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## Principles of Neo-Schumpeterian Economics

by Horst Hanusch and Andreas Pyka, 2007.

par **Hans-Heinrich Bass**

Langue : anglais

This comment is a positive assessment of the broad perspective of the Hanusch/Pyka-paper regarding contributions of Neo-Schumpeterian economics to the understanding of the industrial sphere, and (to a lesser extent) the financial sphere and the public sector, as an alternative to neo-classical standard economics. Secondly, the policy proposals of the paper are critically evaluated with respect to undue state-optimism regarding the financing of innovations and the neglect of ethical implications of technical innovation.

(1)

Hanusch/Pyka's aim is to offer a sketch of a "Comprehensive Theory of Neo-Schumpeterian Economics" and to outline directions for further research in this framework. In addition to dealing with the characteristics of these approaches, they consider possible political consequences.

The authors trace Neo-Schumpeterian economics to different roots: not only directly and indirectly (via biology-inspired evolutionary economics) to Schumpeter, but also to complexity economics and system theory (which inspired concepts of "systems of innovation") – and provide brief characteristics of each of these strands of literature. As the common ground of all varieties of Neo-Schumpeterian economics, Hanusch/Pyka define the focus on innovation, resulting in the perception of development in socio-economic systems as open and uncertain, i.e. as in principle unpredictable regarding the outcome. Constitutive elements are further seen in the notion of ubiquitousness of qualitative change in economies, of the discontinuity of quantitative changes resulting in unforeseeable alternations between smooth development and radical changes (with disequilibria as "normal" features), and of the non-linearity of these processes (inter alia since positive feedback effects, such as increasing returns, are understood as basic to economic dynamics). Nevertheless, patterns do emerge ("spontaneous order"), and Neo-Schumpeterians are considered to be concerned with revealing them.

To transgress the boundaries of conventional Neo-Schumpeterian economics, Hanusch/Pyka point to the fact that contemporary economies consist of three spheres: apart from the industrial sphere, on which much Neo-Schumpeterian research has been concentrated so far, these are the financial sphere and the public sector. All three spheres are understood as equally having to face uncertainty about the future and to evolve by innovations (in a broad sense, including organisational ones). Furthermore, the three spheres are seen to be interlinked with each other, thus the development in one sphere may hinder or spur the development of the other two. Financial bubbles and infrastructural bottlenecks are cited as examples of possible negative influences of the financial and public spheres on the industrial sphere.

(2)

By addressing the financial and public sector economy, the paper explicitly addresses economic policies.

First, it proposes that Central Banks do not limit themselves to guaranteeing consumer price level stability but rather that they support growth and development by fostering innovation dynamics under the side condition of controlling inflation in all types of markets (including asset markets). It remains unclear, however, as to what kind of monetary policies the authors have in mind (explicitly not: the provision of cheap liquidity). One cannot help thinking of some sort of Japanese-style industrial policy via credit allocation to particularly promising industries (which is made more explicit when it comes to the public sector proper; see below). Anyway, however, the definition of meritorious goods needs significant information leads and superior knowledge.

Therefore, with respect to the financial sector, there is obviously some vague market pessimism in this paper. This difficulty can be traced back to a contradiction in the original Schumpeter model. Here, by means of credit creation, financial institutions were considered

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to facilitate the withdrawal of resources from their present use to set in motion a simultaneous process of structural change and growth. Credit creators, however, were perceived as mere passive, non-entrepreneurial actors as opposed to the entrepreneurs of the real sphere. Thus, as argued by Siemon (C. Siemon, *Unternehmertum in der Finanzwirtschaft: Ein evolutionsökonomischer Beitrag zur Theorie der Finanzintermediation*, Norderstedt 2006), the success of an innovation system is seen to be dependent on a system-exogenous input, separated from an otherwise 'auto-poietic', i.e. self-generating innovation process. In economic history, however, the role of commercial banks (not to mention central banks) in "real" innovation processes has been of limited relevance, while original entrepreneurship has been essential in non-traditional financial institutions. Thus Neo-Schumpeterians, following a mistake of their founding father, have so far probably underestimated the creative response in the financial industry and overestimated the role of a financial bureaucracy.

If this misunderstanding is applied to economic policies, it will lead to a paradoxical situation: The financial entrepreneurs' ability to finance real-sphere innovation will shrink if there is an inflow of investor-protection and arbitrage oriented funds (such as those triggered off by tax reduction to indirectly foster innovations). Previously innovation-oriented financial intermediaries will refrain from financing unpredictable, i.e. in its proper sense actual innovation. Furthermore, this approach overlooks the fact that from bootstrapping via network financing to business angels a variety of non-formal finance instruments exists to finance innovation. This variety is not at all a disturbance of the economic process, a market failure which the state should correct by streamlining the institutions, but it is the genuine, dynamism-guaranteeing optimal case of an innovation-oriented capitalist system. Linking the investment of state funds to private investment rather than simple state-funding might be a second-best option to submit public funds to the logic of innovation competition. In general, however, one has to be sceptical of the success chances of such external interventions in the innovation process.

More criticism, both in line with this argument and of a more fundamental nature, has to be uttered when coming to the second policy-related aspect of the Hanusch/Pyka paper. With regard to the public sector, the authors follow a normative, Rawlsian approach (J. Rawls, *A Theory of Justice*, New York 1971), based on the uncertainty of the results of every innovation. Not knowing the future, an economic society would be termed "just" only if public support for innovation activities were complemented by the responsibility to compensate the society in the case of success.

Market failures are discussed in terms of discarding promising opportunities too early and of staying on exhausted trajectories for too long. The state is expected to support consumption, use and production of goods promising future growth impulses and to timely redirect labour-qualification from old to new industries. In line with Hayek's scepticism and supported by numerous examples of misdirected innovation policies, however, one might ask again how the bureaucracy in an economy at the forefront of scientific knowledge (i.e. in forging-ahead not in catching-up economies such as the Asian economies in the 1950s to 1990s!) can know which technological trajectories are promising. Actually, economic areas like the European Union in its Lisbon goals nowadays define their innovation policies in a much more open (and thus: much more Schumpeterian way) than in the old-fashioned industrial policy approach. Hanusch/Pyka furthermore argue with a modified and normativised version of Wagner's Law in favour of an increasing state share of public expenditures in overall production in order to provide higher qualities of public goods such as infrastructure, education, and basic research as preconditions for long-term economic growth. It must be stated, however, that this perception does not have much in common with the "complete" Schumpeter – it only reflects the "Schumpeter-mark II" ideas, i.e. the Schumpeter of the Schumpeter-(Galbraith-)-Hypotheses.

More fundamentally, however, one wonders whether limiting the state to an inter-temporal redistribution agent is acceptable considering the challenges of modern technologies, which go far beyond "normal" risks and "normal" profits. The paper completely neglects the necessity that a society judges the proper innovation process. Given the possibility of short-term profitable innovations, which can destroy the long-term living conditions of a society or even humankind, a Rawlsian ethic also has to be applied to this realm, allowing societies to direct or even to limit innovations and even research (Germany's withdrawal from the further development of atomic energy plants and its ban on therapeutic cloning can be quoted as examples).

### (3)

The paper suggests working towards a unification of Neo-Schumpeterian approaches to develop a consistent analytical tool vis-à-vis neoclassical economics: a "Comprehensive Theory of Neo-Schumpeterian Economics". Secondly, the paper suggests extending research in a Neo-Schumpeterian framework beyond real sector analysis (such as industry dynamics, micro-foundations of economic growth – as dealt with in conventional Neo-Schumpeterian analyses) and focussing on financial market analysis and public sector analysis.

The proposed corpus of Neo-Schumpeterian themes relevant to the industrial sphere development includes the micro and meso-foundations of structural change on the macro-level (as all sectoral change results from enterprise-level and industry-level innovations), competition and co-ordination as complements in guiding economic players in an increasingly fierce global competition for innovation-leadership (as opposed to the neoclassical price competition), collaboration between long-established, large-scale

enterprises and (knowledge-intensive) small start-ups, as well as the generation and diffusion of tacit, local and complex knowledge (vis-à-vis the simplifying treatment of knowledge as a ubiquitous public good in neoclassical economics). The authors rightly show that there is no representative agent in Neo-Schumpeterian economics, but "ideal types" of agents in various stages of a complex time-dependent development with various competencies and capabilities or institutional frameworks, explaining unbalanced growth and differing velocities of meso-level (industry, region) development (forging ahead, catching up, leapfrogging, falling behind). To show the coherence of the Neo-Schumpeterian mosaic is an important, innovative contribution to heterodox economics.

The proposed corpora of Neo-Schumpeterian themes relevant to the financial sphere and the public sector are less comprehensive. In particular, other economists regarding themselves as Neo-Schumpeterians would probably oppose the proposed industrial policies as insufficiently competition-oriented – and they are probably not mistaken when pointing to the fact that Schumpeter himself was always sceptical of public expenditure as the complement of heavy taxation would paralyze the dynamic forces of an economy.

#### 4)

This paper provides a good overview of the essence of Neo-Schumpeterian approaches, especially in the field of industrial economics. When it comes to the financial sector and the public sector, it rightly points to research gaps. The paper, however, attempts to fill these gaps with a particular version of neo-Schumpeterian thinking – which is not without contradictions, and which is probably not generally accepted. A somewhat more including paper of this school of thought has been published in German (U. Cantner / H. Hanusch, *Ansaetze zu einer Schumpeterianischen Wachstumspolitik*, in: ifo-Studien, 1997, pp. 287-308). The present paper is thus one important step towards a "Comprehensive Theory of Neo-Schumpeterian Economics" as an alternative to orthodox (neoclassical) economics. Not more, but also not less.

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#### Sources

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