (2005), and Hein (2015). On Schumpeter, see Boianovsky and Trautwein (2010, pp. 249–51).

should be accompanied by increase in profit margins and fall in effective demand in relation to capacity.

Hansen (1954) wrote a largely positive review of Steindl (1952). He identified three types of stagnation theory: (i) theories based mainly on exogenous factors (technological progress, population, and new territories), represented by Hansen's own analysis and "perhaps also that of Harrod"; (ii) theories based on changes in social institutions (increasing state intervention, growth of the labour movement, non-competitive structures) and their impact on the "arterial sclerosis" of capitalism, as represented by Schumpeter (1942); and (iii) theories based on endogenous microeconomic factors such as the development of imperfect competition and oligopoly and their impact on income distribution and excess capacity, as represented by Steindl.[16] This explained why Hansen looked to fiscal policy for the solution whereas Schumpeter and Steindl looked to changes in the price system.

5. Macroeconomic theory

In Hansen's (1954, p. 412) view, post-war prosperity did not disprove the stagnation thesis: "How inventive, productive and dynamic the American private enterprise can be when operating under the pull of adequate aggregate demand", he wrote, "has been demonstrated in a remarkable laboratory experiment during the last fifteen years" (the Second World War). However, he warned, there were "sound reasons for the proposition that the economy cannot on its own generate enough steam to provide its full potential growth". Unaided by the "massive fiscal powers of the federal government", the American economy should not be able to reach its full-employment growth path. Hansen deployed the term "laboratory experiment" in his review of a book by William Fellner (1956), a Keynesian economist critical of the secular stagnation thesis. Hansen disputed Fellner's claim that exogenous technical progress was the main element behind the long period of sustained growth since the end of the war. Such growth could not have happened, argued Hansen, without expansionary fiscal policy. Moreover, technological progress was probably stimulated by adequate aggregate demand, meaning that the actual and potential growth trends are not independent from one another. "It requires", charged

16 European stagnation was the subject of Svennilson (1954) (see Boianovsky 2012). As Hansen (1957b, pp. 6–7) pointed out with evident satisfaction, Svennilson took into account the negative impact on economic activity of the declining European population growth rate.

Hansen, a "pretty heavy black-out of a vast laboratory experiment to believe that this vastly enlarged role of government has really played no role in the spectacular transition from stagnation to sustained growth and expansion" (1957a, p. 114).

However, whatever Hansen thought, by the late 1950s, idea that the US economy was doomed to secular stagnation had fallen out of favour. It was dismissed as the result of the tendency of some economists to treat any problem that had lasted for more than a short period as being permanent. In the 1930s, that problem had been stagnation, in the 1950s it was the dollar shortage and inflation, and in other periods it would be something else. In the 1950s and 1960s, discussions of secular stagnation were most often found in economic history, history of economic thought, and development economics, the field in which Higgins increasingly specialised. It was also used in Samuelson's textbook to describe the problem of stagnation over several business cycles, to which the "New economics" of the Kennedy administration was the response. For economists such as Samuelson, who assumed the existence of oligopoly, there was no theoretical problem in maintaining such a position. However, for economists who thought in terms of perfectly competitive markets, or who believed that free enterprise must generate an optimal outcome, the situation was different. And Lekachman (1964, p. 5) suggested that secular stagnation could be a convenient label for "*any* persistent tendency" of aggregate demand and supply to approach equilibrium at less than full employment. He considered Hansen's notion of secular stagnation to be "the only truly original American extension of Keynesian economics until at least the 1950s" (1966, p. 131).

Harry Johnson (1971, p. 6) pointed out the role played by the stagnation thesis in turning Keynesian economics into the new orthodoxy in the post-war period. He argued that the view that unemployment is always the foremost social problem was elevated into a "dogma" in the USA under the leadership of Hansen, whose theory of secular stagnation "has been quietly forgotten, or frugally converted into a theory applicable to underdeveloped countries", although vestiges of it still lingered in American Keynesianism at the time. Johnson was thus positive about Leijonhufvud's (1968) attempt to distinguish between Keynesian economics and the economics of Keynes. For Leijonhufvud, "Keynesian economics", as represented by the Hicks–Hansen IS-LM diagram and Hansen's stagnation thesis, was not the "economics of Keynes", which should be understood in terms of disequilibrium (see Backhouse and Boianovsky 2013). Patinkin (1956, Chapter 14), another of the major figures in disequilibrium macroeconomics, contained a section on "secular growth versus secular stagnation" as part of his analysis of Keynesian and classical theories of unemployment. However, the real balance effect meant that stagnation, though it might last a long time, could not be permanent.

Leijonhufvud (1968, p. 316), too, pointed out the original secular context of the Pigou effect, which should be seen against the background of post-war "Stagnationist Keynesianism" and its insistence that it proved the possibility of "unemployment equilibrium". Leijonhufvud (1968, pp. 159–61) interpreted the stagnationist school as denying the proper working of the price mechanism, due to inelastic functions, which he contrasted with Keynes. Like Patinkin before him, Leijonhufvud deemed a purely static interpretation of unemployment equilibrium incompatible with Keynes, and argued for a dynamic disequilibrium interpretation. He acknowledged Patinkin's priority, but claimed that his point for a dynamic interpretation was made in "stronger and more general terms" than Patinkin's, for Patinkin (as Klein before him) had laid great weight on the interest-inelasticity of investment as a factor influencing the time length of disequilibrium while the real balance effect operates. As noted by Leijonhufvud (p. 176), the stagnationist point about a negative natural rate of interest was based on the lack of outlets for saving. Leijonhufvud rejected that notion by referring to Martin Bailey's (1962, pp. 107–14, 123–30) and Cassel's (1903, pp. 106–09) argument – subscribed to by Simons, as discussed above – that the demand for fixed durable capital goods becomes very elastic at low interest rates. As observed by Leijonhufvud (p. 189, n. 2), Keynes's position about the possibility of capital saturation was quite distinct from Cassel's or Bailey's. At the same time, Leijonhufvud (pp. 410–11) denied that Keynes was a stagnationist in Hansen's sense.

Throughout the 1970s and early 1980s, as macroeconomic performance deteriorated in the USA and Europe, the notion of "stagflation" caused by aggregate supply shocks came to the fore. However, this was not secular stagnation, which was absent from most of the mainstream macroeconomic literature. Secular stagnation attracted some attention from heterodox economists who had already discussed it in the past, such as Paul Sweezy (1982) and Steindl (1979) (see Rosenof 1997, Chapter 13). Steindl (1987) wrote the entry on "stagnation" in the *New Palgrave*, which mainly restated his 1952 interpretation and surveyed classic contributions by Hansen and Marxian authors. It also caught the attention of the economic journalist Leonard Silk (1976) and, in the 1970s and 1980s, demographers occasionally referred to secular stagnation in the context of declining population growth in developed countries, but tended to dismiss its practical relevance (see e.g. Neal, 1978, Espenshade 1978).

Secular stagnation, therefore, became primarily a topic in the history of economic thought, especially after Hansen's death in 1975. Samuelson (1976, 1988, 2002) discussed Hansen's stagnation thesis, calling attention to the fact that Hansen (correctly) did *not* anticipate stagnation in the post-war period.[17] Samuelson (1988) – written for the centenary of Hansen's birthday – was the first formalisation of Hansen's secular stagnation thesis since Higgins (1950).

6. Changing conceptions of a mature economy

In the 1930s, the idea of a mature economy had been associated with the demographic transition and the exhaustion of investment opportunities, making it easy for Hansen to associate it with stagnation. However, by the 1960s, though the United States was still seen as a mature economy, that notion came to be conceived very differently. The development of the national accounts meant that the United States could be contrasted much more clearly with Europe and the "under-developed world": the gap between the US per capita income and that of the rest of the world had increased enormously. "Modernization theory", which pervaded not only development economics but other social sciences, such as political science and international relations (see Gilman 2003), saw the United States as the economy towards which other countries were moving. It was, in Galbraith's words, the archetypal *Affluent Society* (1958).

This conception of the United States as a mature, modern economy was shown most clearly in its political context in Walt Rostow's *The Stages of Economic Growth: A Non-Communist Manifesto* (1960). Countries passed through historical stages, such as the "take-off into self-sustained growth", Rostow's characterisation of the British Industrial Revolution, a stage through which other developed countries had passed, and culminated in the "age of high mass consumption", represented by the contemporary United States. Alexander Gerschenkron questioned the idea that countries had to go through preordained stages, but the idea of "backwardness", with its implication of a hierarchy, was still there. In the growth accounting of Angus Madison, "catch up" – growth that arose from the adoption of technologies already in use in more advanced countries – was one of the many contributions to economic growth, by definition not available to the most advanced country. But this was hardly a context that left room for a mature economy to stagnate. Worse, if it did, it would raise fundamental questions about the superiority of the free-market system over its Soviet counterpart. Government spending might be necessary to maintain full employment

17 Samuelson probably had in mind Hansen's (1943, pp. 18, 21) expectation that the "potentialities for expansion of consumption and private investment in the immediate postwar period are sufficient to indicate the possibility of a genuine and fairly prolonged postwar boom".

but in the Cold War it was natural for the government to play a larger role in the economy than in the 1930s. Consensus on this point had not yet broken down.

Rostow (1956, p. 27) did not exclude the "possibility of growth giving way to secular stagnation or decline in the long term". He asked, "Will man fall into secular spiritual stagnation, finding no worthy outlet for the expression of his energies, talents, and instinct to reach for immortality?" (1960, p. 91). That was a speculative question but once the Cold War was over, Rostow (1998, p. 131, 2000, p. 393) discussed the problem of stagnation linking it to slow population growth. After rapid growth from 1950 to 1980, Japan had entered into a period of stagnation that he analysed in Hansenian terms. Japan was just the first case, because "all nations will have to settle down to a stagnant population, at best, if they are to survive". Rostow's sense of a "mature economy" had changed with the ending of the Cold War.

7. Secular stagnation, now and then

The heretical character of the secular stagnation hypothesis is reflected in Summers's reference, at his 2013 IMF speech in honour of Stanley Fischer, to "a set of older and much more radical ideas that I have to say were pretty much rejected in [Fischer's 1970s MIT class on monetary economics], a set of older ideas that went under the phrase secular stagnation." Summers contrasted secular stagnation with theories that take the average level of output and employment over a long time period as given. Mainstream macroeconomics is about fluctuations of employment and output around their equilibrium levels, and the goal of macroeconomic policy is to reduce volatility. The "new secular stagnation hypothesis", on the other hand, as claimed by Summers (2014a, p. 29), argued that fluctuations in activity are small in relation to the trend and that, as shown by Japanese experience since the 1990s and the poor performance of the United States and Europe after the 2007–2008, market forces are insufficient to bring the economy to its full-employment growth path due to a permanently negative natural rate of interest.[18] Moreover, Summers (2016) suggests, in the secular stagnation scenario, exceptionally high growth rates – as in the USA during 2003–2007 – often come from dangerous borrowing that turn excess saving into unmaintainable investment levels, as illustrated by

18 von Weizsäcker (2014), circulated in draft in 2011, put forward a capital-theoretic Böhm–Bawerkian/Wicksellian model featuring a negative natural rate of interest. However, this model does not include unemployment or stagnation.

the housing bubble. Saving tends to flow into existing assets, causing asset price inflation.

The return of the secular stagnation thesis has been preceded by the revival of the concept of the liquidity trap under the guise of the "zero lower bound" to nominal interest rates (see Boianovsky 2004). Secular stagnation means that the zero lower bound becomes a permanent problem (Krugman 2014). This creates problems for modelling. In the Ramsey–Cass−Koopmans representative agent framework, the steady-state real interest rate cannot fall below the rate of discount, which has to be positive if the model is not to explode. An alternative is to build an overlapping generations model along the lines of Samuelson (1958), with heterogeneous agents. This has been done by Eggertsson and Mehrotra (2014), the first attempt to formalise Summers's "new secular stagnation hypothesis".[19]

As observed by Bernanke (2015), the secular stagnation hypothesis is about inadequate aggregate demand, not aggregate supply.[20] In contrast, Gordon (2014, 2015) has focused on the "supply side" of secular stagnation: the effects on the potential growth trend. According to Gordon (2014, p. 48), because Hansen wrote before the invention of the concept of potential output and its measurement, he and his colleagues lacked a notion of aggregate productivity or its growth rate, implying that the 1930s and 1940s stagnationists were not aware of the fact that average aggregate productivity was rising in the late 1930s (productivity increased by 3.8% per annum in the USA in 1937−1940, as compared to 0.8% in 2009−2014). However, as discussed above, Higgins (1950) and other stagnationists stressed that the key indicator was the deflationary gap between potential and actual output. The absence of numbers for productivity growth in the 1930s had not prevented Alan Sweezy (1943) from pointing out that secular stagnation was not about lack of technical progress, which was proceeding at a rapid rate.

Summers (2014b, 2015, 2016) points to factors behind the apparently negative natural rate of interest: the reducing capital intensity of some key industries (particularly in sectors involving information technology), declining population growth, increasing saving due to higher income and wealth inequality, and falling relative prices of capital goods. He refers to Hansen only in connection with the demographic factor. However,

19 Pigou avoided this problem by postulating that saving decision are affected by factors beside the expected yield from capital accumulation. The Pigou effect is conspicuously absent from recent discussions of secular stagnation. See Boianovsky (2004, p. 116).

20 Bernanke, however, rejects secular stagnation, partly for reasons that are reminiscent of the Knight–Simons arguments.

Hansen did discuss the perverse effect of capital-saving innovations on investment demand and the capital–output ratio, and the increase of savings coming from corporations (see Higgins 1948). Like many others, Summers believes Hansen's stagnation thesis was proved wrong by the post-war boom, until changing economic and demographic circumstances led to its restatement. The revival of the secular stagnation thesis, as argued by Summers (2016), means that fiscal policy may regain the central role it played in aggregate demand management during Hansen's time. In particular, expansionary fiscal policy may reduce excess saving and push the natural interest rate upwards. This is distinct from the new orthodoxy established in the 1980s, which looked at price level stability as the overall policy goal and to monetary policy as the key to demand management.

It is generally assumed that the secular stagnation hypothesis disappeared because it was obviously refuted by events. However, events could not refute the claim that secular stagnation was possible. Changing attitudes towards secular stagnation have always had an important political dimension. Though Hansen had used the term earlier, the idea took off only in 1938. The reason was not that the US had experienced nine years of depression: the shock was that recovery suddenly aborted in 1937, with a downturn even more severe than that of 1929. By this point, the New Deal was widely seen as taking a turn that was critical of business, and business opposition to it was growing (see Phillips-Fein 2010). In 1938, responding to a request from Roosevelt, a joint resolution of the Congress established a Temporary National Economic Committee, to investigate the problem of excessive concentration of economic power, believed to lie at the root of America's problems. This was the context in which Hansen and Currie persuaded policy-makers to take seriously the idea that the problem might lie in the coordination of saving and investment, an idea closely linked to secular stagnation (see Backhouse 2015). Secular stagnation was thus highly political from the start.

Herbert Stein (1969, pp. 175–6), writing an insider's history of America's "fiscal revolution", put the politics in a more subtle way. Policy-makers did not like the claim that historical changes had reduced the propensity to invest because to view investment as "a passive response to historical factors … seemed to deny the dynamic role of the businessmen, in which they took pride and which 'legitimized' their incomes and position in society." Neither could they accept the never-ending growth of the federal debt to which the thesis seemed to point. They could accept fiscal policy only as a remedy for fluctuations, not to solve the problem of stagnation. Stein claimed that the fading of secular stagnation was "partly" the result of economic arguments.

The implications of post-war experience for secular stagnation depended critically on how the idea was interpreted. The historical thesis centred on Turner's (1921) argument about the ending of the frontier might seem an argument from a different era. It no longer made sense to see secular stagnation as a problem of economic maturity – now seen as involving high mass consumption and rapid technological development, for it seemed to be a problem afflicting "immature economies" in the underdeveloped world. Yet as long as Keynesian theory was thought to show that economies would not necessarily achieve full employment, the idea that fiscal stimulus might be needed to maintain aggregate demand remained a possibility. Post-war reconstruction, the Korean War, the Cold War, and the massively increased role for government might raise demand sufficiently that there was no need to make a case for expansion until the early 1970s, but it did not mean that secular stagnation was disproved. It remained possible that stagnation would re-emerge should the role of government be reduced.

The decisive reason for mainstream economists' rejection of secular stagnation was the acceptance, by the 1970s, of the rational-agent general competitive equilibrium model based on inter-temporal optimisation as the dominant framework in macroeconomics, finally displacing the presumption, rooted in the institutionalist literature of the 1930s but still found in Samuelson's textbook, that markets were oligopolistic. When this happened, it became very difficult to make a case that secular stagnation was theoretically coherent. Arguments from economic theory and ideology came together to push the concept out of contemporary economics. As the theory of secular stagnation – the branch of stagnation theory running from Hansen to Samuelson – changed, so too did the mixture of theoretical, empirical, and political reasons for considering it heretical.

Acknowledgements

We would like to thank Geoff Harcourt, Jorge Arbache, Charles Goodhart, David Laidler and an anonymous referee for helpful comments on earlier drafts, and Heinz Kurz for sharing material with us.

Funding

Mauro Boianovsky gratefully acknowledges a research grant from CNPq (Brazilian Research Council).

References

Ackley, G., 1961. *Macroeconomic theory*. New York: Macmillan.

Backhouse, R.E., 2015. Economic power and the financial machine: competing conceptions of market failure in the Great Depression. *History of political economy*, 47 (suppl), 99–126.

Backhouse, R.E. and Boianovsky, M., 2013. *Transforming modern macroeconomics: exploring disequilibrium microfoundations, 1956–2003*. Cambridge: Cambridge University Press.

Backhouse, R.E., and Boianovsky, M., 2016. Theories of stagnation in historical perspective. *European journal of economics and economic policies*, forthcoming.

Bailey, M., 1962. *National income and the price level*. New York: McGraw-Hill.

Barber, W., 1987. The career of Alvin H. Hansen in the 1920s and 1930s: a study in intellectual transformation. *History of political economy*, 19, 191–205.

Bernanke, B., 2015. Why are interest rates so low, part 2: secular stagnation. Available from: http://www.brookings.edu/blogs/ben-bernanke/posts/2015/03/31-why-interest-rates-low-secular-stagnation

Boianovsky, M., 2004. The ISLM model and the liquidity trap concept: from Hicks to Krugman. *In*: M. De Vroey and K.D. Hoover, eds. *The IS-LM model: its rise, fall and strange* persistence. Annual supplement to *History of Political Economy*. Durham, NC: Duke University Press, 92–126.

Boianovsky, M., 2012. Svennilson and the Kaldor–Verdoorn law. *In*: H. Krämer, H. Kurz and H.-M. Trautwein, eds. *Macroeconomics and the history of economic thought: festschrift in honour of Harald Hagemann*. London: Routledge.

Boianovsky, M., 2015. Modeling economic growth: domar on moving equilibrium. Duke Center for the History of Political Economy, Working Paper # 2015-10. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2664149

Boianovsky, M. and Trautwein, H.-M., 2010. Schumpeter on unemployment. *Journal of evolutionary economics*, 20, 233–63.

Branson, W., 1979. *Macroeconomic theory and policy*. 2nd ed. New York: Harper & Row.

Cassel, G., 1903. *The nature and necessity of interest*. London: Macmillan.

Dillard, D., 1955. Review of Hansen (1953). *Journal of economic history*, 15, 327–28.

Dockès, P., 2015. Les débats sur la stagnation séculaire dans les anées 1937–1950: Hansen-Terborgh et Schumpeter-Sweezy. *Revue économique*, 66, 967–92.

Domar, E.D., 1944. The "Burden of the Debt" and the national income. *American economic review*, 34, 798–827.

Domar, E.D., 1946. Capital expansion, rate of growth, and employment. *Econometrica*, 14, 137–47.

Domar, E.D., 1947. Expansion and employment. *American economic review*, 37, 34–55.

Domar, E.D., 1948. The problem of capital accumulation. *American economic review*, 38, 777–94.

Domar, E.D., 1957. *Essays in the theory of economic growth*. New York: Oxford University Press.

Dutt, A.K., 2005. Internal finance and monopoly power in capitalist economies: a reformulation of Steindl's growth model. *Metroeconomica*, 46, 16–34.

Eichengreen, B., 2015. Secular stagnation: the long view. *American economic review*, 105, 66–70.

Espenshade, T.J., 1978. Zero population growth and the economics of developed nations. *Population and development review*, 4, 645–80.

Fellner, W., 1956. *Trends and cycles in economic activity: an introduction to problems of economic growth*. New York: Henry Holt.

Fogel, R., 2005. Reconsidering expectations of economic growth after World War II from the perspective of 2004. *IMF staff papers*, 52, 6–14.
Galbraith, J. K., 1958. *The affluent society*. New York: Houghton Mifflin.
Gilman, N., 2003. *Mandarins of the future: modernization theory in Cold-War America*. Baltimore, MD: Johns Hopkins University Press.
Gordon, R.J., 2014. The turtle's progress: secular stagnation meets the headwinds. *In:* C. Teulings and R. Baldwin, eds. *Secular stagnation: facts, causes and cures*. London: CEPR, 47–60.
Gordon, R.J., 2015. Secular stagnation: a supply side view. *American economic review*, 105, 54–9.
Guthrie, W. and Tarascio, V., 1992. Keynes on economic growth, stagnation and structural change: new light on a 55-year old controversy. *History of Political Economy*, 24, 381–412.
Haberler, G., 1941. *Prosperity and depression*. 3rd ed. Geneva: League of Nations.
Hansen, A.H., 1921. *Cycles of prosperity and depression in the United States, Great Britain and Germany: a study of monthly data, 1902–1908*. Madison: University of Wisconsin Studies in the Social Sciences and History.
Hansen, A.H., 1932. *Economic stabilization in an unbalanced world*. New York: Harcourt, Brace.
Hansen, A.H., 1934. Capital goods and the restoration of purchasing power. *Proceedings of the academy of political science*, 16, 11–19.
Hansen, A.H., 1936. Mr. Keynes on underemployment equilibrium. *Journal of political economy*, 44, 667–86.
Hansen, A.H., 1938. *Full recovery or stagnation*? New York: Norton.
Hansen, A.H., 1939, Economic progress and declining population growth. *American economic review*, 29, 1–15.
Hansen, A.H., 1941. *Fiscal policy and business cycles*. London: Allen and Unwin.
Hansen, A.H., 1943. The postwar economy. *In:* S. Harris, ed. *Postwar economic problems*. New York: McGraw-Hill, 9–26.
Hansen, A.H., 1946a. Keynes and the general theory. *Review of economics and statistics*, 28, 182–7.
Hansen, A.H., 1946b. Some notes on Terborgh's "The bogey of economic maturity". *Review of economics and statistics*, 28, 13–17.
Hansen A.H., 1951. Business cycle and national income. New York: Norton.
Hansen, A.H., 1953. *A guide to Keynes*. New York: McGraw-Hill.
Hansen, A.H., 1954. Growth or stagnation in the American economy. *Review of economics and statistics*, 36, 409–14.
Hansen, A.H., 1957a. Trends and cycles in economic activity. *Review of economics and statistics*, 39, 105–15.
Hansen, A.H., 1957b. *The American economy*. New York: McGraw-Hill.
Hansen, A.H., 1966. Stagnation and under-employment equilibrium. *Rostra economica Amstelodamensia*, November, 7–9. Available from: https://issuu.com/sefa_uva/stacks
Hansen, A.H. and Perloff, H.S., 1942. *Regional resource development*. Washington, DC: National Planning Association.
Harris, S., ed., 1943. *Postwar economic problems*. New York: McGraw-Hill.
Harrod, R.F. 1939. An essay in dynamic theory. *Economic journal*, 49, 14–33.
Harrod, R.F., 1948. *Towards a dynamic economics*. London: Macmillan.
Harrod, R.F., 1959. Domar and dynamic economics. *Economic journal*, 69, 451–64.
Hawtrey, R.W., 1937. Alternative theories of the rate of interest: rejoinder. *Economic Journal*, 47 (187), 436–43.

Hein, E., 2015. Secular stagnation or stagnation policy? Steindl after Summers. Levi Economics Institute of Bard College. Working Paper # 486. Available from: http://www.levyinstitute.org/pubs/wp_846.pdf

Higgins, B., 1948. Concepts and criteria of secular stagnation. *In:* L.A. Metzler, ed. *Income, employment and public policy: essays in honour of Alvin H. Hansen.* New York: Norton, 82–107.

Higgins, B., 1950. The theory of increasing under-employment. *Economic journal*, 60, 255–74.

Higgins, B., 1959. *Economic development.* New York: Norton.

Johnson, H.G., 1971. The Keynesian revolution and the monetarist counter-revolution. *The American economic review*, 61, 1–14.

Keynes, J.M., 1919. *Economic consequences of the peace.* London: Macmillan.

Keynes, J.M. 1936. *The general theory of employment, interest and money.* London: Macmillan.

Keynes, J.M., 1937. Some economic consequences of a declining population. *Eugenics review*, 29, 13–17.

Klein, L.R., 1947a. *The Keynesian revolution.* New York: Macmillan.

Klein, L.R., 1947b. Theories of effective demand and employment. *Journal of political economy*, 55, 108–31.

Knight, F.H., 1936. The quantity of capital and the rate of interest. *Journal of political economy*, 44, 433–63 and 612–47.

Knight, F.H., 1944. Diminishing returns from investment. *Journal of political economy*, 52, 26–47.

Krugman, P., 2014. Four observations on secular stagnation. *In:* C. Teulings and R. Baldwin, eds. *Secular stagnation: facts, causes and cures.* London: CEPR, 61–68.

Lee, F., 1999. Josef Steindl and the stagnation thesis. *In: Post Keynesian price theory.* Cambridge: Cambridge University Press, 186–200.

Leijonhufvud, A., 1968. *On Keynesian economics and the economics of Keynes.* New York: Oxford University Press.

Lekachman, R., ed., 1964. *Keynes's general theory: reports of three decades.* London: Macmillan.

Lekachman, R., 1966. *The age of Keynes.* New York: Random House.

Mehrling, P., 1997. *The money interest and the public interest: American monetary thought, 1920–1970.* Cambridge, MA: Harvard University Press.

Neal, L., 1978. Is secular stagnation around the corner? A survey of the influences of slowing population growth upon investment demand. *In:* T. Espenshade, ed. *The economic consequences of slowing population growth.* New York: Academic Press, 101–25.

O'Rourke, K.H. 2016. Economic impossibilities for our grandchildren. *Journal of the British Academy,* 4, 21–51. Available from: http://www.britac.ac.uk/journal/4/orourke.cfm.

Patinkin, D., 1948. Price flexibility and full employment. *The American economic review*, 38, 543–64.

Patinkin, D., 1956. *Money, interest and prices: an integration of monetary and value theory.* Evanston, IL: Row Peterson.

Patinkin, D., ed., [1973]1981. Frank Knight as a teacher. *In: Essays on and in the Chicago tradition.* Durham, NC: Duke University Press.

Penrose, E., 1968. Stagnation. *In:* D.L. Sills, ed. *International encyclopedia of the social sciences*, vol. 15. New York: Macmillan, 137–42.

Phillips-Fein, K., 2010. *Invisible hands: the businessmen's crusade against the new deal.* New York: Norton.

Pigou, A.C., 1943. The classical stationary state. *Economic journal*, 53, 343–51.

Robbins, L., 1930. On a certain ambiguity in the conception of stationary equilibrium. *Economic journal*, 40 (158), 194–214.
Rosenof, T., 1997. *Economics in the long run: new deal theorists and their legacies, 1933–1993.* Chapel Hill: University of North Carolina Press.
Rostow, W.W., 1956. The take-off into self-sustained growth. *Economic journal*, 66, 25–48.
Rostow, W.W., 1960. *The stages of economic growth: a non-communist manifesto.* Cambridge: Cambridge University Press.
Rostow, W.W., 1998. *The great population spike and after: reflections on the 21st century.* New York: Oxford University Press.
Rostow, W.W., 2000. Modern Japan's first challenge: the political economy of a stagnant population. *Proceedings of the American Philosophical Society*, 144, 384–96.
Samuelson, P.A., 1943. Full employment after the war. In S.E. Harris, ed. *Postwar economic problems.* New York: McGraw-Hill, 27–53.
Samuelson, P.A., 1948. *Economics: an introductory analysis*, 1st ed. New York: McGraw Hill.
Samuelson, P.A., 1958. *Economics: an introductory analysis*, 4th ed. New York: McGraw Hill.
Samuelson, P.A., 1961. *Economics: an introductory analysis*, 5th ed. New York: McGraw Hill.
Samuelson, P.A., 1964. *Economics: an introductory analysis*, 6th ed. New York: McGraw Hill.
Samuelson, P.A., 1976. Alvin Hansen as a creative economic theorist. *Quarterly journal of economics*, 90, 24–31.
Samuelson, P.A., 1988. The Keynes-Hansen-Samuelson multiplier-accelerator model of secular stagnation. *Japan and the world economy*, 1, 3–19.
Samuelson, P.A., 2002. Reply: complementary innovations by Roy Harrod and Alvin Hansen. *History of political economy*, 34, 219–23.
Samuelson, P.A. and Hagen, E.E., 1943. *After the war: 1918–1920.* Washington, DC: National Resources Planning Board.
Samuelson, P.A., and Nordhaus, W., 1985. *Economics*, 12th ed. New York: McGraw Hill.
Schumpeter, J.A., 1942. *Capitalism, socialism and democracy.* New York: Harper & Brothers.
Schumpeter, J.A., 1943. Capitalism in the postwar world. *In:* S.E. Harris, ed. *Postwar economic problems.* New York: McGraw-Hill, 113–26.
Schumpeter, J.A., 1954. *History of economic analysis.* New York: Oxford University Press.
Silk, L., 1976. The secular slowdown thesis. The New York Times, October 21.
Simons, H.C., 1942. Hansen on fiscal policy. *Journal of political economy*, 50, 161–96.
Smith, A., 1976. *An inquiry into the nature and causes of the wealth of nations. In:* R.H. Campbell, A. Skinner and W.B. Todd, eds. Oxford: Oxford University Press.
Stein, H., 1969. *The fiscal revolution in America.* Chicago, IL: University of Chicago Press.
Steindl, J., 1952. *Maturity and stagnation in American capitalism.* Oxford: Basil Blackwell.
Steindl, J., 1979. Stagnation theory and stagnation policy. *Cambridge journal of economics*, 3, 1–14.
Steindl, J., 1987. Stagnation. *In:* J. Eatwell, M. Milgate and P. Newman, eds. *The new Palgrave dictionary of economics*, Vol. 4. London: Macmillan, 472–4.
Summers, L., 2013. Speech at the IMF fourteenth annual conference in honor of Stanley Fischer. Available from: https://www.youtube.com/watch?v=KYpVzBbQIX0
Summers, L., 2014a. Reflections on the "new secular stagnation hypothesis". *In:* C. Teulings and R. Baldwin, eds. *Secular stagnation: facts, causes and cures.* London: CEPR, 27–38.
Summers, L., 2014b. US economic prospects: secular stagnation, hysteresis, and the zero lower bound. *Business economics*, 49, 65–73.
Summers, L., 2015. Demand side secular stagnation. *American economic review*, 105, 60–5.
Summers, L., 2016. The age of secular stagnation: what it is and what to do about it. *Foreign affairs*, 95 (Mar–Apr), 2–9.

Svennilson, I., 1954. *Growth and stagnation in the European economy*. Geneva: UN Commission for Europe.
Sweezy, A., 1943. Secular stagnation? *In:* S.E. Harris, ed. *Postwar economic problems*. New York: McGraw-Hill, 67–82.
Sweezy, A., 1972. The Keynesians and government policy, 1933–1939. *The American economic review*, 62, 116–24.
Sweezy, P., 1942. *The theory of capitalist development*. New York: Oxford University Press.
Sweezy, P., 1982. Why stagnation? *Monthly review*, 34 (June), 4–10.
Terborgh, G., 1945. *The bogey of economic maturity*. Chicago, IL: Chemical and Allied Products Institute.
Teulings, C. and Baldwin, R., eds., 2014. *Secular stagnation: facts, causes and cures*. London: CEPR. Available from: http://www.voxeu.org/sites/default/files/Vox_secular_stagnation.pdf.
Turner, F.J., 1921. *The frontier in American history*. New York: Henry Holt.
von Weizsäcker, C.C., 2014. Public debt and price stability. *German economic review*, 15, 42–61.

Abstract

The paper presents a history of the concept of "secular stagnation", from Alvin Hansen in the 1930s and 1940s to its recent revival by Larry Summers. We examine Hansen's ideas and those of young economists associated with him, notably Evsey Domar, Everett Hagen, Benjamin Higgins, Alan Sweezy, and Paul Samuelson, who were the economists who kept the doctrine alive in the 1950s and to whom Summers and others taking up the idea recently turned. Their ideas are contrasted with the theories of stagnation associated with Josef Steindl and Joseph Schumpeter. It is a label for a historical thesis about the American economy, which, initially seen as distinct from Keynes *General Theory*, came to be seen as a theoretical proposition based on Keynesian theory. It is argued that the idea of secular stagnation had a political dimension, connected to the New Deal and the Cold War and changing conceptions of economic maturity.

Keywords

Secular stagnation, economic maturity, unemployment equilibrium, negative natural rate of interest, population growth