



ELSEVIER

Contents lists available at ScienceDirect

Technology in Society

journal homepage: www.elsevier.com/locate/techsoc

The outlines of innovation policy in the capability approach



Zoltán Bajmócy*, Judit Gébert

University of Szeged, Faculty of Economics and Business Administration, Kalvaria sgt. 1, 6722 Szeged, Hungary

ARTICLE INFO

Article history:

Received 28 May 2013

Received in revised form 18 February 2014

Accepted 26 February 2014

JEL codes:

B59

I30

O12

O38

Keywords:

Innovation policy

Informational basis

Systems of innovation

Capability approach

The case of food additives

ABSTRACT

Innovation policies are usually expected to contribute to growth in economic performance, in productivity, or in employment. These ultimate objectives are formulated in the political arena; therefore, the examination of their adequacy is beyond the scope of innovation studies. However, these aims are increasingly questioned in other fields of economics. The present paper builds on one of the most influential criticisms of the dominating growth-centred traditions of economics: Amartya Sen's capability approach. We analyze the set of information that would be required for the design, implementation and evaluation of innovation policy if it relied on the capability approach, and how this informational basis would differ from that of the growth centred view. We conclude that switching to the capability approach would result in a sea-change, but the systems of innovation approach, as a framework for analysis, would still be of good use.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

The examination of technological change and innovations is largely multidisciplinary. However, the research community dealing with these issues can be separated into relatively distinct groups [1]. The innovation policy field is dominated by economics, especially evolutionary economics and the systems of innovation approach. As Fagerberg and Sapprasert [2] pointed out, the literature of innovation systems is growing faster than the overall literature of innovation economics; hence its relative weight is presumably increasing.

Systems of innovation, strongly shaped by neo-Schumpeterian evolutionary economics [3,4] and institutional economics [5,6], focuses on a set of interrelated factors that influence the emergence, transfer, modification and diffusion of new technologies [7–9]. The main

elements of innovation systems are organizations (actors), institutions and links [10–12].

The function of the system is to “generate, diffuse and utilize technologies that have economic value” [13]. Therefore, amongst the possible connections of actors, the focus is on knowledge and capital flows and interactive learning [14]. These interactions are embedded in a specific, historically developed institutional setting [9,15], which varies in time and space. This results in the uniqueness of the systems [16] and the necessity of differentiated policies [17].

Innovation policies relying on the innovation system theories strive to eliminate “system failures” that hinder the emergence and diffusion of new technologies [18,19] such as the lack or inadequate operation of certain actors, institutions or links [20]. In economic theorizing, the more intense emergence and diffusion of innovations is linked to faster growth in total factor productivity, and hence to economic growth [21,22].

The theories of innovation policy are largely depoliticized [23]. They do not intend to examine the

* Corresponding author. Tel.: +36 62 546 926.

E-mail addresses: bajmocy@eco.u-szeged.hu (Z. Bajmócy), gebert.judit@eco.u-szeged.hu (J. Gébert).

adequacy of the objectives formulated at the political arena; rather, they attempt to contribute to their effective realization. According to Edquist [20] the ultimate goals of innovation policy are determined in a political process. “With regard to innovation policy, the most common objectives are formulated in terms of economic growth, productivity growth, or employment” [20].

Thus the normative assumptions lying behind innovation policy theories are characteristically implicit. However, it is apparent that the abovementioned objectives fit well into the dominant utilitarian, growth-centred approach of economic theorizing [24,25]. On the one hand, the objectives formulated in the political process are unlikely to be entirely independent of economic theorizing; on the other hand, the traditions of economics make it difficult to incorporate different political objectives (such as equality, sustainability, etc.). Thus, for innovation policy theories it is quite tempting to accept the abovementioned common aims. However, these objectives are being increasingly questioned in other fields (e.g. the capability approach, ecological economics and critical theories of technology).

The present paper is concerned with the normative assumptions of innovation policy theories. It poses the question whether the capability approach (CA) of Amartya Sen could serve as a basis for innovation policy, what kind of advantages such a “marriage” would provide and how this would shape the outlines of innovation policy theorizing.

The first important steps of finding connections between innovation systems and the capability approach were taken by Johnson et al. [26] and Lundvall [27]. Recently, Capriati [28] systematized the possible links and argued that the “CA can provide a normative framework for the development of the social and institutional context in which innovation systems develop.”

While focussing on the connections between the two approaches, little attention has been paid so far to the tensions arising between them. The CA, being a normative framework, imposes questions on the abovementioned understanding of the ultimate goals of innovation policy. The growth-centred view of current innovation policy can also be a subject to severe criticism [29]. While growth may certainly contribute to the expansion of capabilities, the exaggerative attention paid to real-income can be detrimental according to the CA. In Sen’s [25] view, the relation of wealth and well-being is neither exclusive (since there are significant influences on our well-being other than wealth), nor uniform (since the impact of wealth depends on many factors).

Although this debate is beyond the scope of traditional innovation policy theories, its consequences may affect its gist. The present paper does not intend to participate in the “utilitarianism versus capability approach” debate. It is rather interested in the question of what the consequences would be if we relied on the capability approach instead of the growth-centred utilitarian view. How would the basis of policy differ in the two approaches? Therefore we focus on the *informational basis* of innovation policy: the set of information that is used and the set of information that is excluded during the design, the implementation and the evaluation of policies [25].

The paper first provides a brief introduction into the capability approach in Section 2. Then Section 3 provides a literature review about the connections of technological change, the systems of innovation theory and the capability approach. The paper outlines the informational basis of an innovation policy that is based on the arguments of the CA in Section 4. In Section 5 we attempt to depict the outlines of innovation policy in the CA. Then in Section 6 we illustrate our arguments through the case of food additives. We draw conclusions in Section 7.

2. The capability approach

The capability approach was developed by the Nobel laureate Amartya Sen, and his works were followed by several capability theorists, researchers and policy designers. Sen’s ideas significantly contribute to the contemporary discourses about well-being, development, poverty reduction and many other areas of social science.

Most generally, the approach is applied to assess the well-being of countries or societies. It is a framework, or evaluative space, which shows what set of information should be looked at if we want to assess how well a life is going. Thus, the approach is capable of not just evaluating the aggregate well-being of a community but also of making interpersonal comparisons of well-being [30,31].

In economics – or welfare economics – the capability approach is brought into play to evaluate the level of development or the quality of life, to identify the poor in developing countries, or to assess complex aspects of well-being in advanced economies, inter alia. In political science, it is used to debate policies, or to assess development projects [32].

It is important to emphasize that the capability approach is very much *open-ended*, and is more an evaluative framework than a theory with exact definitions [33]. Hence, to make use of the approach, the theory needs to be extended according to the aim of the actual research topic. This aspect of the approach leaves huge space for different interpretations and extensions [30].

The capability approach arose very much from the dissatisfaction with the classical frameworks and tools of welfare theories [25,34]. It argues that utilitarian welfare theories, subjective well-being measures, and evaluations about primary goods or basic needs have many disadvantages and are built on a too narrow “informational basis” to be able to assess such a multidimensional phenomenon like well-being [25].

Inserting additional information into the previous concepts of well-being was not a new idea when Sen molded the capability approach. An enormous stream of works had already existed on social indicators, on the quality of life and subjective well-being indicators. Sen’s important contribution is in conceptualizing, helping to focus, and organizing these efforts [33].

A useful way to explain the capability approach might start with defining two of its fundamental concepts: functioning and capability. “*Functionings* represent parts of the state of a person – in particular the various things that he or she manages to do or be in leading a life” [35]. Certainly, people may deem different “doings and beings” to be

Download English Version:

<https://daneshyari.com/en/article/6851680>

Download Persian Version:

<https://daneshyari.com/article/6851680>

[Daneshyari.com](https://daneshyari.com)