BUSINESS CYCLES, PART II

F. A. HAYEK

THE COLLECTED WORKS OF

F. A. Hayek

BUSINESS CYCLES
PART II

Edited by Hansjoerg Klausinger

Liberty Fund

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EDITORIAL FOREWORD

This volume complements the first part of *Business Cycles*, which contains Hayek's two major monographs on money and the cycle, with a series of shorter papers, stretching from the 1920s to his final word on these matters in 1981. In particular, this volume includes four hitherto unpublished contributions: The first, and possibly most important, results from a book project that Hayek pursued between 1924 and 1929, the "Geldtheoretische Untersuchungen", of which an unfinished typescript of eight chapters has survived in the Friedrich A. von Hayek Papers at the Hoover Institution Archives; this fragment is published here for the first time, translated as "Investigations into Monetary Theory" (chapter 1). Two of the unpublished contributions relate to Hayek's London School of Economics (LSE) lectures in January 1931 that gave rise to *Prices and Production* (1931): one is a lecture given at the University of Cambridge on his way to London ("The Purchasing Power of the Consumer and the Depression", chapter 2); the other lecture was presented in 1981, on the fiftieth anniversary of these LSE lectures ("The Flow of Goods and Services", chapter 12). Finally, a short typescript prepared for a London publisher ("Restoring the Price-Level?") is also reproduced here for the first time. My hope is that the availability of these hitherto unpublished materials will serve to deepen our understanding of Hayek's thought on money and the cycle.

With regard to the presentation of the text this edition keeps to the standard established for the *Collected Works*. Specifically, the full reference of a source is always given at the first quotation and abbreviated references when there are further quotations; however, the Editor's Introduction and each of the chapters are treated as self-contained parts to which this rule applies separately. Inaccurate quotations have been left as in Hayek's original, yet these inaccuracies will be corrected: in the text these are pointed out in accompanying editorial notes, and in the footnotes inaccurate quotations are supplemented by corrections in brackets. Incomplete references by Hayek will be silently supplemented, yet brackets are used for correcting references that are definitely wrong, e.g., as regards the author's name, title, or pagination. Finally, the translations from German-language sources are principally by the editor, if no other source is indicated.

This volume would not have been produced had it not been for help and support from various persons and institutions. Papers relating to my editorial work on Hayek's *Business Cycles* have been presented at numerous conferences and seminars throughout Europe, in the United States, and in Japan, and the final result has indeed much profited from the suggestions and queries received on these occasions. Of the persons to whom I feel most indebted, I would like to mention—without any claim to completeness—Roger Garrison, Susan Howson, Robert Leonard, Larry White, Günter Chaloupek, Harald Hagemann, Heinz D. Kurz, Hans-Michael Trautwein and Arash Molavi Vasséi, and among my colleages at the WU (Wirtschaftsuniversität) Vienna, J. Hanns Pichler, Alfred Sitz, and Herbert Walther. The comments by two anonymous readers of the original typescript proved invaluable for improving the final outcome. I have also to acknowledge with many thanks the hospitality I experienced at the University of Stuttgart-Hohenheim, the Walter Eucken-Institute (Freiburg im Breisgau), Hitotsubashi University (Tachikawa), and Yokohama National University, and in particular the stimulating atmosphere during my stay as a senior research fellow of the Duke Center for the History of Political Economy, with special thanks to Craufurd Goodwin, Kevin D. Hoover, Neil de Marchi, E. Roy Weintraub, and in particular to Bruce Caldwell, also in his capacity as the most helpful and patient general editor of this series. Having made heavy use of these facilities, I also want to thank the staff of all the libraries and archives I visited in the course of my research on Hayek.

I am grateful to Anthony Courakis, the literary executor of Sir John Hicks, for permission to quote from the unpublished correspondence of Sir John Hicks; to the Hoover Institution Archives (copyright Stanford University), the repository of the Machlup papers, for the unpublished correspondence of Fritz Machlup; and of course to the Estate of F. A. Hayek for his unpublished papers and correspondence. Furthermore, I would like to thank Mary Kaldor as well as John Wiley and Sons, Ltd., for permission to reprint Nicholas Kaldor's "Professor Hayek and the Concertina-Effect" and "Postscript". I have also to thank Murray Milgate for generously making his correspondence with Hayek available to me. Finally, work on these volumes has been much facilitated by financial assistance from the WU-Jubiläumsstiftung, which provided the financial means for a one-year sabbatical (*Forschungsvertrag*), and the Austrian National Bank for awarding its *Internationalisierungspreis*, which I gratefully acknowledge.

Hansjoerg Klausinger

INTRODUCTION

The contributions to the theory of the cycle collected in this volume encompass a period of more than fifty years—from an early hitherto unpublished typescript to a paper that Hayek presented at the fiftieth anniversary of his famous LSE lectures. Thus it also documents the evolution of Hayek's thought, and concomitantly the rise, transient decline, and ultimate restoration of Hayek's reputation as an economic theorist.

After a short biographical sketch, this introduction will concentrate on two issues: first, on Hayek's attempts to cope with the problem of deflation and his final and vain effort to provide a dynamic foundation for his theory of the cycle, the two areas of Hayek's approach most vulnerable to criticism, and second, on the continuity and change that may be seen in Hayek's system of thought during his long struggle to free himself from the suppositions of the equilibrium framework in which his early writings were embedded.

Hayek in London, 1931–42

In the introduction to the companion volume[1] we left off at the point at which Hayek had arrived at the London School of Economics (LSE) in 1931 and on the eve of the controversies in which he, together with other members of the faculty, was soon to be embroiled. These included, for example, Lionel Robbins's clash in the Macmillan Committee with John Maynard Keynes, in particular on the issue of free trade, and Hayek's early confrontation with Keynes and Cambridge, highlighted by the mutual reviews of Keynes's *A Treatise on Money* by Hayek and of Hayek's *Prices and Production* by Keynes and Piero Sraffa.[2] With regard to economic policy the challenge of the Great Depression

[1] *Business Cycles, Part I*, ed. Hansjoerg Klausinger, vol. 7 (2012) of *The Collected Works of F. A. Hayek* (Chicago: University of Chicago Press).

[2] John Maynard Keynes, *A Treatise on Money*, 2 vols. (London: Macmillan, 1930), reprinted as vols. 5 and 6 (1971) of *The Collected Writings of John Maynard Keynes*, ed. Austin Robinson and Donald Moggridge (London: Macmillan; Cambridge: Cambridge University Press); and F. A. Hayek, *Prices and Production* (London: Routledge, 1931; 2nd ed. rev., 1935), reprinted in F. A.

initiated a series of public debates on the question of reflation,[3] on saving versus spending,[4] and on stable prices versus neutral money.[5] Outside the domain of money and the cycle the other battles fought by Hayek and the Austrians ought not to be forgotten, that is, the controversies on the nature of capital, on economic calculation under socialism, and generally on the trend of recent economic thinking. As these battles took place during the 1930s Hayek and the liberal camp he represented were repeatedly seen to be on the losing side,[6] and consequently his influence on economic policy-making as well as his reputation as a first-rate economic theorist began to wane.

A similar evolution can be discerned with regard to the circle of Hayek's students at LSE. Although Hayek had never attempted to transform this circle of disciples into a 'school', as time went by the attraction of being regarded a follower of Hayek was fading. To give but a few examples, John R. Hicks's leaving London in 1935 for a lectureship at Cambridge was widely considered a serious loss, although he collaborated there more closely with Dennis Robertson than with Keynes and the Cambridge circus; others like Abba P. Lerner and G. L. S. Shackle after a spell under Hayek's influence converted to Keynesianism. Lerner after spending six months at Cambridge in 1934–35 immigrated to the United States in 1937; at the same time Shackle, who had started his thesis under Hayek's supervision, changed the topic to a Keynesian theme. Whereas many of Hayek's former disciples, like those just mentioned, affirmed their continuing high esteem for Hayek's achievements as a theorist,[7]

Hayek, *Business Cycles, Part I.* On the debate cf. the editor's introduction and the respective chapters in *Contra Keynes and Cambridge: Essays, Correspondence*, ed. Bruce Caldwell, vol. 9 (1995) of *The Collected Works of F. A. Hayek.*

[3] Cf. in particular Lionel Robbins, "Letters to the Editor: Monetary Policy", *Economist*, May 14 and 28, June 11, 1932, pp. 1081, 1188–89 and 1295, and Roy F. Harrod, "Letters to the Editor: Monetary Policy", *Economist*, June 4 and 18, 1932, pp. 1242–43 and 1358.

[4] Cf. in particular the letters to the editor signed by Harrod et al. in the *Times*, July 5, 1932, p. 10, and March 10, 1933, p. 15. Another letter ("Private Spending—Money for Productive Investment. A Comment by Economists") by D. H. Macgregor, Arthur Cecil Pigou, John Maynard Keynes, Walter Layton, Arthur Salter, and Josiah C. Stamp appeared in the *Times*, October 17, 1932, p. 13, and was followed by a critical comment ("Spending and Saving—Public Works from Rates") by Theodore E. Gregory, F. A. Hayek, Arnold Plant, and Lionel Robbins (October 17, 1932, p. 13), and a reply by the former ("Spending and Saving—What Are National Resources? The Economists' Reply", October 21, 1932, p. 15).

[5] On this debate see the editor's introduction to F. A. Hayek, *Business Cycles, Part I*, p. 36.

[6] Cf. Mark Blaug, "Commentary", in *Austrian Economics: Tensions and New Directions*, ed. Bruce J. Caldwell and Stephan Boehm (Boston, Dordrecht and London: Kluwer, 1992), pp. 31–34.

[7] Cf., e.g., John Hicks, "The Hayek Story", in *Critical Essays in Monetary Theory* (Oxford: Oxford University Press, 1967), pp. 203–15; and George L. S. Shackle, "F. A. Hayek, 1899–", in *Pioneers of Modern Economics in Britain*, ed. D. P. O'Brien and John R. Presley (London: Macmillan; Totowa, NJ: Barnes and Noble, 1981), pp. 234–62. Indeed, Shackle in his specific brand of Keynesianism combined a Hayekian concern with the role of knowledge in economic affairs with Keynes's emphasis on uncertainty.

the case of Nicholas Kaldor was different, and paradigmatic for the turning from disciple to foe. As Kaldor also played a vital role in the controversy that for nearly three decades ended Hayek's endeavours in the theories of money and the cycle, the relationship between Hayek and Kaldor in the 1930s shall be addressed here more thoroughly.[8]

In 1930 Kaldor had just graduated from LSE and been awarded a two-year research studentship which he used to embark on a research project on the economic problems of the Danubian succession states. The geographical focus of this project provided the first contacts with the Austrian school and in particular with Hayek. Possibly at the initiative of Robbins, Kaldor in 1930 had translated Hayek's habilitation lecture[9] and was offering to translate *Geldtheorie und Konjunkturtheorie*,[10] and from May to July 1931 Kaldor visited Vienna to enrol for the summer term at the university. Thus, when he and Hayek met again in London, at the beginning of Kaldor's career as a professional economist, all his contemporaneous writings, whether on the economics of the Danubian states, the origins of the Austrian banking crisis, free trade and exchange restrictions, or the possibility of technological unemployment, were firmly rooted in the specifically Austrian version of liberal thought. In this regard, it might then have been difficult to decide if he considered himself more a disciple of Hayek or of Robbins.

Just as Hayek was becoming entangled in his famous controversies with Keynes and Sraffa, however, Kaldor began to dissociate himself from his teachers, possibly due to Hicks and Brinley Thomas disseminating the novel approach of the Swedish economists, in particular of Gunnar Myrdal.[11] Consequently, in the controversy (between Harrod and Hayek) on stable prices versus neutral money Kaldor adopted an intermediate position, and he remained conspicuously silent on the themes of reflation and public spending. Furthermore, he actively participated in the imperfect competition revolution of Edward Chamberlin and Joan Robinson, and his view of excess capacity as a po-

[8] The following draws on Hansjoerg Klausinger, "Hayek and Kaldor: Close Encounter at LSE", *History of Economic Ideas*, vol. 19, no. 2 (2011).

[9] Jointly with Georg Tugendhat, published as "The 'Paradox' of Saving", *Economica*, no. 32, May 1931, pp. 125–69, reprinted as chapter 2 of F. A. Hayek, *Contra Keynes and Cambridge*.

[10] Cf. Hayek to Kaldor, December 1, 1930, in the Nicholas Kaldor Papers, section 3, box 4, King's College Archive Centre, Cambridge. Eventually the translation became a joint effort by Kaldor and Honoria Croome, another of Robbins's students (see *Monetary Theory and the Trade Cycle* [London: Cape, 1933], reprinted in F. A. Hayek, *Business Cycles, Part I*).

[11] Cf. Gunnar Myrdal, "Der Gleichgewichtsbegriff als Instrument der geldtheoretischen Analyse", in *Beiträge zur Geldtheorie*, ed. F. A. Hayek (Vienna: Springer, 1933; reprinted, Berlin, Heidelberg, and New York: Springer, 2007), pp. 361–487; see for an English translation *Monetary Equilibrium* (London: Hodge, 1939; reprinted, New York: Kelley, 1965). On the Swedish influence see Nadim Shehadi, "The London School of Economics and the Stockholm School in the 1930s", in *The Stockholm School of Economics Revisited*, ed. Lars Jonung (Cambridge: Cambridge University Press, 1991), pp. 382–83.

tential justification for government regulation for the first time drew explicit protest from Hayek's side (albeit only in private correspondence).[12]

If by then Kaldor's distancing from Hayek's position was already becoming evident, things changed dramatically with the appearance of Keynes's *General Theory*[13] and Kaldor's rapid conversion. At first, Kaldor's thought evolved in two directions; he contributed to the development of the Keynesian approach, yet also continued in his attempt at a synthesis of capital and business cycle theory. As a by-product of this endeavour he severely criticised Hayek's attempts directed at a similar aim. Typical examples of Kaldor's critique are his survey on capital theory and, in particular, two companion papers on capital intensity and the cycle, the one conceived as a logical and empirical criticism of Hayek's *Prices and Production*, the other dealing more generally with structural obstacles to the sustainability of full employment.[14] When Hayek published his final venture into the theory of the trade cycle, introducing the notion of the Ricardo effect, this gave rise to the ultimate showdown. First, Tom Wilson, whose thesis was supervised by Kaldor, called into question the microeconomic foundation and thus the logical validity of the Ricardo effect, to which Hayek responded with another attempt at clarification.[15] Yet, it was Kaldor himself who in a devastating critique dealt the final blow (or so it appeared to contemporaries) to the Hayekian edifice.[16] In any case, apart from a short reply, Hayek remained silent on matters of money and the cycle for more than twenty years.[17] This

[12] Cf. Nicholas Kaldor, "Market Imperfection and Excess Capacity", *Economica*, n.s., vol. 2, February 1935, pp. 33–50, reprinted as chapter 4 of *Essays on Value and Distribution*, vol. 1 of *Collected Economic Essays* (London: Duckworth, 1960; 2nd ed., 1980), and the correspondence between Hayek ("A Note on Kaldor", typescript [1935?]) and Kaldor ("Reply to Hayek", typescript [1935?], both in the Friedrich A. von Hayek Papers, box 105, folder 18, Hoover Institution Archives, Stanford University).

[13] John Maynard Keynes, *The General Theory of Employment, Interest and Money* (London: Macmillan, 1936), reprinted as vol. 7 (1971) of *The Collected Writings of John Maynard Keynes*.

[14] Cf., respectively, Nicholas Kaldor, "Annual Survey of Economic Theory: The Recent Controversy on the Theory of Capital", *Econometrica*, vol. 5, July 1937, pp. 201–33, reprinted as chapter 9 of his *Essays on Value and Distribution*; "Capital Intensity and the Trade Cycle", *Economica*, n.s., vol. 6, February 1939, pp. 40–66, and "Stability and Full Employment", *Economic Journal*, vol. 48, December 1938, pp. 642–57, reprinted as chapters 6 and 5, respectively, of his *Essays on Economic Stability and Growth*, vol. 2 of *Collected Economic Essays*.

[15] Cf., respectively, F. A. Hayek, "Profits, Interest and Investment", chapter 1 of *Profits, Interest and Investment. And Other Essays on the Theory of Industrial Fluctuations* (London: Routledge and Sons, 1939), reprinted as chapter 8 of this volume; Tom Wilson, "Capital Theory and the Trade Cycle", *Review of Economic Studies*, vol. 7, June 1940, pp. 169–79; and F. A. Hayek, "The Ricardo Effect", *Economica*, n.s., vol. 9, May 1942, pp. 127–52, reprinted as chapter 9 of this volume.

[16] Nicholas Kaldor, "Professor Hayek and the Concertina-Effect", *Economica*, n.s., vol. 9, November 1942, pp. 359–82, reprinted as chapter 10 of this volume.

[17] F. A. Hayek, "A Comment", *Economica*, n.s., vol. 9, November 1942, pp. 383–85, reprinted in this volume, pp. 313–15. He eventually returned to this topic with "Three Elucidations of the

concluded, for a time, the scientific controversy between Hayek and Kaldor, yet animosities between them were to persist for the rest of their lives.

Coping with Deflation

Just at the time when Hayek had entered the scene as an economic theorist in Great Britain, the economies of the major industrial countries found themselves in the midst of what came to be known as the Great Depression,[18] characterised by a slump in production, high rates of unemployment, and a fall in prices accompanied by a shrinking circulation of money. As soon as the fall in prices made itself felt, a debate on the proper reaction in terms of monetary policy evolved, in particular on whether the authorities should respond with expansionist policies and reflation. Indeed, policies for preventing and counteracting deflation appeared to follow from Hayek's stance, too, as neutral money to a first approximation corresponded to a policy of stabilising monetary circulation. Yet, as is well known, Hayek—like most of the economists close to the Austrian school—refrained from any such proposals and was extremely cautious with regard to expansionist monetary policies. Therefore a crucial question to be addressed is how Hayek conceived of the phenomenon of deflation and why he remained so hostile to anti-deflation policies.[19]

In order to answer this question it is necessary to reconstruct Hayek's approach to deflation.[20] To recapitulate, according to Hayek's theory the crisis is

Ricardo Effect", *Journal of Political Economy*, vol. 77, March/April 1969, pp. 274–85, reprinted as chapter 11 of this volume.

[18] Cf., e.g., Lionel Robbins, *The Great Depression* (London: Macmillan, 1934; reprinted, Auburn, AL: Ludwig von Mises Institute, 2007).

[19] On the related issue of stable prices versus neutral money in the presence of technical progress cf. the editor's introduction to F. A. Hayek, *Business Cycles, Part I*, pp. 34–39.

[20] Hayek's concern with deflation started in 1931, when he began discussing it with Gottfried Haberler, Fritz Machlup, and Wilhelm Röpke in a correspondence of which unfortunately only a single letter survived (Hayek to Haberler, December 20, 1931, Gottfried Haberler Papers, box 65, Hoover Institution Archives, Stanford University; an excerpt is reprinted in this volume as an appendix to chapter 5). He had not dealt before with deflation in his two monographs, *Geldtheorie und Konjunkturtheorie* (Vienna: Springer, 1929; reprinted, Salzburg: Neugebauer, 1976) and *Prices and Production* (1st ed., 1931), yet he added short passages to the prefaces of the respective English and German versions, *Monetary Theory and the Trade Cycle* (1933) and *Preise und Produktion* (Vienna: Springer, 1931; reprinted 1976), both prefaces reprinted in F. A. Hayek, *Business Cycles, Part I.* Next, some reflections on deflation and the policies directed at it are to be found in a contribution to *Der Deutsche Volkswirt* ("Das Schicksal der Goldwährung", vol. 6, February 12 and 19, 1932, translated as "The Fate of the Gold Standard" and reprinted as chapter 3 of *Good Money, Part I: The New World*, ed. Stephen Kresge, vol. 5 (1999) of *The Collected Works of F. A. Hayek*), and in a comment on the current monetary policy of the Federal Reserve System in a Viennese daily ("Die Bedeutung der New-Yorker Börsenhausse. Konjunkturumschwung?", *Neues*

caused by a maladjustment in the structure of production typically initiated by a credit boom, such that the period of production (representing the capitalistic structure of production) is lengthened beyond what can be sustained by the rate of voluntary savings. The necessary reallocation of resources and its consequences give rise to crisis and depression. Thus, the 'primary' cause of the crisis is a kind of 'capital scarcity' while the depression represents an adjustment process by which the capital structure is adapted. This process can, but need not, be accompanied by deflation. It is in this specific meaning that Hayek speaks of deflation as being 'secondary', for example, when referring to "these (in a methodological sense) secondary complications which arise during the depression", or maintains that "the process of deflation represents only a secondary phenomenon".[21] It should also be clear that Hayek was propounding the definition of deflation then prevailing in Austrian circles, that is, deflation as a decrease in (the circulation of) money as opposed to the more common meaning of a decrease in prices (or the price level).[22]

A full understanding of the primary-secondary distinction as well as the policy conclusions drawn from it requires a short glance at the contemporary German debate. The origin of the terms derived most probably from Schumpeter, who in his writings on the business cycle distinguished between two types of liquidation (or depression): 'normal' and 'abnormal', 'primary' and 'secondary', or later on between 'recession' and 'depression'.[23] In this vein,

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Wiener Tagblatt, August 21, 1932, p. 16). In 1933 Hayek devoted a section of his "Der Stand und die nächste Zukunft der Konjunkturforschung" (in *Festschrift für Arthur Spiethoff*, ed. Gustav Clausing (Munich: Duncker and Humblot, 1933), pp. 110–17, translated as "The Present State and Immediate Prospects of the Study of Industrial Fluctuations" and reprinted as chapter 4 of this volume) to the problem of secondary deflation. He dealt with reflation in a short paper, "Restoring the Price Level?", intended for a London publisher (reprinted as chapter 5 of this volume), but appearing instead the following year in Italian as "Una politica errata: il rialzo artificiale dei prezzi" (in the biweekly *La Borsa – Quindicinale dei mercati finanziari*, no. 25, March 3, 1934, pp. 3–4). The issue was once again taken up in some detail in "Capital and Industrial Fluctuations" (*Econometrica*, vol. 2, April 1934, pp. 152–67, reprinted as chapter 6 of this volume), later on included as an appendix in the revised second edition of *Prices and Production* (1935), which otherwise contained no modifications of his views on the mechanism of depression. After discussing the limits set for monetary policies within a framework of an international monetary system in *Monetary Nationalism and International Stability* (Geneva: Longmans, 1937; reprinted as chapter 1 of *Good Money, Part II: The Standard*, ed. Stephen Kresge, vol. 6 (1999) of *The Collected Works of F. A. Hayek*), Hayek for a last time returned to the topic of deflation in connection with the Ricardo effect (in "Profits, Interest and Investment").

[21] "The Present State and Immediate Prospects", this volume, p. 175, and "The Fate of the Gold Standard", p. 165. The first use of 'secondary deflation' is in the preface to *Preise und Produktion*, reprinted, p. 184; cf. also *Monetary Theory and the Trade Cycle*, reprinted, p. 54, and "Capital and Industrial Fluctuations", this volume, p. 200–205.

[22] The 'circulation of money' refers to MV, the 'left-hand side' of the quantity equation.

[23] Cf., e.g., Joseph A. Schumpeter, *Theorie der wirtschaftlichen Entwicklung*, 2nd ed. (Munich and Leipzig: Duncker and Humblot, 1926), p. 348, translated as *The Theory of Economic Development*,

Röpke and Haberler used the distinction—often referring to 'depression' and 'deflation' interchangeably—to denote two phases of the cycle.[24] The primary depression is characterised by the reactions to the disproportionalities of the boom, and accordingly an important cleansing function is ascribed to it; thus it is necessary to allow the primary depression to run its course. In contrast, the secondary depression refers to a self-feeding, cumulative process, not causally connected with the disproportionality that the primary depression is designed to correct. Thus the existence of the secondary depression opens up the possibility of a phase of depression dysfunctional to the economic system, where an expansionist policy might be called for.[25] Typical elements of the secondary depression are both deflation as an endogenous shrinkage in the circulation of money and the vicious spiral of reductions in income and expenditure chasing each other. Put into an equilibrium framework, the primary process is akin to an adjustment directed towards equilibrium, the secondary process to its overtaking by a movement away from equilibrium. Consequently, in the secondary depression criteria derived from equilibrium are prone to mislead: with economic activity at an unprecedentedly low level "there will scarcely be any investment that will not turn out to be a 'faulty investment'", and "there will hardly be any wages which are not too high" to ensure profitable production.[26]

trans. Redvers Opie (Cambridge, MA: Harvard University Press, 1934), p. 236. Keynes used the terms 'primary' and 'secondary' in *A Treatise on Money* (reprinted, vol. 1, pp. 254–59), and a similar notion had been present in Robertson's distinction between 'appropriate' and 'inappropriate fluctuations in output' (Dennis H. Robertson, *Banking Policy and the Price Level: An Essay in the Theory of the Trade Cycle* [London: King, 1926], reprinted as vol. 3 of *The Development of Monetary Theory, 1920s and 1930s*, ed. Forrest Capie and Geoffrey E. Wood [London: Routledge, 2000], chapters 2 and 4).

[24] Wilhelm Röpke used it in his monograph *Krise und Konjunktur* (Leipzig: Quelle and Meyer, 1932), translated as *Crises and Cycles* (London: Hodge, 1936; reprinted, Auburn, AL: Ludwig von Mises Institute, 2007); cf. also Röpke, "Trends in German Business Cycle Policy", *Economic Journal*, vol. 43, September 1933, pp. 427–41, and for a summary Gottfried Haberler, *Prosperity and Depression: A Theoretical Analysis of Cyclical Movements* (Geneva: League of Nations, 1937), pp. 53–57. Outside Germany, Robertson and Jacob Viner might be listed as prominent adherents. Cf. Dennis H. Robertson, "Industrial Fluctuation and the Natural Rate of Interest", *Economic Journal*, vol. 44, December 1934, pp. 650–56, reprinted in *Essays in Monetary Theory* (London: King, 1940), pp. 85–91; and Jacob Viner, *Balanced Deflation, Inflation, or More Depression* (Minneapolis: University of Minnesota Press, 1933), reprinted in vol. 4 of *The Development of Monetary Theory, 1920s and 1930s*, ed. Capie and Wood.

[25] This passage draws on Hansjoerg Klausinger, "'In the Wilderness': Emigration and the Decline of the Austrian School", *History of Political Economy*, vol. 38, Winter 2006, p. 636.

[26] Röpke, *Crises and Cycles*, p. 130. This idea is similar to the notion of the 'corridor' (around equilibrium, where the system exhibits homeostatic properties) introduced by Axel Leijonhufvud, "Effective Demand Failures", *Swedish Economic Journal*, vol. 73, March 1973, pp. 27–48, reprinted as chapter 6 of his *Information and Coordination: Essays in Macroeconomic Theory* (New York and Oxford: Oxford University Press, 1981).

Hayek's view was fundamentally different. He doubted that deflation was indispensable for the recovery from the depression, and instead linked secondary deflation with the existence of rigidities. He also warned against policies whose goal was to directly combat deflation.

Hayek's doubts on the necessity of deflation as an element of the adjustment process derived primarily from his criticism of the quantity theory. For Hayek the cause of the price declines that typically occur during the early stage of the depression need not be sought in monetary factors, as would follow from adherence to "the mechanistic quantity theory".[27] Rather it could be perfectly explained by 'real' factors alone, that is, by a temporary excess supply of consumers' goods, such as from distress sales, although probably not to the extent experienced in 1931.[28] On another occasion he reiterates that "the deflationary tendencies . . . are not a necessary consequence of any crisis and depression".[29] Furthermore, one might draw on Hayek's distinction, though part of an argument against *re*flation, between the harmful effects stemming from *changes* in the price level (if generated by changes in monetary circulation) and the irrelevance of the *level* itself.[30] Hayek kept to this distinction even when taking into account the distorting effects of an unexpectedly low (or high) price level on the redistribution of wealth between debtors and creditors in the presence of long-term contracts fixed in terms of money. Yet, the evidence on this issue is not wholly clear-cut: for example, when in correspondence discussing Haberler's widely circulated first draft of the survey of business cycle theory, Hayek objected to a passage that attributed to him a purely non-monetary explanation of the depression,[31] and indeed in *Prosperity and Depression* Haberler listed Hayek among those who are "of the opinion that the deflation is a necessary consequence of the boom".[32]

However, even if Hayek might not have considered the coexistence of deflation with crisis and depression a theoretical necessity, he was certainly aware that for some types of monetary systems such a link was inevitable. The vital distinction to be made here is between a commodity-based currency like the gold standard and a managed fiat currency.[33] In the case of a closed economy

[27] Preface to *Preise und Produktion*, reprinted, p. 185.

[28] Cf. Hayek to Haberler, December 20, 1931.

[29] "Capital and Industrial Fluctuations", this volume, p. 203. Already in his letter to Haberler, cited above, Hayek insisted that "the required shortening of the roundaboutness of production would also result without deflation" (this volume, p. 185).

[30] Cf. Hayek, "Restoring the Price Level?", this volume, p. 181.

[31] Cf. Gottfried Haberler, *Systematic Analysis of the Theories of the Business Cycle* (Geneva: League of Nations, 1934), p. 17, and Hayek to Haberler, September 4, 1934, Haberler Papers, box 66.

[32] Haberler, *Prosperity and Depression*, p. 56.

[33] Prior to *Monetary Nationalism* Hayek had conducted the analysis without explicitly taking account of the complications of an open economy. For example, when discussing neutral

on the gold standard, the credit inflation that fuels the boom will eventually be stopped by an internal drain due to the increasing cash requirements of the public. As banks in the crisis reduce their deposit-reserve ratio there must be some deflation (a decrease in money broadly defined), and in the aggregate prices will tend towards their pre-inflation level. This is, of course, precisely the mechanism on which for a gold standard regime Hayek bases his view of the inevitability of the breakdown of the boom.[34] In this context of a fixed gold parity, then, it is legitimate to ascribe to Hayek the notion of an 'unsustainable' price level that needs to be adjusted by means of deflation in order to restore equilibrium.[35] The case will be different for a managed currency. Here (or in a pure credit economy), as in principle credit expansion can go on practically without limit, an internal cash drain is no longer sufficient to explain the upper turning point. Indeed Hayek argued that it is accelerating inflation that ultimately will bring an end to the boom, at the latest when inflation threatens to destroy the function of money and therefore must be stopped.[36] Yet, it is here that the belief in the indispensability of deflation as a means to restore equilibrium loses its force, as all the arguments that Hayek assembled against a policy of reflation appear to apply also to the reverse case of deflation. This conclusion may also be supported by Hayek pointing to "the evil effects" of Great Britain's attempt after World War I "to use deflation in order to restore prices to their pre-war level".[37]

Having thus disposed of the *necessity* of deflation, how then did, in Hayek's view, a secondary deflation develop and what would have been an adequate policy response to it? Here the crucial element is the existence of wage and price rigidities:

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money, he referred to a single closed ('isolated') economy or to the world as a whole; cf., e.g., "Das intertemporale Gleichgewichtssystem der Preise und die Bewegungen des 'Geldwertes'", *Weltwirtschaftliches Archiv*, vol. 28, July 1928, translated as "Intertemporal Price Equilibrium and Movements in the Value of Money" and reprinted in F. A. Hayek, *Good Money, Part I: The New World*, p. 220. In contrast, Lionel Robbins had based his arguments against reflation in Great Britain on his worries about the repercussions on the exchange rate (cf. his "Letter to the Editor: Monetary Policy", p. 1081).

[34] Cf., e.g., *Monetary Theory and the Trade Cycle*, reprinted, pp. 136–37.

[35] Cf. Lawrence H. White, "Did Hayek and Robbins Deepen the Great Depression?", *Journal of Money, Credit and Banking*, vol. 40, June 2008, pp. 753–54. White (p. 757) identified the deflation required by the gold standard as Hayek's 'initial' in contrast to 'secondary deflation' (see the quotation below, p. 10).

[36] See the discussion in Hayek, "Capital and Industrial Fluctuations", this volume, pp. 197–99.

[37] Hayek, "Restoring the Price Level?", this volume, p. 181. Note however that Hayek's Austrian colleague Machlup in 1933 was ready to accept the decrease in U.S. banking deposits to their pre-inflation level of the 1920s as a "necessary consequence" and warned against "deflation hysteria" (Fritz Machlup, "Diagnose des Falls Amerika", *Der Österreichische Volkswirt*, vol. 26, December 23, 1933, p. 317).

> There can be little question that these rigidities tend to delay the process of adaptation and that this will cause a 'secondary' deflation which at first will intensify the depression but ultimately will help to overcome these rigidities.[38]

From this passage (and similar ones) we can conclude that the remedying effect of the (primary) depression could be successfully fulfilled, were it not for the obstacle of rigid wages and prices. In turn, it is the delay in this adaptation of the economy due to rigidities that gives rise to secondary deflation. Thus, this deflation "is not a cause but an effect of the unprofitableness of industry".[39] Presumably he considered the stickiness of wages as the most important obstacle in this regard. For in order to adapt the structure of production as inherited from the boom to the structure of demand, a reduction of production costs and of the demand for consumers' goods is required, both to be furthered by wage cuts. Deflation by its effect on demand and unemployment may thus perform a useful function in exerting downward pressure on wages.

Nevertheless, as Hayek notes, the policy conclusions to be derived from this idea depend on the answers to two more queries, namely:

> firstly, whether this process of deflation is merely an evil which has to be combated, or whether it does not serve a necessary function in breaking these rigidities, and, secondly, whether the persistence of these deflationary tendencies proves that the fundamental maladjustment of prices still exists, or whether, once that process of deflation has gathered momentum, it may not continue long after it has served its initial function.[40]

On the first point, Hayek rejects any measures directed against deflation unless its function has been fulfilled in eliminating the imbalances that had given rise to the crisis. He expresses this most clearly on one of the first times that he discussed the issue:

> If the deflation is induced [by the lack of profitability], then it will stop only after costs of production have decreased stronger than prices, and as long as

[38] Hayek, "The Present State and Immediate Prospects", this volume, p. 176.

[39] Hayek, *Monetary Theory and the Trade Cycle*, reprinted, p. 54. Hayek did not explicitly specify the economic mechanism whereby these rigidities generated a process of deflation. Banning deflationary policies (as Hayek did), endogenous deflation could be attributed to hoarding (which Hayek relegated to the special case of 'induced' deflation) or to a contraction of credit, a process which Schumpeter was to refer to as "autodeflation"; cf. Joseph A. Schumpeter, *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process* (New York and London: McGraw Hill, 1939), p. 156.

[40] Hayek, "The Present State and Immediate Prospects", this volume, p. 176.