A systemic framework for a broad-based innovation policy
The innovation generating model – expanded triple helix

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Today many countries agree upon the importance of innovation-enhancing policies as a means of gaining competitive advantage. Instead of traditional technology-oriented innovation policy, in several industrialised Western countries the focus today is more on a broader-based understanding of innovation (Pot 2015).

It is argued that such broad-based innovation policies require new types of systemic frameworks and tools in order to support innovation activities broadly and efficiently. The innovation generating model (Figure 1) has been created for this purpose, and it has been used to date on several occasions in Finland. It has been applied as a systemic framework for Finnish Workplace Development Programme (Alasoini & Ramstad, 2007), as an evaluation framework for learning network projects (Ramstad, 2003, 2009), as a framework for managing participatory innovation processes (Saarilinta & Heikilä, eds., 2015), as an evaluation framework for innovation infrastructure (Ramstad 2009b), and as a framework for workplace development projects (Ramstad & Alasoini, 2007). It seems that the model can serve as a broader framework for different purposes in order to understand the embeddedness of different innovations, the roles of different actors and the processes involved.

Figure 1. The innovation generating model - expanded triple helix (Ramstad, 2003; 2005; 2008; 2014a).
Background

Earlier policy models including the national innovation system (Lundvall, 1992; Miettinen, 2002, Nelson, 1993), the triple helix model (Leydesdorff & Etzkowitz, 1998), the open innovation model (Chesbrough, 2003) and Naschold’s “best practice” model (1994) have played an important role in innovation research and in shaping innovation activities and policies in different countries. However in spite of their important contributions to the innovation literature, these are not systematic frameworks capable of supporting innovation activities more broadly. There is a need to improve the relationship between traditional innovation policy and organisational and service development at macro-, meso- and micro-levels (Ramstad, 2008).

The innovation generating model differs from the traditional national innovation system concept for a number of specific reasons:

Firstly, social innovations and their characteristics are not traditionally included in science and technology policy and hence not in the debate on the national innovation system. The broader model is intended to emphasise the importance of social innovation (e.g. organisational, service and policy innovations) alongside technological innovations. Contrary to the traditional neoclassical explanations for economic growth, it is understood that both social and technological innovations are intertwined endogenous factors.

Secondly the national innovation system concept has been criticised for focusing on public sector organisations even though private businesses are ultimately the key players in innovation. The innovation generating model sees businesses and other organisations as equal partners in relation to public-sector bodies but with different roles. Workplaces in general are at the heart of innovation; it is here that the transformation of knowledge into new innovative products and services takes place.

Thirdly the innovation generating model focuses not only on inter-organisational relationships but also on the internal development of organisations (such as autonomous team-working, relationship between management and employees, employee-driven innovation, and the use of innovation tools, which can enhance both productivity and quality of working life (Ramstad, 2014b).

Fourthly, according to Schienstock (2006) the innovation system concept represents a top–down approach as it focuses on establishing supportive institutional settings. What is important in the innovation generating model is that changes on different levels are interrelated. Without knowledge about the micro-structures we might get little out of attempts to change institutions and organisations at the meso- and macro-levels.

The innovation generating model is an application of the triple helix model as it focuses on the interfaces between the various parties. The evolution of new, creative innovation environments stems from differences and complementarities between the players involved, their practices and their integration, i.e. learning from complementarities. The innovation generating model differs from the narrow triple helix model in that it

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<th>Potential Outcomes</th>
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<td><strong>Workplaces:</strong> comprehensive development, better solutions, increased innovation capability and understanding of the system, improved performance and QWL.</td>
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<td><strong>RDI Units:</strong> improved expertise, education and European/national/regional activities, new methods and services, publications, more RDI activities and funding.</td>
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<td><strong>Policymakers:</strong> policy, strategy and evaluation improvement, improved expertise on working life and innovation infrastructure, improvement of funding instruments, new unofficial role.</td>
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<td><strong>Society:</strong> improved performance and QWL, generative knowledge and practices created by the innovation system and its activities, databanks, Big Data, evaluation system, broader infrastructures, civil crowdsourcing.</td>
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addresses a wider range of organisations. Instead of ‘government’ we use the term ‘policy-makers’, which includes industrial relations systems, i.e. the trade unions and employer’s associations. Issues of organisational development are more sensitive than technological development as they are closely linked to employers’ discretionary rights. Besides businesses, the cooperation includes public workplaces and NGOs; besides universities and other R&D institutes it includes intermediate organisations. Whereas the traditional model only discusses three kinds of relationship the expanded model highlights the importance of a plurality of relationships. It also suggests potential outcomes and learning mechanisms, absent from the narrower model.

The main theoretical principles of the innovation generation model

The innovation generating model is a systemic framework and an analytical tool for a new rationale of innovation studies that also acknowledges the systemic role of innovations (technology, service, organisational and policy innovations) at different levels of society: micro-, meso-, and macro-systems. The three main knowledge systems are the policy-makers, RDI units and workplaces, which in turn consist of different types of subsystems (hybrids). The heterogeneity of knowledge systems broadens problem solving capacity and hence makes development and knowledge creation of complementarities possible.

While it is impossible to change the whole system at the same time, the innovation generating model calls into question the interrelationships of the systems (the sub-system and macro-level system). For example we need to ask how education and labour markets could become more supportive of the micro-level organisations. On the other hand there can be lot of slack and incompetence in the microstructure, whereas interaction in a wider setting may help overcome such weaknesses. The subsystems of the innovations are embedded in the wider set of institutions that shape people and the relationships between them. In addition the created solutions and outcomes of innovation activities at micro-level need to be linked to macro-level activities. It is important that micro-level outcomes are clearly shown as national level effects in the longer term.

This multisubjective approach reflects the fact that in addition to joint objectives (vision, goals) and joint problem-solving, the players have their own interests that can be served as a part of the broader innovation system. In a complex arrangement such as the innovation generating model, functions can no longer be expected to correspond to a one-to-one relation with institutions. The activities have to serve different players. The aim is not primarily intended to create consensus among players but instead to realise the best potential for problem-solving and new qualitatively improved knowledge and solutions.

The model can be applied in several ways, for example as a framework or as an evaluation model for complex innovation systems. It can be viewed as a broad platform where participants create, exchange and reflect upon information and knowledge (problems, solutions and outcomes). It offers a broader perspective for discussing how to solve complex problems, for instance from the perspective of the role of various players, learning at different levels (internal, inter-organisational, system), and the various forms of activity within the collaboration (research, teaching, policy-making, development, crowdsourcing) in order to enhance the dialogue between workplace development and innovation policy.

Sources


Ramstad, E. (2003). Workplace development system and the learning networks. A conference proceeding 27.10.2003. https://www.blogger.com/blogger.g?blogID=1626303150695528125#editor/target=post;postId=4220364920686423322;onPublishedMenu=allposts;onClosedMenu=allposts;postId=0;src=postId

Ramstad, E. 2014. Innovation generating model – expanded triple helix. http://innovationgeneratingmodel.blogspot.fi/search?updated-min=2014-01-01T00:00:00-08:00&updated-max=2015-01-01T00:00:00-08:00&max-results=1


