

Market power and the financial machine

Backhouse, Roger

DOI:

[10.1215/00182702-2007-3130463](https://doi.org/10.1215/00182702-2007-3130463)

License:

None: All rights reserved

Document Version

Peer reviewed version

Citation for published version (Harvard):

Backhouse, R 2015, 'Market power and the financial machine: competing conceptions of market failure in the Great Depression', *History of Political Economy*, vol. 47, no. 1, pp. 99-126. <https://doi.org/10.1215/00182702-2007-3130463>

[Link to publication on Research at Birmingham portal](#)

Publisher Rights Statement:

Published as above and available online at: <http://dx.doi.org/10.1215/00182702-2007-3130463>

Checked March 2016

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Economic power and the financial machine: competing conceptions of market failure in the Great Depression

Version 3

Roger E. Backhouse

October 2014

Department of Economics
University of Birmingham
Edgbaston
Birmingham
B15 2TT
United Kingdom

Acknowledgement

This paper is written as part of a project, supported by a Major Research Fellowship from the Leverhulme Trust, to write an intellectual biography of Paul Samuelson. It was discussed at the History of Political Economy Conference on the history of market failure, and I am grateful to Malcolm Rutherford and other conference participants for helpful suggestions and comments.

1. Introduction

Prior to the emergence of global climate change, the Great Depression was arguably the biggest market failure in the history of the United States. It was a catastrophe not just because of the economic chaos and hardship it produced but because it threatened the liberty that was fundamental to American democracy. The rise of Nazi and Fascist regimes in Western Europe showed, according to Franklin Delano Roosevelt, that if private power grew to a point where it became stronger than the state, a democracy's liberty was threatened. The subservience of government to a private power was fascism. Democracy was also threatened whenever the business system did not enough employment and an acceptable standard of living. These dangers, he claimed, both confronted the United States.

Among us today a concentration of private power without equal in history is growing.

This concentration is seriously impairing the economic effectiveness of private enterprise as a way of providing employment for labor and capital and as a way of assuring a more equitable distribution of income and earnings among the people of the Nation as a whole. (FDR to Congress, April 29, 1938, (United States, Temporary National Economic Committee 1938), p. 185)

The letter to Congress in which he made this assessment went on to document the increase in the concentration of income and wealth that had taken place during the depression, arguing that increased industrial concentration threatened the competition on which the free-enterprise system depended. He clearly had Germany in mind when he went on to write, "Private enterprise is ceasing to be free enterprise and is becoming a cluster of private

collectivisms; masking itself as a system of free enterprise after the American model, it is in fact becoming a concealed cartel system after the European model” (ibid., p. 186). Unless the concentration of economic power could be reversed, American democracy, resting on a foundation of liberty, was in grave danger.

Roosevelt may not have used the language of market failure but it would have been an apt label for his diagnosis of the problem still facing the United States after almost a decade of depression. His view that markets had failed was long standing (see (Stabile, & Kozak 2012), Chapter 8) but these ideas reflected a substantial literature that on the limitations of markets that had developed in the 1920s and 1930s. This literature, generally focusing on the way American business had evolved in the late-nineteenth and early twentieth centuries, contended that the competitive conditions required for markets to work well no longer prevailed, and during the 1930s these ideas were adduced as explanations of the Great Depression and the inability of traditional, market-based policies to solve the problem.

One reading of this literature is that was doing no more than provide a explanation of why prices were inflexible—the “classical” theory of depression criticized by John Maynard Keynes in *The General Theory of Employment, Interest and Money* ((Keynes 1972)). However, it is very misleading to bracket this literature with the “classical” view attacked by Keynes, for it was rooted in American institutionalism and came with no bias towards *laissez-faire*. Price inflexibility was incidental to this literature, the main concern of which was with the functioning of large corporations and the markets in which they operated, and the structural problems this created for market organization. The story told here is of how this literature, in which market failure was associated with monopoly power, came to be melded with ideas about the failure of what Roosevelt called the financial machine to equilibrate saving and investment: about how how institutionalists came to adopt a more Keynesian

perspective on the cause of the Great Depression. The outcome was thus the emergence of an American Keynesianism with institutionalist roots. Concern with monopoly power did not disappear but it came to be associated with industrial economics rather than with what increasingly came to be considered macroeconomic problems. The institutionalist literature did, however, leave a mark on postwar Keynesian macroeconomics in that it was widely taken for granted that competition was imperfect, in clear contradiction to the position taken by Keynes.

This paper outlines these theories as they were developed in the academic literature and as they were drawn upon in a major inquiry, authorized by the letter from Roosevelt to Congress from which the above quotation is taken. It then traces some of the ways in which this literature, though it was eclipsed by Keynes's competing vision of the market failure that led to the depression, nonetheless fed through into postwar economics. It fed directly into the literature on industrial organization, in which Joe Bain and the architects of what came to be known as the Harvard school attempted to analyze the relationship between market structure and economic performance. The Chicago attacks on the Harvard school, associated with George Stigler, developed a perspective on industrial policy that began as a critique of the institutionalist literature. The link with postwar macroeconomics is less direct, but it can be seen in the widespread practice of justifying reverse-L shaped aggregate supply curves with an account of oligopolistic price setting. The paper illustrates this using the textbook that, above all others, came to be linked with American Keynesianism—Paul Samuelson's *Economics*—which drew to an extent not generally recognized, on the institutionalist literature discussed in this paper.

The story told here is not completely new. Rutherford (Rutherford 2011), chapter 10) has drawn attention to the complexity of the institutionalist response to Keynes, drawing

attention to the divide between those institutionalists who blamed depression on business profit-making and those who adopted underconsumptionist explanations (ibid., p. 291, n. 5); and the story parallels and overlaps with the one told by Lee (Lee 1990) in relation to the National Resources Committee. Similarly Mehrling (1997) has pointed out that Hansen's "conversion" came when he saw how he could accommodate certain Keynesian ideas within his earlier conception of the business cycle. However, such work has not drawn out the implication of this episode for thinking about the concept of market failure.

2. Questioning competitive markets, the 1920s

In the United States there is a long tradition of concern with the dangers posed by monopolies and cartels. This was reflected in the passage of the Sherman Anti-Trust Act (1890), which made it illegal to attempt to create a monopoly in interstate or international trade, and the Clayton Act (1914) which amended the Sherman Act through making illegal specific practices through which this was achieved (price discrimination, exclusive dealing contracts, mergers between competing companies, and interlocking directorates). This legislation and its use against perceived monopolies was a significant part of the background against which economists discussed the operation of markets in after the First World War.

One of the most significant books to emerge during the 1920s was Frank Knight's *Risk, Uncertainty and Profit* (1921). This book is best known for its distinction between risk and uncertainty, and for its having offered a rigorous account of the conditions necessary for perfect competition. Knight's motivation for developing the theory of perfect competition was to show that the pre-requisites for perfect competition, and hence the traditional theory of

value, to be valid were not satisfied in the real world. The most important of these assumptions was perfect knowledge and a large part of his book was devoted to exploring the implications of uncertainty. This took him into dynamics, for in a world in which there was no change, then there was unlikely to be much uncertainty.

A lot of Knight's book was theoretical, dealing with abstract and even philosophical ideas. However, his concern was with how markets worked, for he wanted "to isolate and define the essential characteristics of free enterprise as a system or method of securing and directing cooperative effort in a social group" (Knight 1921), p. viii). Knight claimed that his book "probably" emphasized the defects of free enterprise, but before concluding that any other system was better, it was necessary to examine alternative forms of social organization. The only conclusion to which he admitted was that "In the ultimate society, no doubt, every conceivable type of organization machinery will find its place" (ibid., p. ix). Markets have problems but so too might other forms of social organization.

Whereas the fundamental problem for Knight was uncertainty, John Maurice Clark ((Clark 1923)), who had helped Knight turn his thesis into a book, took a different view. For him the fundamental problem was "overhead costs"—those costs that cannot be attributed to specific units of output and which businesses have to incur irrespective of the quantity of goods they produce. This undermined traditional views about markets because, as Clark ((Clark 1923), p. 32) put it, "There is no natural system of prices in the old sense. Cost prices do not mean anything definite any more." In other words, the existence of overhead costs meant that supply and demand did not determine unique prices, and prices did not correspond either to the cost of producing goods or to the value of goods to consumers: they varied over the business cycle according to the level of prosperity (ibid., Chapter XXIII). Competition

served to reduce price differentials but it did not eliminate them completely. Because of this, decisions had to be made about how overhead costs should be apportioned, raising questions about how objectives of efficiency, incentives and fairness were to be balanced against each other.

The implication was that competition was “a varied and elastic thing” (ibid., p. 461):

Competition is necessarily a thing of self-imposed restraints, governed by the folkways of the business community even more actively and consciously than by the underlying restraints imposed by government. ... Agreements, understandings and the sentiment against “spoiling the market” all play a part in restraining competition, and are limited in their turn by some of the various forms of potential competition. Some of the forces of potential competition do not begin to act until the earnings of the capital engaged in the business are materially above the minimum rate necessary to attract free capital; while some of the forces of active competition continue to act even after prices are below the level necessary to cover operating expenses.

Clark argued that these were not merely imperfections in the market but were “essential to its ‘normal’ operation” (ibid., p. 460). He even included government expenses in the overhead costs industry had to bear, for government furnishes “vital, if intangible, factors of production; and produces far more than it costs” (ibid., p. 463).

Though making no assumption about the number of firms—he claimed to be presenting a general theory of competitive processes—Clark saw competitive markets as characterized by the type of indeterminacy usually attributed to oligopoly. Mechanical forces of supply and demand did not determine prices, but merely determined the constraints within which human

psychology would operate. Markets would not equate supply and demand for there were times when both labor and capital were idle.

In times of depression, prices of goods and rates of wages do not come down to the point where demand for the ultimate factors of production would be equal to supply. They are pegged at higher levels which hard back to the more active times which trade has enjoyed, and hopes to enjoy again. There is a sag, but it is like the sag of a rope stretched across a chasm, and does not reach bottom. These sustaining forces take varied forms ... especially in connection with the ultimate costs of labor, and cut-throat competition. ((Clark 1923), p. 465)

The reference to cut-throat competition, alluding to his arguments about how businessmen normally sought to avoid such potentially ruinous practices, makes it clear that he was not simply alleging that wages were sticky. They might be sticky but this was an inherent feature of competition in a world where prices had to be significantly greater than variable costs if firms were to survive.

The result of this was that markets might break down—they might fail. The economic system, involving an endless process of learning through trial and error, was “the very opposite of fool-proof”: “it requires nothing short of superhuman qualities of vision, foresight, correlation and co-operation to make it work without disastrous breakdowns” ((Clark 1923), p. 480). This raised questions for democracy, for democracy required that this “superhuman vision ... must be grasped by the many and this correlation must be democratically conceived and brought into being” (ibid.).

Edward Chamberlin's *Theory of Monopolistic Competition* (1933), like Knight's book originally a thesis supervised by Allyn Young, was published in the midst of the Great Depression but its conception was in the 1920s, for the thesis on which it was based had been submitted to Harvard 1927. His starting point was the claim that economists, among whom he cited Knight and Clark, were confused about perfect competition. The reason for their confusion, he argued, was that "supposedly perfect competition is really imperfect" (Chamberlin 1933), p. 4). He set out to construct a synthesis of the theories of monopoly and perfect competition, ending up with a complex theory of market structure. Markets could be distinguished according to the number of sellers but account also had to be taken on product differentiation and selling costs, such as advertising. Chamberlin was trying to create an economic theory appropriate for the modern world in which these were central phenomena of business activity. His search was for a more realistic theory. "Competitive theory," he argued, "is unreal in large part because it fails truly to represent the forces at work in the economic system" (Chamberlin 1933), p. 176).

A more radical appraisal of markets, that was published after Chamberlin's thesis, though before his book, was *The Modern Corporation and Private Property* (Berle, & Means 1932)). In the course of differentiating between different sources of income—the returns for providing capital, managing a business, and bearing risk and uncertainty—Knight had drawn a clear distinction between management and ownership of business. In a project funded by the Social Science Research Council, launched in 1928, not long before the height of the stock market boom that preceded the Great Crash, but published only after the world had moved into depression, a lawyer, Adolf Berle, and an economist, Gardiner Means developed the idea that ownership and management were different into a critique of the

market system as it had evolved in the United States. The corporation, they argued, was both a way of holding property and a means whereby economic life was organized. It permitted the concentration of wealth and its control by a small number of people—the managers of large corporations. Investors had surrendered control over their wealth and had “effectively broken the old property relationships and has raised the problem of defining these relationships anew” ((Berle, & Means 1932), p. 2). They documented the history of the corporation and the concentration of economic power that had taken place. Even though wealth had become more concentrated, ownership of modern corporations was widely dispersed leaving managers in control. The significance of this stemmed from the different interests of owners and managers. The law might be able to look after the rights of the property owner but it was not able to regulate the way managers ran the businesses under their control.

Arguing that existing theories were inadequate, Berle and Means called for a new concept of the corporation. Taking Adam Smith as representing traditional theory, they the separation of ownership from control had rendered it obsolete. Modern corporate enterprise was not the same as the forms of private enterprise with which Smith was familiar, and in the modern corporate world, involving cooperation and the exercise of “authority almost to the point of autocracy” within business, “individual liberty is necessarily curtailed” ((Berle, & Means 1932), p. 349). The profit motive had become distorted and competition was no longer effective.

Today competition in markets dominated by a few great enterprises has come to be more often either cut-throat and destructive or so inactive as to make monopoly or duopoly conditions prevail. Competition between a small number of units each

involving an organization so complex that costs have become indeterminate does not satisfy the condition assumed by earlier economists, nor does it appear likely to be as effective a regulator of industry and of profits as they had assumed. ((Berle, & Means 1932), p. 351)

These works are enough to show that, even during the prosperity of the 1920s, economists were questioning whether there might be structural reasons why markets could not be fully competitive and might fail to deliver the benefits they were supposed to bring. In the 1930s, such explanations were to become a prominent explanation of the depression.

3. The depression and market failure, the 1930s

When the world was hit by the Great Depression, many economists naturally turned to theories of the business cycle their for diagnoses of what had gone wrong. However, the downturn clearly indicated a failure of American capitalism and some economists argued that this failure amounted to a market failure: it was the result of a breakdown of competition—of a failure of competition to produce the results that, according to traditional theory, it should produce. In other words, they turned not to interactions between different parts of the economy but to the way individual markets functioned, drawing on ideas developed in the 1920s and earlier. These two perspectives on the Great Depression can be seen in the programs of the AEA soon after the stock market crash of 1929. At the first session after the crash, a round-table discussion on the causes of the economic problem was titled, “The theory of dynamics as related to industrial instability” ((Taussig et al 1930)). At the 1931 meeting, when it was becoming much clearer that it was no ordinary depression, the equivalent session

comprised a diagnosis by Schumpeter ((1931)), to which five economists responded ((Adams et al 1931)), producing a wide ranging discussion of possible causes of the cycle. However, at the same meeting, the causes of the depression were also addressed in a session in which eight economists discussed “The decline of laissez faire” (Handman et al 1931). Though labelled “Economic history” and covering thinking several centuries, it appears to have been motivated, at least in part, by current problems. The link between markets and depression is clearest in Alvin Hansen’s contribution (ibid., pp. 8-9), talking about the problems of price rigidity, especially for a country still on the gold standard, in a rapidly changing world. He argued that “social control” of business posed a dilemma, for whilst it might be possible to achieve greater stability than was available under free enterprise, the price would be slower technical advance and a more static market.

These two approaches can also be identified in the following year’s AEA meeting ((1932)). Hansen, Harry Jerome and Sumner Slichter introduced a discussion of the role of technological change in creating unemployment, a topic squarely in the tradition of American business cycle theory. Alongside that were sessions on “Private enterprise in economic history” and “Economic organization and the control of industry”. Though concerned with markets and market structures, this was as clearly addressed to the problem of depression as was the session on technological change. The first paper, by Henry Harriman, of the New England Power Company, argued that freedoms that might have been justified in the relatively simple society of the previous century could no longer be tolerated, for “the unwise action of one individual may adversely affect the lives of thousands” ((Harriman 1932), p. 67). His argument was that producers would be willing to “gauge their output to the consuming capacity of their country” but they were unable to do so because of the “ever-present risk of incurring penalties under anti-trust laws which ... are not in consonance with

the present-day needs of industry” (ibid.). He suggested a scheme whereby businesses coordinate their activities so as to get away from “the present harsh and unremunerative competitive system” on condition that all such agreements were regulated by a government authority. This theme was taken up in the following paper in which Rexford Tugwell ((1932), p. 75), then one of Roosevelt’s advisers, argued that, because “War in industry is just as ruinous as war among nations”, there was a need for national planning. Such planning should be thought of as technical rather than political—as a “normal extension and development of the kind of planning which is a familiar feature of contemporary business” (ibid., p. 76).

Such arguments were reinforced by some of the measures Roosevelt introduced in his first term. In the face of falling prices and a collapse of business profits, the National Industrial Recovery Act (NIRA) of June 1933 suspended the anti-trust laws and supported measures to sustain prices. Companies were required to establish codes of fair competition, fixing prices and wages, establishing production quotas, and restricting entry. The NIRA was followed by the setting up of the National Recovery Administration (NRA) which helped draw up such codes of practice, with firms that participated being allowed to use a Blue Eagle emblem to indicate their compliance. The NRA came to an end in May 1935, when it was declared unconstitutional, initiating an ongoing conflict between Roosevelt and the Supreme Court.

Means extended the ideas he had developed with Berle in a series of articles in the mid 1930s. The theoretical foundations for his work were presented in an article where he argued that it was necessary to bring economics together not with law (as in the collaboration with Berle) but with political science. The reason was that political science dealt with the

organization of economic activity through administrative means. He claimed that by 1929, “the control of something approaching half of industrial activity had become an administrative matter handled within 200 great administrative units” (Means 1935a), p. 62). Markets were failing to restrain their power, which had been further increased in the depression. When such a high proportion of economic activity was organized outside the market-place, it did not make sense to rely solely on market coordination. Because economists had few tools for analyzing non-market organization, they should turn to political scientists for assistance.

Because the behavior of large corporations was unlike that of more traditional businesses, the market had “become rather a disorganizing than an organizing influence”, price being set by the administrative actions of large firms (ibid.). Prices were increasingly inflexible, this undermining the effectiveness of the market as a device for coordinating economic activities. “A Ford Company,” Means wrote, “can throw a whole countryside into depression by its single decision to alter radically the character of its output”. The system had become unstable through relying on the market to coordinate activities that were not organized through markets.

Means, now in the Department of Agriculture, applied these ideas to monetary policy, arguing that it was no longer appropriate to treat all prices as being flexible. He substantiated his claim that some prices were set administratively by using wholesale price data to classify items according to the frequency with which their prices changed. This revealed large differences between commodities: there were 125 items that changed price almost every month and, at the other end of the scale, there were 95 that changed price less than five times in eight years (Means 1935b), p. 402). The former were the ones to which traditional theory applied; the latter were determined administratively. There was also a clear correlation, albeit

with wide dispersion, between the frequency of price changes and the fall in prices from 1929-32. Prices that changed infrequently had fallen around 10%, whilst ones that changed often had fallen 50% (with wide dispersion about both of these figures ((Means 1935b), p. 404). There was also a connection with production, industries with inflexible prices seeing the largest falls in output.

The problem of excess capacity was tackled in a major project started in 1932 by the Brookings Institution. Directed by Edwin Nourse, the project's first volume, *America's Capacity to Produce* ((Nourse et al 1934)) established, on the basis of industry-by-industry statistical analysis, that there was excess capacity of around 20 per cent. In the last in the series of four volumes arising from the project one of Nourse's collaborators, Harold Moulton ((1935)) concluded that by 1932 as much as 40 percent of capacity was unused. Harold Moulton, author of this volume, *Income and Economic Progress*, claimed that this failure was not the result of technical barriers on the production side but the failure of consumption to keep pace with productive capacity. The root cause of this lay in the fact that too much income was flowing to high income groups (who saved a high proportion of their income), leading to excessive saving. Saving was not translated into productive investment because the demand for investment was determined by consumption spending, which was not rising sufficiently fast, a very Hobsonian argument. The remedy was to be sought in making the distribution of income more equal. To achieve this, Moulton discussed employment in public enterprises, ideally self-financing but some financed by taxation, wage increases, profit sharing and price reductions. The last of these was thought particularly important:

There is one type of distributive reform which in our judgment outranks all the others in its promise of attaining the goal we seek. This is in the gradual but persistent revamping of price policy so as to pass on the benefits of technological progress and rising productivity to all the population in their role as consumers. ... To seek the acceleration of economic progress by means of price reduction is not to attack the system of private capitalism but rather to return to the very logic upon which that system was justified and extolled by both lay and professional students of the economic process during the days when the system was assuming its present general character ((Moulton 1935), pp. 161-2).

To achieve economic progress it was necessary to do more than protect the interests of specific interests and groups: economic progress had to include “all our people, the unskilled laborer as well as the master of a trade, those seeking to develop a new business as well as those entrenched in an old one—the masses not the classes” (((Moulton 1935), pp. 163).

Another powerful statement of the case that capitalism had to be reformed if it were to survive came from Henry Simons, at Chicago, whose “Positive program for laissez faire: some proposals for a liberal economic policy”, first published in 1934, ((1948)) constituted a strong attack on monopoly. Rather than adopting the almost corporatist strategy of accepting monopoly as a fact of modern life and seeking to make large corporations operate in the public interest, he argued that competition needed to be restored. His approach was explicitly libertarian in that he sought to defend liberty and democracy against their Communist and Fascist critics and against their real enemies, “the naive advocates of managed economy or national planning” (ibid., p. 41). The goal of economic policy should be to allow prices—

central to the free-enterprise system—to be determined independently of government. Instead of tinkering with relative prices, thereby interfering with the efficient operation of the free-enterprise system, governments should take positive actions to maintain competitive conditions in industry, for the problem facing society was monopoly.

[T]here is an intimate connection between freedom of enterprise and freedom of discussion and ... political liberty can survive only within an effective competitive economic system. Thus, *the great enemy of democracy is monopoly, in all its forms: gigantic corporations, trade associations and other agencies for price control, trade-unions—or, in general, organization and concentration of power within functional classes. Effectively organized functional groups possess tremendous power for exploiting the community at large and even for sabotaging the system. ... If the organized economic groups were left to exercise their monopoly powers without political restraint, the result would be a usurpation of sovereignty by these groups—and, perhaps, a domination of the state by them.* ((Simons 1948), p. 44)

Given his mention of Communism and Fascism, such language suggests that he has in mind political developments in those parts of continental Europe where corporate interests became tied up with the state and the attack on democracy.

Simons therefore proposed a series of measures designed to eliminate monopoly—what he called “a complete ‘new deal’ with respect to the private corporation” (ibid, p. 58). These including reserving to the Federal government the power to license private corporations, prohibiting companies engaged in making or selling commodities or services from owning securities of any other such corporation, limiting the total property any one corporation could own, restricting the types of securities that could be issued, preventing inter-locking

directorships, and measures to reduce the waste of advertising (ibid., pp. 58-9, 71). Where monopolies were inevitable (utilities and railroads) they should be nationalized and run by the state.¹

By adopting such a program, the state would effectively discharge its responsibilities to support a free-enterprise system. “The so-called failure of capitalism (or of the free-enterprise system, of competition),” Simons claimed, “may reasonably be interpreted as primarily a failure of the political state in the discharge of its minimum responsibilities under capitalism” (ibid, p. 43). Markets could succeed only if the state ensured that competition prevailed, a task that required a radical reform.²

A similar attitude towards monopoly was found in Arthur E. Burns’s *The Decline of Competition: A Study of the Evolution of American Industry* ((1936)), an exhaustive 600-page historical study of competitive practices in the United States, clearly illustrates this way of thinking. In response to economists’ arguments about the benefits of competition, “read as beguiling briefs for laissez faire”, Burns argued, competitive capitalism had been given a thorough trial in the period stretching from the Civil War to the NIRA.³ However, despite attempts to give it legislative support, “capitalism failed to preserve its competitive quality” ((Burns 1936), p. 1). The concentration of industry in the late nineteenth century through dramatic and ruthless method was widely blamed on the “pathological tendencies of

¹ Simons also advocated reforming the tax system, changing the nature of property rights so as to reduce the degree of inequality and a series of measures to reform the monetary system.

² The substantial role Simons saw for the state no doubt explains why later Chicago economists, though they might see him as a predecessor, did not consider him a supporter of free markets.

³ Burns cites Alfred Marshall’s *Industry and Trade* ((Marshall 1919)) as an example of the caveats economists made concerning laissez faire.

a few individuals” and legislation was introduced to restrain such people ((Burns 1936), p. 2). The possibility that such practices were inherent in a competitive, individualistic system was ignored. In the twentieth century attempts of the Supreme Court, “armed with the phrases ‘restraint of trade’ and ‘monopoly’” to compel “normal” competitive behavior proved ineffective. “Intent” to restrain trade was hard to establish and statistical measures, such as long periods of price stability, were inconclusive evidence.

Drawing on Chamberlin ((Chamberlin 1933)) and Robinson ((Robinson 1933)), Burns argued that there was no clear distinction between monopoly and competition, and elements of monopoly were an increasingly important and inescapable part the economic system.

Elements of monopoly have always been interwoven with competition but the monopoly elements have increased in importance. They can no longer be regarded as occasional and relatively unimportant aberrations from competition. They are such an organic part of the industrial system that it is useless to hope that they can be removed by law and the industrial system thus be brought into conformity with the ideal of perfect competition. ((Burns 1936), p. 3)

A major factor was a reduction in the number of sellers in many industries. Part of the problem was developments in technology making for large scale organization but concentration was also encouraged by the developments in corporate law highlighted by Berle and Means which favored corporations over individuals, and by patent laws. Anti-trust law had failed because, in outlawing certain practices, it had simply caused businesses to suppress competition in ways not covered by the law. Burns reviewed many of these practices in detail: price discrimination, non-price competition and the integration of industrial operations.

The extent to which Burns departed from mechanical views of the way markets worked, believing that there was significant indeterminacy in pricing policies, leaving room for the business psychology, is shown by his eventual conclusion. Very critical of the NIRA and NRA, he came down in favor of social control of business through the courts. “Reasoned decisions publicly available are the best means of providing for the evolution of an effective technique of control and for the minimization of resistance to policy” ((Burns 1936), p. 590).

Though Moulton had sketched what needed to be done to ensure economic progress, none of the four volumes produced by the Brookings team proposed specific policies to achieve these goals. This was tackled three years later by Nourse and Horace Drury in *Industrial Price Policies and Economic Progress* ((1938)). Taking up Moulton’s conclusion, they started from the premise that the best way to improve economic welfare was “though a consistent policy of expanding real incomes by lowering the prices of goods and services wherever advances in techniques and organization make such a course practicable” ((Nourse, & Drury 1938), p. 2). After reviewing the way prices were formed in a wide range of markets and in different businesses, they presented a detailed account of the history competition in the United States, supporting the conclusions reached by Berle, Means and Burns, whose books were cited approvingly, in many industries, competition no longer worked as it had done. In some industries, such as agriculture, prices were determined in the market, and there was no need for action. However, many industries were characterized by administered prices, determined not by the market but by the industrial executive. It was these prices that were the problem.

The “administered prices” of the big corporation are expressions of the thinking of particular men who occupy executive positions. They reflect the way in which those individuals suppose that the economic process works. A big corporation is a potent instrument in the hands of a stupid man to carry into effect a price policy which may stunt its growth or lead to its actual death. It is, in the hands of one who understands the laws of economic growth, an equally powerful instrument for the carrying out of a price program which will stimulate and develop the market, lead to capacity operations, and thereby contribute to that general prosperity on which the given business will feed in the future. ((Nourse, & Drury 1938), p. 270-1).

Though there might be a role for regulating prices, there was in Nourse’s conclusions an assumption that business behavior needed to be changed. Industrialists might bemoan the stupidity of labour union officials, yet they could be equally stupid in their pricing policies. The clear implication was that if industrialists could be persuaded that there were better policies, they would find it in their interests to adopt them. Businessmen benefited from free enterprise but in return they acquired obligations to society.

If the American business man demands the right of freedom of economic enterprise, society in granting it to him may properly ask that he use that freedom aggressively in the public interest. ... If he cannot meet it [this challenge] the system of free enterprise under private capitalism is doomed to a condition of invalidism, low vitality, and unproductiveness. ((Nourse, & Drury 1938), p. 275).

By the time Roosevelt wrote to Congress, there was thus an extensive literature arguing that stagnation and depression were the result of competition having broken down, implying the

need for policies that ran counter to the policies of maintaining prices that he had pursued in his first administration. The problem was not ruinous competition putting firms out of business but inadequate competition, resulting in households having insufficient incomes to buy the goods being produced.

4. The concentration of economic power

In response to the President's letter, Congress established a Temporary National Economic Committee (TNEC), made up of members of both Senate and the House of Representatives, to investigate the concentration of economic power. Staff from various government agencies produced a series of monographs, and the TNEC heard evidence from many witnesses. One of the most widely discussed hearings was the one in which Lauchlin Currie and Alvin Hansen gave evidence (see (Sandilands 1990), pp. 83-4; (Stein 1969), pp. 167-8). Hansen was the first and in the morning of May 16, 1939, after explaining about flows of savings and investment, he argued that the depression had been brought about by a decline in investment that could be linked to population growth having been much lower in the 1930s than it had been in the 1920s. A fall in investment, and hence unemployment, could arise from a mere slowdown in the rate of expansion. His evidence was primarily statistical, full of technical details about how magnitudes were measured.

Before Currie gave evidence in the afternoon, the committee chair, Senator Joseph O'Mahoney emphasized the importance of the topic by reading out a letter Roosevelt had sent that day, saying that he was concerned not only with idle men and factories but also with "the vast reservoir of money and savings [that had] remained idle in stagnant pools" ((United

States, Temporary National Economic Committee 1940), pp. 3519, 4009). Roosevelt expressed his hope that the committee would analyze ways in which “the financial machine” could be made to work more efficiently. Currie’s evidence provided further statistics, focusing explicitly on “income-producing expenditures that offset saving”, material that was clearly directly related to Roosevelt’s concerns. Hansen was then recalled to interpret Currie’s statistics. His crucial point was that, in order to have full employment, all savings, even money that was hoarded, had to be offset by some form of spending.

Though such justification may not have been necessary, especially given Roosevelt’s letter, Hansen justified paying attention to saving and investment by arguing that it was wrong to focus exclusively on commodity markets:

Too frequently when the functioning of the price system is under consideration attention is focused almost exclusively upon the commodity markets.

To leave an inquiry into the functioning of the price system, with a consideration of commodity prices alone would in my judgment overlook a sector in our economy, which is more important than any other for an understanding of the operation, the maladjustments and the instability of modern economic life. I refer in particular to that area which relates to the flow of savings and to the flow of new investment into the expansion of productive equipment. ((United States, Temporary National Economic Committee 1940), p. 3497)

He made no comments on the merits of the idea that there was a much more generalized market failure linked to a decline of competition, but merely drew the committee’s attention to the importance of what Roosevelt had called the financial machine. A later critic ((Stigler 1942), p. 5) pointed out that the TNEC had failed to hear any other opinions on monetary

economics and that both Hansen and Currie completely ignored monopoly. Given his previous work, Berle might have been expected to address the problem in his testimony ((United States, Temporary National Economic Committee 1940), pp. 3809-3835) but he did not. He was called as an expert on corporate finance, and his evidence concerned the role of bank credit and corporate bond markets in influencing investment. His evidence on the concentration of corporate capital, and problems faced by small business-men in raising finance fitted well with the arguments with Means about the changing structure of industry, but with creating new financial institutions that might make the system run more efficiently.

Even if Hansen and Currie were the star witnesses ((Stein 1969), p. 168), their testimony covered only 88 of the 33,000 pages published by the TNEC.⁴ Elsewhere, in both monographs produced by employees of the government agencies involved, some supervised by academic economists, and the record of the hearings, extensive attention was paid to problems of industrial structure and factors that might have caused competition to become ineffective. Monographs were devoted to the structure of industry, pricing policies (with a separate monograph on basing-point pricing), antitrust policy, patents, taxation, wages, profits income distribution, life insurance and the motion picture industry. Hearings covered patents, technology and the concentration of economic power, monopolistic practices, insurance, investment and profits, as well as specific industries.⁵ These were summarized in the TNEC's final report ((United States, Temporary National Economic Committee 1941a)).

⁴ There is an ambiguity in the number of volumes in that some volumes numbered separately were printed as single physical volumes. The page count is taken from (Stigler 1942), p. 1.

⁵ Neither of these lists is comprehensive. For a complete set of volumes, go to <https://archive.org/search.php?query=temporary%20national%20economic%20committee>.

The report began by documenting the extent of monopoly in the United States. After explaining some of the problems involved in defining monopoly, statistics were presented on the degree of concentration in different industries and there was a discussion of the practices by which firms sought to maintain their market positions. It concluded that concentration had increased over the previous fifty years and even in industries that were normally competitive, “competition is constantly breaking down” ((United States, Temporary National Economic Committee 1941a), p. 26). However, it was not inevitable that this should happen: the report rejected the argument that the efficiency of large-scale production inevitably led to monopoly, which was the result of formal agreements, secret understandings, combinations, interlocking directorates and stock-holdings, restrictive practices, coercion, intimidation, violence and property rights that gave their owners exclusive privileges, patents and tariffs (ibid., p. 28).

After a chapter documenting the concentration of production, the report turned to “Managed industrial prices” (ibid., Chapter III). Though expressed in different language, this was Means’s argument about administered prices.

For the prices of a vast range of industrial commodities and even of some agricultural products are controlled to a material extent by the policy decisions of business executives acting individually or in concert. Unlike such products as wheat ... the prices of such commodities as steel, aluminum, automobiles, cigarettes, and bread are all subject to a substantial degree of control by a limited number of executives in a few large companies. ((United States, Temporary National Economic Committee 1941a), p. 67)

Such businessmen all faced constraints on their ability to set prices, but they were continually trying to widen the limits within which they had discretion over prices. The result was that the businessman had become “the economic planner of our society”.

Attention was also paid to technological change. Economic theory held that increased in productivity would lower prices, increasing the consumer’s purchasing power. However, “this theory presupposes that all prices are ‘market’ prices” ((United States, Temporary National Economic Committee 1941a), p. 118). But in many industries, where prices were “influenced” (there was no settled terminology for this phenomenon) businesses were able to retain some of these gains. Prices remained high and employment fell fastest in these industries. Technological advance thus created gains and losses. Anticipating later chapters, a summary of these losses was immediately followed by the observation that “Evidence of the lack of balance between investment and consumption necessary for the maintenance of a ‘balanced economy’ is unmistakable” ((United States, Temporary National Economic Committee 1941a), p. 141).

The way in which the report made the transition to discussion of saving and investment was through moving from the analysis of the concentration of production to “Concentration of ownership of corporate assets, earnings and profits” and concentration of ownership of wealth in general. This led to an analysis of the concentration of savings (in a chapter written by Oscar Altman) which began, quoting from Currie’s testimony, by explaining that what mattered was not whether savings were invested or consumed, but whether they were hoarded and not returned to the income stream. Hydraulic metaphors abounded, as when the chapter talked of the “reservoirs” in which savings were collected (*ibid.*, p. 214). The capital market was the name used to refer to the set of institutions that transferred funds from savers, increasingly concentrated, into the hands of investors.

When it turned to the concentration of investment, another chapter written by Altman, the report pointed to two functions performed by investment. Not only did investment increase productive capacity but also it maintained the flow of purchasing power. This was illustrated with a diagram taken from a TNEC monograph by Martin Taitel ((United States, Temporary National Economic Committee 1941a), p. 225; (United States, Temporary National Economic Committee, & Taitel 1941), p. 128), shown here as Figure 1. Though its circularity is only implicit, this is virtually a circular flow diagram, for it shows how national income in one period generates national income in the next. However, where post-war circular flow diagrams were to focus on the flow of income, with the capital market being considered as a side-channel, here the “capital pool” was central, with the relationship between the stock of capital and flows of saving and investment being analyzed in great detail.

Altman’s statistics showed that over the previous two decades, the fraction of investment funded by business saving—by companies’ internally generated funds—had increased dramatically, and he argued that this was an underestimate of the true figure. This gave scope for the issues raised by Berle and Means about the separation of ownership and control to be important.

When businesses invest their own funds it must not be assumed that the actual savers are identical with those who make the investment decisions. ... it is the managers who decide how much should be set aside for reserves and expansion. ... In theory the stockholders have the right to determine whether investment of the earnings of the property should be made at all, and how much. Actually, in most cases, they play no

effective part in the decisions. ((United States, Temporary National Economic Committee 1941a), p. 231)

For market mechanisms to work, investment would have to respond to profit rates, but there was evidence that this did not happen. Though he conceded that little was known about the extent to which “social, personal and political elements” determined investment decisions, there was evidence that “High rates of profit do not of themselves attract new investment, nor low rates deter it” ((United States, Temporary National Economic Committee 1941a), p. 246). The most important factors affecting new investment were the level of output and the need to introduce new technologies.

The depression, Altman concluded, had arisen because concentration of income and wealth had raised the level of saving, and hence the need for investment. At the same time, concentration of wealth reduced the outlets for investment: “concentration limits the extent to which capital expenditures can or will be made for capital goods to take business away from existing facilities” (ibid, p. 247). It is the last phrase that is crucial here, for it is the result of a decline in competition.

This set the stage for chapter arguing for policies to stimulate investment, written by Paul Sweezy, strongly influenced by Hansen, whose testimony was quoted at length at the outset. There was some evidence that investment might be insensitive to interest rates, but this did not apply to all sectors of the economy. Housing and small business investment were responsive to interest rate cuts, so measures should be taken to focus on them. For much of industry, however, monopoly was a barrier in that monopolies would be reluctant to undertake new investment till older investments had worn out. “In short,” Sweezy wrote, “under monopoly new methods tend to succeed old methods; under competition, new

methods tend to replace old methods” ((United States, Temporary National Economic Committee 1941a), p. 278). The report therefore concluded with chapters covering housing, small businesses and consumers in more detail, and a closing chapter on fiscal policy.

Figure 1: Selected Features of the Flow of Funds

Source: (United States, Temporary National Economic Committee, & Taitel 1941), p. 128.

5. The legacy

When investigating the economic thinking spawned by the Great Depression, historians have generally focused on the constellation of events generally known as “The Keynesian Revolution” and the emergence of ways of thinking about “macroeconomic” problems. According to Keynes, there was a very specific market failure: a market economy had no mechanism to ensure that sufficient investment would be undertaken to absorb the savings that would be generated at full employment. His aim was to argue that, despite the existence of mass unemployment, the key market failure was in the capital market, not the labor market. For over three decades this was the framework within which the causes of depressions were debated: was wage rigidity necessary for involuntary unemployment to occur, or was there some other reason why free-market economies would typically fail to achieve full employment?

This paper adds a very important element to the conventional story of the Keynesian revolution. Many American economists sought to explain the Great Depression as a failure of competition. Though they were not “Keynesians”, they hardly fit Keynes’s stereotype of a “classical” economist, using arguments about how concentration of market power could interfere with market processes and produce inequalities of wealth that would, in a Hobsonian manner, reduce aggregate spending. The catastrophic failure of the market system was due, at least in significant part, to the growth of monopoly, which prevented traditional

market mechanisms from working. Though the phrase was not used at the time, the nearest being the term “Failure of capitalism”, cited by Simons, this amounted to an argument that there had been a general market failure. Markets worked when there was effective competition but competition was not working, not because individual businessmen were crooks, but because of deeply rooted structural factors. Wage rigidity was a part of this story but only a small part.

The proceedings of the TNEC are particularly important because these two perspectives on the depression—that it was the result of a failure of the financial machine to translate savings into investment, and that depression was the result of a widespread breakdown in competition—came together in their hearings. Historians who have considered this episode have focused on the way Hansen and Currie captured the attention of the committee. However, whilst that is correct, simply focusing on a clash between “Keynesian” and older views obscures the way in which a new form of what, for want of a better term might be called “American Keynesianism” arose out of the literature that associated market failure with the breakdown of competition. Hansen, whose arguments are particularly influential, was deeply rooted in the “institutionalist” traditions out of which the literature on the decline of competition emerged, his Keynesianism being deeply influenced by structural factors, such as the decline in population growth and changes in the flow of innovations, both factors that entered arguments about the growth of monopoly.

Even more significant, the report of the TNEC presented arguments for fiscal policy as a response to the problems caused by the concentration of economic power. Concentration of wealth affected saving and concentration of power within industry affected investment, and arguments about ownership and control provided a foundation distinctive basis for the Keynesian stress on the distinction between saving and investment. Keynesianism had been

encompassed into a worldview that owed more to American institutionalism than to Marshall's Cambridge.

It is easy to trace the links between the literature discussed here and post-war industrial economics. Edward Mason, who along with Joe Bain, was one of the leading figures in what became known as the "Harvard" school of industrial economics had helped supervise the monograph on the central topic of "Price behavior and business policy" (United States, Temporary National Economic Committee 1941b), as well as acting as a consultant on another volume. The TNEC's quantitative approach, based on classifying industries, finds a clear echo in the work of Mason, Bain and their colleagues. Stigler's ((Stigler 1942)) questioning of the TNEC's conclusions about the the extent and implications of monopoly represents an early statement of the "Chicago" view of monopoly. As this literature developed, it lost its connections with the business cycle and the attempt to explain the Great Depression in terms of a failure of competition. At the same time, explanations of depression were increasingly seen in Keynesian terms. As Rutherford has shown, institutionalists increasingly adopted Keynes.

However, the perspectives discussed in this paper did leave a mark on American Keynesianism as it developed after the Second World War. Accounts of the history of macroeconomics often focus on what Merhling ((Mehrling 1997)) has called "monetary Walrasianism", a term that accurately describes mathematical modeling in the tradition of John Hicks, Oskar Lange, Franco Modigliani and Don Patinkin in which macroeconomics is grounded on theories of competitive markets. It is well known that much work did not fit this framework, being less formal, and often based on the assumption that firms were imperfectly competitive, facing costs that were roughly constant up to full capacity. What is not often

acknowledged is that this approach was rooted in the analysis of markets discussed in this paper. It is no coincidence that some of the most influential interpreters of Keynes in the early 1950s were not monetary Walrasians but had institutionalist roots: for example, Dudley Dillard's *The Economics of John Maynard Keynes: The Theory of a Monetary Economy* (1948) and Hansen's *A Guide to Keynes* (Hansen 1953). John Kenneth Galbraith, a very influential Keynesian on account of his public profile, went so far as to develop, in a series of highly popular books, theories of market failure that clearly owed much to institutionalist theories of market failure developed during the 1930s (see (Parker 2005)).

The debates discussed in this paper also left their mark on the work of Paul Samuelson, whose widely used textbook, *Economics: An Introductory Analysis* (Samuelson 1948), did much to define postwar American Keynesiansism. Samuelson was personally and intellectually very close to Hansen during the decade after Hansen's testimony to the TNEC. He was recruited by Hansen to act as a consultant to the National Resources Planning Board, working with Altman, author of two of the crucial chapters in the final report and testified several times before the committee, making proposals that were taken up in several monographs. The project on which Samuelson worked—using statistics on the distribution of income to obtain forecasts of postwar consumption—was entirely in the spirit of the TNEC's analysis of concentration. He had Harvard teachers (e.g. Mason), fellow students (e.g. Sweezy), and MIT colleagues (e.g. Douglass Brown and Charles Myers), who were heavily involved in the TNEC's deliberations. Much of this affected his thinking on macroeconomics and carried over into his textbook.

The TNEC was only cited three times in his textbook, once on the structure of American industry, once on industrial insurance schemes, and once to criticize the mistaken belief of those testifying to it that the US economy was entering a period of stagnation.

However its influence is pervasive. His discussion of business organization and the modern corporation documented industrial concentration under the heading “The evil of monopoly” ((Samuelson 1948), pp. 126-7). He acknowledged that business was controlled by managers, not by its owners and he saw managers as having sufficient monopoly power to have some discretion in setting prices. Imperfect competition was more than a theoretical possibility. After discussing competitive markets, he wrote,

The practical importance of pure competition is not great enough to justify its further discussion. The competitive firm need only look at the newspaper price quotations of the Board of Trade to know all there is to know about price, demand, and revenue. ... Realistically speaking, we must recognize that modern business firms—even the largest—are unable to calculate their marginal revenue and marginal cost. They cannot determine their optimum price and output with nice exactitude. ... There seems nothing to do about this unsatisfactory situation but to try to specify a number of different competitive and monopolistic patterns characteristic of various important industrial situations. ((Samuelson 1948)), pp. 509, 510, 511).

His first such category “Chronically overcrowded sick industries” carries stronger overtones of institutionalist industrial economics than the economic theory found in the mathematical models of markets in his *Foundations of Economic Analysis* ((Samuelson 1947)).

Samuelson’s account of the determinants of saving and investment are too brief to be sure how far he accepted Altman’s and Taitel’s analysis but he did cite large corporations when explaining that saving and investment were undertaken by different people and for different reasons ((Samuelson 1948), p. 254). His emphasis on the investment opportunities provided by new products, new resources and greater population clearly echoed Hansen and,

though he discussed the determination of interest rates, there was no systematic account of the effect of interest rates on investment: he allowed for the possibility that investment might vary with the level of national income but not that it might vary with the rate of interest.

Were these merely remarks in an introductory textbook, they might have little significance, despite Samuelson's pre-eminence. Their significance arises because such a position was standard outside the world of mathematical economics. In the 1960s, it was routine to assume that constant costs, another regularity established in the pre-war literature and mark-up pricing ((Samuelson 1948)), p. 509) to argue that prices would be largely independent of output. Arguments about "cost-push" inflation, which were widespread in the 1950s and 1960s, were based on the assumption that prices were determined substantially independently of output, an assumption that made sense in a world where corporations had sufficient monopoly power to have discretion over the prices they set (see {Forder 2014}; (Backhouse, & Forder 2013)). Though consistent in its own terms, it was a view of the world that later generations of economists, committed to mathematical modeling of rational individuals, failed to understand.⁶

6. Concluding remarks

⁶ A good example of this is the notion of cost-push inflation. This was based on the assumption that supply and demand did not completely determine prices, with the result that there were limits within which non-economic, possibly sociological, factors could influence inflation, independently of the level of aggregate demand. As macroeconomics changed in the 1970s, this view changed into one in which cost-push was no more than a label for changes originating on the supply side. The cost-push/demand-pull distinction had lost its rationale, but survived.

Though they used different language, the Great Depression was, for most economists of the time, a clear example of market failure. For much of the 1930s, many American economists argued that the growth of market power had led to a failure of competition and that this had caused capitalism to fail. At the end of the decade, such explanations of the depression were displaced by theories about the failure of what Roosevelt called “the financial machine” to translate savings into investment. The interplay of these two conceptions of market failure can be seen in the proceedings of the TNEC, and this shows that, although the Keynesian perspective came to dominate the TNEC’s final report, it was merged with and presented as an extension of the view that the root cause of the problem was the concentration of economic power. The failure of the financial machine came to be seen as an extension of the more general view of market failure that had been widespread in the 1930s but which, by the 1950s had dropped out of fashion, certainly among mathematical economists.

The adoption of Keynesian ideas by its supporters contributed to the rapid decline of the institutionalist movement during the 1940s. However, ideas about market did feed into subsequent developments in economic analysis. In the 1940s and 1950s, discussions of the failure of competition were generally linked to microeconomics—to the failure of specific industries to perform well. The postwar debate between the “Harvard” and “Chicago” schools of industrial organization can be traced back at least to Stigler’s critique of institutionalist analysis found in the TNEC reports. Post war Keynesians focused not on market power but on deficient effective demand and the cause of depression, modeling this using the multiplier, the 45-degree line diagram popularized by Samuelson’s textbook, and what came to be known as the Hicks-Hansen IS-LM model. However, the background of many leading Keynesians in the arguments about market power prevalent in the 1930s left their mark on the way these models were interpreted. They were seen not as grounded in theories of perfectly

competitive equilibrium but as resting on ideas about the operation of imperfectly competitive markets that were not analyzed formally.

An important part of the story of the Keynesian revolution in America involves the taking up by institutionalists of Keynesian ideas, leading to the demise of institutionalism as a distinctive movement. In Hansen's case this involved realizing that Keynes was proposing arguments that could be related to his own theory of stagnation, and that the multiplier could be incorporated into his own theoretical framework. In the proceedings of the TNEC, a similar process took place, in which ideas about the failure of the saving investment mechanism were incorporated into a more general theory of market failure, which they then dominated. This is not a complete account of the Keynesian revolution in America, which also involves a turn towards fiscal policy as the main weapon with which to combat unemployment but it is an important part of the story.

References

- Adams, A.B., Goodrich, C., Demmery, J., Thorp, W.L. & Hansen, A.H., 1931, *The Business Depression of Nineteen Hundred Thirty--Discussion*, , 21(1), pp. 183-201.
- Backhouse, R.E. & Forder, J., 2013, Rationalizing incomes policy in Britain, 1948-1979, *History of Economic Thought and Policy*, 1(1), pp. 17-35.
- Berle, A.A. & Means, G.C., 1932, *The Modern Corporation and Private Property*, Macmillan, New York.
- Burns, A.R., 1936, *The Decline of Competition: A Study of the Evolution of American Industry*, McGraw Hill, New York.
- Chamberlin, E.H., 1933, *The Theory of Monopolistic Competition*, Harvard University Press, Cambridge, MA.
- Clark, J.M., 1923, *Studies in the economics of overhead costs*, The University of Chicago Press, Chicago, Ill..
- Handman, M., Usher, A.P., Stocking, G.W., Bladen, V.W., Mitchell, B., Jaffé, W., Hansen, A.H. & Goodrich, C., 1931, *Economic History--The Decline of Laissez Faire*, , 21(1), pp. 3-10.
- Hansen, A.H., 1953, *A Guide to Keynes*, McGraw Hill, London.

- Harriman, H.I., 1932, *The Stabilization of Business and Employment*, , 22(1), pp. 63-74.
- Keynes, J.M., 1972, *The General Theory of Employment, Interest and Money*, Macmillan, London.
- Knight, F.H., 1921, *Risk, uncertainty and profit*, Houghton Mifflin Company, Boston.
- Lee, F.S., 1990, From Multi-Industry Planning to Keynesian Planning: Gardiner Means, the American Keynesians, and National Economic Planning at the National Resources Committee, *Journal of Policy History*, 2(02), pp. 186-212.
- Marshall, A., 1919, *Industry and Trade*, Macmillan, London.
- Means, G.C., 1935a, The Distribution of Control and Responsibility in a Modern Economy, , 50(1), p. 59.
- Means, G.C., 1935b, Price Inflexibility and the Requirements of a Stabilizing Monetary Policy, , 30(190), p. 401.
- Mehrling, P., 1997, *The money interest and the public interest : American monetary thought, 1920-1970*, Harvard University Press, Cambridge, Mass..
- Moulton, H.G., 1935, *Income and economic progress / by Harold G. Moulton*, Washington, D.C. : The Brookings Institution, Washington, D.C..
- Nourse, E.G. & Drury, H.B., 1938, *Industrial price policies and economic progress / by Edwin G. Nourse and Horace B. Drury*, Washington, D.C. : The Brookings Institution, Washington, D.C..
- Nourse, E.G., Leven, M., Moulton, H.G. & Lewis, C., 1934, *America's capacity to produce, / by Edwin G. Nourse and associates, Frederick G. Tryon, Horace B. Drury, Maurice Leven, Harold G. Moulton, Cleona Lewis*, Washington, D.C., : The Brookings Institution, Washington, D.C.,.
- Parker, R., 2005, *John Kenneth Galbraith: his life, his politics, his economics*, illustrated, reprint ed. Farrar, Strauss and Giroux, New York.
- 1932, Program of the Forty-Fourth Annual Meeting, , 22(1).
- Robinson, J., 1933, *Economics of Imperfect Competition*, Macmillan, London.
- Rutherford, M., 2011, *The institutionalist movement in American economics, 1918-1947 : science and social control*, Cambridge University Press, New York.
- Samuelson, P.A., 1947, *Foundations of Economic Analysis*, Harvard University Press, Cambridge, MA.
- Samuelson, P.A., 1948, *Economics: An Introductory Analysis*, 1 ed. McGraw Hill, New York.
- Sandilands, R.J., 1990, *The life and political economy of Lauchlin Currie : New Dealer, presidential adviser, and development economist*, Duke University Press, Durham.
- Schumpeter, J., 1931, The Present World Depression: A Tentative Diagnosis, , 21(1), pp. 179-82.
- Simons, H.C. 1948, A positive program for laissez faire: some proposals for a liberal economic policy, in *Economic Policy for a Free Society*, University of Chicago Press, Chicago, pp. 40-77.
- Stabile, D.R. & Kozak, A.F., 2012, *Markets, Planning and the Moral Economy: Business Cycles in the Progressive Era and New Deal*, Edward Elgar, Cheltenham.
- Stein, H., 1969, *The Fiscal Revolution in America*, University of Chicago Press, Chicago, IL.
- Stigler, G.J., 1942, The Extent and Bases of Monopoly, , 32(2), pp. 1-22.
- Taussig, F.W., Mills, F.C., Garver, F.B., Knight, F.H., Souter, R.W., Lorwin, L.L. & Ezekiel, M., 1930, The Theory of Economic Dynamics as Related to Industrial Instability, , 20(1), pp. 30-9.

- Tugwell, R.G., 1932, *The Principle of Planning and the Institution of Laissez Faire*, , 22(1), pp. 75-92.
- United States, Temporary National Economic Committee, 1938, *Investigation of Concentration of Economic Power: Hearings, Part 1-3: Economic Prologue*, US Government Printing Office, Washington DC.
- United States, Temporary National Economic Committee, 1940, *Investigation of Concentration of Economic Power: Hearings, Part 9: Savings and Investment*, US Government Printing Office, Washington DC.
- United States, Temporary National Economic Committee, 1941a, *Investigation of Concentration of Economic Power: Final Report of the Executive Secretary*, US Government Printing Office, Washington DC.
- United States, Temporary National Economic Committee, 1941b, *Investigation of Concentration of Economic Power: Monograph 1-3, Price Behavior and Business Policy*, US Government Printing Office, Washington DC.
- United States, Temporary National Economic Committee & Taitel, M., 1941, *Investigation of Concentration of Economic Power: Monograph 12, Profits, Productive Activities and New Investment*, US Government Printing Office, Washington DC.