University of Groningen

Economics without equilibrium

Brakman, Steven; Garretsen, Harry

Published in:
Regional Studies

DOI:
[10.1080/00343404.2017.1278971](https://doi.org/10.1080/00343404.2017.1278971)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2017

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Brakman, S., & Garretsen, H. (2017). Economics without equilibrium. *Regional Studies*, 51(4), 655-658.
<https://doi.org/10.1080/00343404.2017.1278971>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Economics without equilibrium

Steven Brakman & Harry Garretsen

To cite this article: Steven Brakman & Harry Garretsen (2017) Economics without equilibrium, Regional Studies, 51:4, 655-658, DOI: [10.1080/00343404.2017.1278971](https://doi.org/10.1080/00343404.2017.1278971)

To link to this article: <https://doi.org/10.1080/00343404.2017.1278971>

Published online: 09 Feb 2017.

Submit your article to this journal [↗](#)

Article views: 357

View related articles [↗](#)

View Crossmark data [↗](#)

business cycles and long waves of economic development. In this book he also offers a number of historical examples of entrepreneurs who triggered economic development by introducing radical innovations. In his famous *Capitalism, Socialism and Democracy* (1942), Schumpeter again elaborates intensively on the role of entrepreneurship for the long-term development of an economy. It is here where he stresses the challenge of innovation for established firms and industries that he characterizes as 'creative destruction'.

In the 'lost' seventh chapter of the 1911 first edition of Schumpeter's book that he excluded from the second German edition later on, Schumpeter expands on his ideas about using a dynamic perspective to explain growth, and describes the role played by entrepreneurship and radical innovation in creating structural change (latter known as 'creative destruction') (Schumpeter, 2002). The chapter delves into aspects of psychology and sociology to explore human motivations and the role of 'milieu' or 'culture' that are today increasingly recognized as being important for explaining economic development. It is possible that the reason Schumpeter decided to drop this chapter from the second German edition was because he felt that this important widening of the perspective was too far away from the economic mainstream of his times.² Even today, such arguments are not widespread among economists.

One of the most important contributions of Schumpeter's early masterpiece is that he was one of the first economists to identify the importance of innovation, in a broad sense, as a key source of economic growth. Second, and maybe even more important, is that Schumpeter draws attention to the role of entrepreneurial leadership in the introduction and establishment of significant innovations. Third, he emphatically states that explaining economic development requires a dynamic approach, thereby laying the grounds for what is today labelled 'evolutionary theory'. Fourth, Schumpeter pioneered a socio-economic approach that accounts for factors that are outside of economic theory in a narrow sense, such as individual motivations, personality, cultures and historical circumstances. Fifth, and probably not least, in directing our attention to the complex interplay of economic and non-economic factors he laid the foundation for a variety of systems approaches, such as innovation systems or systems of entrepreneurship.

Many of the ideas presented in Schumpeter's more than 100-year-old book are still quite relevant today. Especially the second chapter, perhaps the most influential one, can be highly recommended to anyone interested in economic development. Viewed from today's perspective, there are of course some weaknesses. One of these is his rather narrow definition of entrepreneurship. Recent empirical research has shown that it is not only the introduction of radical innovations that encourage growth, but that regular, non-high-tech entries may also considerably spur growth processes (Fritsch, 2013). Investigating the effects of different types of entrepreneurship in this wider sense is a key issue on today's research agenda. Another limitation is that Schumpeter largely ignores the role of knowledge and the generation of knowledge in developing the available set of entrepreneurial opportunities and, more specifically, the importance of knowledge for innovative entrepreneurship. Despite these weaknesses, *The Theory of Economic Development – An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* is a visionary book that still speaks to us today. It is Schumpeter's great distinction that he not only stressed the role played by innovation and

entrepreneurship in triggering economic growth, but also shed light on critical issues concerning research methodology that social scientists struggle with even today.

ORCID

Michael Fritsch <http://orcid.org/0000-0003-0337-4182>

Notes

1. Citations in this review are based on this 1934 edition (repr. New Brunswick: Transaction, 1983).
2. In the foreword to the second German edition of the book, Schumpeter states that he had omitted the seventh chapter because it had led to some considerable misperceptions and was suited to disturb the understanding of his basically economic line of argumentation.

References

- Baumol, W. J. (2004). Entrepreneurial enterprises, large established firms and other components of the free-market growth machine. *Small Business Economics*, 23, 9–21. doi:10.1023/B:SBEJ.0000026057.47641.a6
- Fritsch, M. (2013). New business formation and regional development: A survey and assessment of the evidence. *Foundations and Trends in Entrepreneurship*, 9, 249–364. doi:10.1561/03000000043
- Schumpeter, J. A. (1934). *The theory of economic development – An inquiry into profits, capital, credit, interest, and the business cycle*. Cambridge, MA: Harvard University Press (repr. New Brunswick: Transaction, 1983).
- Schumpeter, J. A. (1939). *Business cycles: A theoretical, historical, and statistical analysis of the capitalist process*. New York: McGraw-Hill.
- Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. New York: Harper & Row.
- Schumpeter, J. A. (2002). 'The economy as a whole': The seventh chapter to Schumpeter's *The Theory of Economic Development. Industry and Innovation*, 9, 93–145. doi:10.1080/13662710220123653
- Shionoya, Y. (1990). The origin of the Schumpeterian research program: A chapter omitted from Schumpeter's *Theory of Economic Development*. *Journal of Institutional and Theoretical Economics*, 146, 314–327.

Michael Fritsch
Friedrich Schiller University Jena, Jena, Germany
m.fritsch@uni-jena.de

© 2017 Michael Fritsch
<http://dx.doi.org/10.1080/00343404.2017.1278975>

Economics without equilibrium, Nicholas Kaldor, Sharpe, New York, 1985. The Arthur M. Okun Memorial Lectures. 96 pp., ISBN 0906449871 (hbk)

Nicholas Kaldor (1908–86) was one of the leading economists in Britain for much of the 20th century, and especially so in the decades right after the Second World War. And as these invited lectures given at Yale University in 1983 in honour of Arthur Okun illustrate, his academic reputation extended well beyond the UK. The three lectures he gave at Yale are important because they provide a very good and lucid summary of his main contributions and can, with hindsight, together with Kaldor (1986), also be seen as his last major academic statement. More than 30 years later, these insights have stood the test of time rather well in the sense that Kaldor's predictions as to where economic theory should go have indeed been to some extent 'picked up' and embraced by the academic profession. At the same time, if he were alive

today, Kaldor would probably still be as critical of mainstream economic theorizing when it comes to the (mis)use of the notion of equilibrium and other key ingredients of neo-classical theory.

Although Kaldor held various positions before he was appointed Fellow at King's College in Cambridge in 1949, it was during his Cambridge years, where he became professor in 1966, that he arguably conducted his most important and influential research and published his main writings. He is, of course, well known for his theoretical contributions, but if anything, as also becomes clear from the first Okun lecture, Kaldor favoured the inductive research method where a researcher first tries to establish empirical regularities – his famous 'stylized' facts – and only then comes up with a suitable theoretical model. This approach is rather different from the deductive approach that (still) dominates much of economics. Economic models, be they formal or informal, are in his view a means to an empirical end. This puts him in the Marshallian tradition of doing economics, which admittedly has gained some ground compared with the days of Kaldor when theory trumped empirics in mainstream economics (see also more recently Rodrik, 2015, who addresses similar issues). One of his most well-known and lasting contributions to economics concerns his 'stylized facts': facts that represent a summary of empirical regularities that highlight some fundamental truth about empirics, but could be inaccurate in detail (Kaldor, 1957).¹

Although he wrote on many topics ranging from imperfect competition, business cycles, income distribution and growth theory to the measurement of capital (e.g., the (in-)famous capital controversy), and also gave policy advice – he is unquestionably best known as a fierce criticaster of mainstream or neo-classical economic theory. In this role, he can also be seen as one of the founders of post-Keynesian economics, together with, for instance, his Cambridge fellow-economist Joan Robinson (1903–83).² Post-Keynesian economics is not a homogeneous or unified theory, it has many sub-branches, but the common theme is its critical assessment of neo-classical theory with its emphasis on *equilibrium* as the central concept in economic reasoning. Kaldor – and hence the title of the book – considers the equilibrium concept to be fundamentally flawed. He does not object against abstract reasoning (or modelling) as such, but according to him general equilibrium theory, the main building block of modern neo-classical theory, starts with the wrong kind of abstraction as argued again and again in these Okun lectures.

In the three lectures that each constitute a chapter in the book, Kaldor reflects on concepts that are essential for his thinking on economic theory, and all centre around his critique of the neo-classical equilibrium concept: 'Stylized Facts as a Basis for Theory Building' (chapter 1), 'Supply and Demand' (chapter 2), and 'Interregional Trade and Cumulative Causation' (chapter 3). In the lectures he was able to present his thoughts on these topics forcefully, without the restrictions of journal articles that always involve a discussion with editors and referees. The Okun lectures thus provide a succinct overview and (ultimate) summary of his thinking.

In the first lecture, he explains his thoughts on the neo-classical equilibrium concept in detail. He revisits his objections against the assumptions that are made in order to produce an equilibrium in a (Walrasian) general equilibrium setting. He mentions the role of prices and in particular stresses price setting (as opposed to price taking in standard general

equilibrium reasoning), the role that prices actually play in the functioning of markets (often misleading), the role of expectations, the role of inventories, etc. He is especially critical of the assumption that prices would entail all the relevant (and correct) information in a particular market. Prices might be subject to bubbles and could be highly speculative. In general equilibrium theory one expects that in practice dealers (market-makers) and speculators together 'smooth out' (p. 17) these bubbles, implying that the Walrasian general equilibrium assumptions about prices are a good approximation about what happens in practice. According to Kaldor, this is plainly and factually wrong; markets usually do not clear and transactions take place at different prices, at different times and in various places. The information carried by prices is per definition flawed or imperfect. This situation is not automatically corrected but continually changes over time, making any idea of an equilibrium illusory.

In addition, knowledge about markets differs among agents, even in the most simple cases, which magnifies the possibly or likelihood of non-clearing markets. In the lecture he provides many examples of these market failures. One telling example of his position – and also described by Okun himself in his *Prices and Quantities* (1981) – is that of theatre tickets on Broadway. Even when a show is extremely popular many months in advance, the theatre typically does not raise prices, which is an argument against profit maximization. Also, 'fairness' enters the market transaction; the theatre might keep tickets in stock for highly valued (potential) customers at standard prices in order to avoid losing goodwill in the long-run. Kaldor's conclusion is that these complex transactions cannot be reduced to 'simple formulae' (p. 26) basically because 'sellers are price-makers and quantity takers, and not, as Walrasian equilibrium theory supposes, price-takers and quantity makers' (p. 31).

More than 30 years after Kaldor wrote these words, one could argue that mainstream economic theory has taken his criticism on board. Models of imperfect competition where firms are indeed price setters are now common and well understood, and the same goes, for instance, for the role of imperfect information, the possibility of self-fulfilling expectations, fairness or reputation in market transactions. At the same time, at a more fundamental level not much has changed. These changes are still analyzed or modelled in a framework where 'equilibrium' and clearing markets are still the main building blocks and where goods and factor prices are based on marginal cost. This is the type of reasoning and modelling that Kaldor firmly rejected.

The second lecture continues this line of argument, and the aim is not to provide definitive answers, but 'point up the areas of our ignorance' (p. 32). The areas of ignorance include, for instance, our lack of analytical handling and understanding of the real-world (omni-)presence of imperfect competition and of heterogeneous firms. As to the latter, Kaldor is speculating about the causes of different shares of profits between different firms and the consequences of this for income distribution (he was writing before firm microdata became widely available). When it comes to the consequences of imperfect competition the second lecture is – from a historical point of view – very interesting. Kaldor is addressing the consequences of imperfect competition (a theme that runs through his work since his writings as a young economist during the first monopolistic competition revolution in the 1930s). He is reflecting on the price behaviour of individual but heterogeneous firms in imperfect markets (and he is

especially struggling with the fact that prices ‘maintain a fairly constant [mark-up] relationship to costs ...’).

At the time that Kaldor was given the Okun lectures, a second monopolistic competition revolution had just started with the publication of the famous Dixit–Stiglitz model in 1977 (Dixit & Stiglitz, 1977). This revolution addressed and solved, formally, some of the problems that Kaldor was addressing: the constant mark-up, Marshall’s representative firm, increasing returns and equilibrium. This revolution culminated in the Melitz (2003) model that introduces firm heterogeneity into the Dixit–Stiglitz model. This model makes it possible to analyze firm heterogeneity in imperfect markets. Although these models are formal, and cannot include all aspects of market behaviour in existing markets, they are definitely a step forward. Kaldor’s sigh that ‘the case of imperfect competition with a hierarchy of firms of varying cost levels and efficiency has, as far as I know, never been generally considered ...’ (p. 46) is no longer valid.³ But here, too, despite these recent advances in modelling, imperfect competition and firm heterogeneity would probably, at best, only receive a lukewarm applause from Kaldor since the underlying models are still equilibrium models where firms are able to maximize profits, using prices that correctly express all relevant market information.

The third and last lecture is perhaps the most interesting for readers of *Regional Studies*, since it discusses ‘Interregional Trade and Cumulative Causation’. It starts with a criticism of the use of formal models in economics where Kaldor states that formal modelling too often prevails over (and is at odds with) the basic empirical regularities that should be the starting point for any economic model, formal or informal. Kaldor’s discussion of Walrasian general equilibrium framework in the first two lectures is a case in point. Kaldor is not alone in these critical remarks, and the Great Recession of 2008 has re-energized this debate on the usefulness of formal models in economics (Rodrik, 2015). Kaldor cites Marshall (pp. 58–59) on how (not) to use formal – that is, mathematical – models in economics or the social sciences, where the use of these formal models are always a means and never the end itself (see also Krugman, 1998, for a similar Marshallian view on the role of formal models in economics).

In the second part of the third lecture, Kaldor revisits his thinking on increasing returns and the chapter can best be read as a one long and very convincing argument for the importance of increasing returns and the associated market structure of imperfect competition for (regional) growth and development. Echoing the work of, for instance, Myrdal, Kaldor argues how increasing returns are the driving force behind the process of cumulative causation and also how increasing returns may lead to regional divergence (Kaldor, 1970). In reviewing Kaldor (1970), Thirlwall (2013) argues that Kaldor’s work on increasing returns predates the literature on the New Economic Geography (NEG) as initiated by Krugman (1991a, 1991b). In fact Krugman (1991b, 1991c) cites Kaldor as one of the predecessors of his work. In that sense, Kaldor’s discussion in the third lecture again predates subsequent theoretical developments, *in casu* NEG. Combining interregional trade and increasing returns Kaldor arrives – following Kaldor (1970) – at the conclusion that in such an economy cumulative causation must be important:

under the general assumption of increasing returns, this is not the end of the story.⁴ If we started with the arbitrary assumption that the various industrial centres expanded at the same

rate, we now have the situation in which one of these centres at least grows at a faster rate than the others. Hence its productivity growth will be accelerated ... its export surplus will reappear, giving rise to another push ...

(p. 74)

For those familiar with NEG or the modern literature on agglomeration economics, this all sounds familiar.⁵

For those, however, who address regional growth differences and economic development from a non-mainstream perspective, the relevance of Kaldor’s work did not suddenly disappear after Krugman’s seminal work on NEG in 1991. On the contrary, in fields like economic geography, regional science, development studies and, as mentioned above, post-Keynesian economics, Kaldorian growth models and the crucial role of increasing returns had always remained relevant. A good recent example where Kaldor’s ideas on (unbalanced) regional growth are clearly important is the unevenness of regional development across the UK (Rowthorn, 2010; or Gardiner, Martin, Sunley, & Tyler, 2013). In addition, Kaldor’s work has been used and extended by Cambridge ‘Kaldorian’ economists like Tony Thirlwall, Bob Rowthorn, John McCombie or Mark Roberts. And again, it is worth stressing that NEG only incorporated those aspects of Kaldor’s thinking that could be formalized using the standard tools of mainstream economic theorizing (Martin, 1999). Aspects of his thinking that are less straightforward to be formalized are still largely ignored by the majority of economists. To give just one example, Verdoorn’s law, associating labour productivity increases with output growth via increasing returns, is an essential element of Kaldor’s growth model but has not (yet) made it into mainstream models of agglomeration and growth (for empirical evidence on Verdoorn’s law, see, for example, McCombie & Roberts, 2007).

The main reason for the partial and belated acceptance of Kaldor’s ideas on increasing returns in mainstream economics is well summarized by Krugman (1995, p. 1244) when he looks back on the state of affairs in the early 1980s at the time when Kaldor gave his Okun lectures:

inevitably given the state of the field at that time, the general impression ... was of a collection of highly disparate and messy approaches [with respect to incorporating increasing returns into trade models], standing both in contrast and opposition to the impressive unity and clarity of constant-returns, perfect-competition trade theory. And yet within only a few years ... it became clear that the new ideas were not a grab-bag after all. On the contrary, many insights of increasing returns trade theory could be understood in terms of a quite simple common framework ... , the framework provided a ‘grammar’ that could be used to discuss topics that went well beyond the standard analysis of trade in final goods ...

The point of our review is, however, that Kaldor would most likely reject this ‘quite simple common framework’ given his criticism of the use of the equilibrium concept in the mainstream economic models that Krugman is referring to! And this critique holds not only for the equilibrium concept but also for (related) key building blocks of neo-classical theory like the use of aggregate production functions, Cobb–Douglas, Constant Elasticity of Substitution (CES) or

otherwise, or the adherence to marginal productivity theory. So, as with the first two lectures, one must conclude that Kaldor's views have made inroads in mainstream economic theory well after he delivered the Okun lectures in 1983, but only with analytical approaches that Kaldor did not accept to begin with!

In conclusion, to (re)read these lectures more than three decades after they appeared is an interesting and rewarding experience, certainly for those interested in regional growth and development. To some extent Kaldor's criticisms and suggestions have been taken on board. In this sense progress has been made. At the same time, his more fundamental critique of economic theorizing still stands since the dominant approach continues to be 'economics with equilibrium'.

Notes

1. See Thirlwall (1987) for the life and times of the economist (and persona) Nicholas Kaldor.
2. The working relation between Kaldor and Robinson eventually became unfriendly and was described by King (1998, p. 412) as hostile: 'King's College archives reveal a major rupture in relations [in 1956] between Kaldor and Robinson ... followed by ... two final decades of cold indifference.' According to King (1998), the publication of Kaldor's famous paper on income distribution (Kaldor, 1955) played a main role in this rupture.
3. Kaldor fits into a long line of economists struggling with imperfect competition (see Brakman & Heijdra, 2004, for a historical survey).
4. For a formal Kaldorian regional growth model along these lines, see Dixon and Thirlwall (1975); for a review of the evolution of the concept of Cumulative Causation, see Martin (2017).
5. Note, however, that Krugman (1980) himself also reflected on the possible spatial implications of the Dixit-Stiglitz model. A topic that he would formalize himself in Krugman (1991a).

References

- Brakman, S., & Heijdra, B. J. (2004). *The monopolistic competition revolution in retrospect*. Cambridge: Cambridge University Press.
- Dixit, A., & Stiglitz, J. E. (1977). Monopolistic competition and optimum product diversity. *American Economic Review*, 67, 297–308.
- Dixon, R. J., & Thirlwall, A. P. (1975). A model of regional growth rate differences on Kaldorian lines. *Oxford Economic Papers*, 27, 201–214.
- Gardiner, B., Martin, R., Sunley, P., & Tyler, P. (2013). Spatially unbalanced growth in the British economy. *Journal of Economic Geography*, 13(6), 889–928. doi:10.1093/jeg/lbt003
- Kaldor, N. (1955). Alternative theories of distribution. *Review of Economic Studies*, 23(2), 83–100. doi:10.2307/2296292
- Kaldor, N. (1957). A model of economic growth. *Economic Journal*, 67, 591–624. doi:10.2307/2227704
- Kaldor, N. (1970). The case for regional policies. *Scottish Journal of Political Economy*, 17, 337–348. doi:10.1111/j.1467-9485.1970.tb00712.x
- Kaldor, N. (1986, March). Recollections of an economist. *Banca Nazionale del Lavoro Quarterly Review*, 39, 3–26.
- King, J. E. (1998). 'Your position is thoroughly orthodox and entirely wrong': Nicholas Kaldor and Joan Robinson, 1933–1983. *Journal of the History of Economic Thought*, 20, 411–432. doi:10.1017/S1053837200002443
- Krugman, P. (1980). Scale economics, product differentiation, and the patterns of trade. *American Economic Review*, 70, 950–959.
- Krugman, P. (1991a). Increasing returns and economic geography. *Journal of Political Economy*, 99, 483–499. doi:10.1086/261763
- Krugman, P. (1991b). History and industry location: The case of the manufacturing belt. *American Economic Review; Papers and Proceedings*, 81, 80–83.
- Krugman, P. (1991c). *Geography and trade*. Cambridge, MA: MIT Press.
- Krugman, P. (1995). Increasing returns, imperfect competition and the positive theory of international trade. In G. Grossman & K. Rogoff (Eds.), *Handbook of international economics* (Vol. III, pp. 1243–1277). Amsterdam: Elsevier.
- Krugman, P. (1998). Two cheers for formalism. *Economic Journal*, 108, 1829–1836. doi:10.1111/1468-0297.00378
- Martin, R. (1999). Critical Survey: The new 'geographical turn' in economics: Some critical reflections. *Cambridge Journal of Economics*, 23(1), 65–91. doi:10.1093/cje/23.1.65
- Martin, R. (Forthcoming 2017). Cumulative causation, endogenous growth, and regional development. In M. Dunford (Ed.), *Wiley-AAG encyclopedia of geography: People, the earth, environment and technology*.
- McCombie, J. S. L., & Roberts, M. (2007). Returns to scale and regional growth: The static–dynamic Verdoorn law paradox revisited. *Journal of Regional Science*, 47(1), 179–208. doi:10.1111/j.1467-9787.2007.00505.x
- Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica*, 71, 1695–1725. doi:10.1111/1468-0262.00467
- Okun, A. M. (1981). *Prices and quantities: A macroeconomic analysis*. Washington, DC: The Brookings Institution.
- Rodrik, D. (2015). *Economics rules*. New York: Norton.
- Rowthorn, R. E. (2010). Combined and uneven development: Reflections on the north–south divide. *Spatial Economic Analysis*, 5, 363–388. doi:10.1080/17421772.2010.516445
- Thirlwall, A. P. (1987). *Nicholas Kaldor*. Brighton: Wheatsheaf.
- Thirlwall, A. P. (2013). *Kaldor's 1970 regional growth model revisited* (University of Kent, School of Economics Discussion Papers No. KDPE 1311). <https://www.kent.ac.uk/economics/documents/research/papers/2013/1311.pdf>

Steven Brakman

Faculty of Economics and Business, University of Groningen,
Groningen, the Netherlands
✉ S.Brakman@rug.nl

Harry Garretsen

Faculty of Economics and Business, University of Groningen,
Groningen, the Netherlands
j.h.garretsen@rug.nl

© 2017 Steven Brakman and Harry Garretsen
<http://dx.doi.org/10.1080/00343404.2017.1278971>