

Inclusion in Mission-Oriented Innovation Policy

Mission-oriented innovation policies target grand societal challenges, e.g. green transition and prevention of biodiversity loss (EU, 2009; UN, 2015). Such policies have major impacts on the entire society and peoples lives. This creates a pressure for more democratic and inclusive innovation policy selection, design and delivery. Mission-oriented innovation policies require wide societal acceptance and broad based engagement with numerous partners. This calls for the development of an inclusive policy approach.

This policy brief discusses frameworks, challenges and actionable steps that can make mission-oriented innovation policy more inclusive and impactful.

Ideally mission-oriented policies are inclusive and can also help marginalized groups. While the rationales for inclusive innovation policies do vary, a common goal is tackling the misallocation of resources in the economy caused e.g. by exclusion. Correcting that misallocation is critical for economic growth, job creation, and social wellbeing (OECD 2017, p.9).

MISS: Practicing mission-oriented innovation policy: inclusive and systems of use approach

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MISS - Practicing mission-oriented innovation policy is a two-year research project funded by Business Finland at the University of Vaasa, Finland. The project employs two analytical lenses, inclusive policy approach and systems of use approach as way to analyze and advance mission-driven innovation policies. Linking of mission-oriented policy and systems of use activities can facilitate not only the systemic change, but also the societal acceptance of the speed and scale of changes. The project studies the users' capability to be key actors in systemic innovation rather than merely targets of the policy. The main research questions of the project are: How to successfully make large systemic changes and/or transformations happen? What would be the right scale of choices and actions especially in a small open economy such as Finland? How mission-oriented policy can create added value for businesses and for the wider society?

Inclusion perspective highlights the wide-ranging societal impacts that mission-oriented innovation policies have.

Mission-oriented innovation policy overlaps areas that are traditionally seen as domains of social policy, regional policy and diversity of the society.

When implemented, policy inclusion supports the success of mission-oriented innovation policy.

Introduction

Mission-oriented innovation policies have emerged as a response to complex contemporary challenges (water and food supply, energy efficiency and security, disease, demographic change, etc), the need for transformative solutions, and the recognition of the limitations of market-driven innovation. These policies aim to mobilize resources, harness technological advancements, and promote collaboration to achieve specific missions and address pressing societal issues (see e.g. Mazzucato, 2017 and 2018).

Dimensions of Inclusive Innovation

Innovation policy design can harness various dimensions of inclusion, and it is relevant aspect also mission-oriented innovation policy seeks to engage with all relevant ecosystem stakeholders. However, inclusive innovation is not a new idea and forms of it have been proposed by scholars from a variety of backgrounds since the 1950s (Heeks and Foster, 2014). Typically inclusive innovation is defined as innovation for and by people from marginalized groups (Heeks et al., 2013). Despite its complex nature, much of inclusion can be grouped under social-, economic-, geographic-, and cultural dimensions. See the box below.

1. **Social inclusion:** This dimension refers innovation policies addressing the needs and interests of diverse social groups, such as women, minorities, persons with disabilities, and disadvantaged communities. Social inclusion can be promoted through policies that provide equal access to education, training, funding, and other resources.
2. **Economic inclusion:** This dimension refers to innovation policies promoting economic growth and development benefiting marginalized people or those excluded from traditional economic opportunities. Economic inclusion can be promoted through policies that support entrepreneurship, innovation, and job creation in underserved communities.
3. **Geographic inclusion:** This dimension refers to innovation policies promoting innovation and economic development in underserved areas. These are often rural and/or economically depressed communities. Geographic inclusion can be promoted through policies that provide infrastructure, funding, and other support for innovation and entrepreneurship in underserved regions.
4. **Cultural inclusion:** This dimension refers to innovation policies recognizing and valuing diverse cultural perspectives and practices, and promoting innovation that is respectful of and responsive to different cultural contexts. Cultural inclusion can be promoted through policies that support the participation and engagement of diverse cultural communities in innovation and entrepreneurship (OECD, 2017).

Key Principles for Inclusive Innovation

From the policy point of view, there is an overlap between the promotion of inclusiveness and mission-oriented innovation policy. The key principles that should be considered when developing inclusive innovation policies include: *Diversity and representation, Access and affordability, Education and training and collaboration and partnership* (OECD, 2017). For details, see the box below.

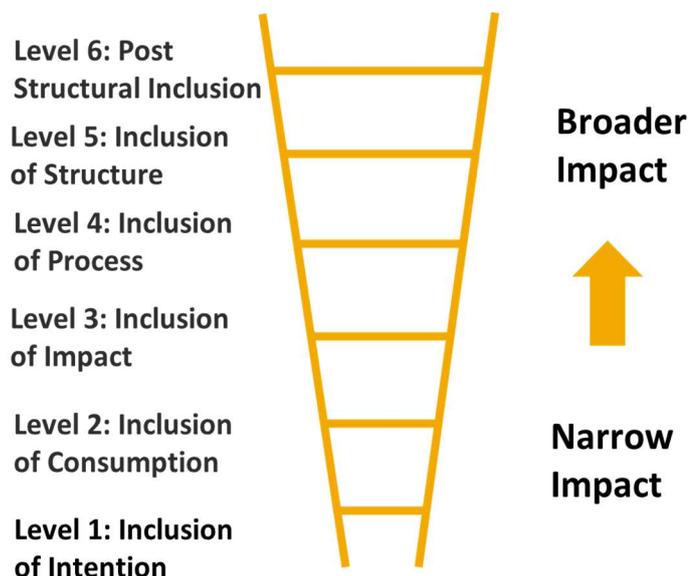
1. **Diversity and representation:** Diversity is a key driver of innovation. Voices and perspectives of people representing different backgrounds are central to the innovation process. Broad societal representation, including underrepresented groups, is a key ingredient of policy design and its societal acceptability.
2. **Access and affordability:** Everyone should have access to the benefits of innovation, including access to new technologies, products, and services. This can involve policies that promote affordability and reduce barriers to access, such as through public-private partnerships, subsidies, or regulatory frameworks.
3. **Education and training:** Society should provide education and training programs that equip people with the skills and knowledge needed to participate in the innovation economy. This can include programs focused on STEM education, entrepreneurship, and digital literacy.
4. **Collaboration and partnerships:** Innovation policy needs to encourage collaboration and partnerships between stakeholders in the innovation ecosystem, including government, industry, academia, and civil society. This helps to ensure the benefits of innovation are shared widely and numerous perspectives are brought to

Ladder of Inclusive Innovation

The depth and comprehensiveness of policy inclusion can be divided in stages that represent different level of development.

The ladder of inclusive innovation, highlights the various levels of inclusion (Heeks et al, 2014). The ladder has six levels (rungs) of inclusion: Intention, Consumption, Impact, Process, Structure and Post structure. Each level represents a different level of inclusive innovation. As you move up the ladder, the type of inclusion deepens (Heeks et al, 2014).

Highly developed inclusion concept implies changes to the processes and structures in policy design and wider society.



1. **Inclusion of intention-** The innovation is intended to be inclusive, but it may have no impact and even cause negative impact on the target community.
2. **Inclusion of consumption-** The target community uses the innovation, but there is no lasting impact. There are innovations spread across low-income countries, such as new types of water pumps, which fit into this category. The recipients initially used the innovation, but they abandoned it once it fell into disrepair.
3. **Inclusion of impact-** The target community uses the innovation, and it has a positive impact on them. A good example of an innovation with inclusive impact are information communication technologies (ICTs) and financial applications that let users cheaply access banking services, such as wire transfers.
4. **Inclusion of process-** People from marginalized groups create, design, and/or develop the innovation. They are a part of the process from the beginning and are often the genesis of the idea.
5. **Inclusion of structure-** The innovation targets structures that create inequality. For example, creating policies that help the patent system better recognize and protect traditional knowledge (Chouhan, 2012). The policies change the structure to be more inclusive.
6. **Post structural inclusion-** The innovation takes place and builds a framework of knowledge that is itself inclusive. This is often the most amorphous rung to measure and quantify. However, the importance of diversity is a good example of a post-structural concept. Today many institutions, organizations, and countries highly prize diversity and it is no longer strange to say diversity is important. Diversity is a post-structural framework that increases inclusion.

Challenges for innovation policy

Not surprisingly, mission-oriented innovation policy development will be challenged by the path dependency and ecosystem partners that benefit the status quo.

There appears to be a clear rationale for including inclusive innovation perspective in the design of the mission-oriented policy. However, there are several challenges that policy makers will face in implementing inclusive innovation policies. Below are four challenges we believe will have a major impact.

Challenge 1: Rethinking missions to be inclusive right from the start of the process and overcoming the path dependency

Much of the innovation literature has focused on economic growth and omitted social, cultural and geographic dimensions of innovation policy. These should be considered when the scale and scope of the mission-oriented policy is defined. Typical missing pieces in policy design are some innovation ecosystem key stakeholders such as users and marginalized groups. There needs to be a rethinking of missions and innovation so that non-economic goals and inclusive innovation are a core part of the definition and not an add on.

Challenge 2: Surviving political challenges to inclusion

There is an evident challenge for policy makers, namely defining the scope of inclusion. Who are the key partners and marginalized groups? Who lacks resources and needs special attention? These are political questions that do not have a clear scientific answer. Defining key stakeholders and marginalized groups touches upon wicked problems such as why certain populations face discrimination or why certain regions are under resourced.

Different dimensions of inclusion concept ought to be included into mission-oriented innovation policy design and delivery.

Finland is in ideal position to benefit from the potential of inclusive innovation, should it embed dimensions of inclusion in the policy design process.

Different parts of society will invariably debate these questions. In Finland's context, there are clear challenges defining language and heritage marginalization, regional gaps, and local vs. international needs.

Challenge 3: Allocating resources for inclusive innovation

Once policy makers determine the scope of inclusion, they must decide how funding is divided across constituents. How much funding should go to mission's key stakeholders, marginalized populations or regions and to what extent is that politically feasible? There will be complaints that not enough money gets allocated to a particular cause or group. Thus, what are the intended consequences (or benefits) of allocating resources to facilitate inclusion of the one specific population or region and not the other? How can these decisions be communicated and evaluated?

Challenge 4: Evaluating inclusion in mission-oriented innovation policy

It is challenging to evaluate the impacts of science and mission-oriented policies. The evaluation challenges are magnified when considering mission specific key stakeholders and marginalized groups. In addition to challenges in defining marginalized these groups, they can be hard to reach and study.

Next steps

Given the scope of the challenges that mission-oriented policies seek to tackle, it is clear that the inclusion question remains a relevant issue for policy design and delivery. Mission-oriented innovation policies are bound to have wide societal impacts, a type universal inclusion in terms of policy impacts e.g. in the case of green transition. While the mission-oriented innovation policy impacts are universal, there is an obvious pressure for more democratic policy design process. As Finland is developing its approach to mission-oriented innovation policy, it is the right time to make use of the policy inclusion concept and its insights into policy development.

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References:

European Commission, (2009). Lund declaration, Formulating Framework Programme 8, (2014-2019), Swedish EU Presidency, 2009, Lund, Sweden.
<https://era.gv.at/era/societal-challenges/the-lund-declaration/>

Kumar Chouhan, V. (2012). Protection of Traditional Knowledge in India by Patent: Legal Aspect. *IOSR Journal of Humanities and Social Science (JHSS)*, 3(1), 35–42. www.iosrjournals.org

Heeks, R., Foster, C., & Nugroho, Y. (2014). New models of inclusive innovation for development. *Innovation and Development*, 4(February 2015), 1–11. <https://doi.org/10.1080/2157930X.2014.928982>

Mazzucato, M. (2018) *Industrial and Corporate Change*, Volume 27, Issue 5, October 2018, Pages 803–815, <https://doi.org/10.1093/icc/dty034>

Mazzucato, M. (2017). *Mission-Oriented Innovation Policy Challenges and opportunities*.

OECD. (2017). *Making Innovation Benefit All: Policies for Inclusive Growth*.

Plaut, V. C. (2010). Diversity science: Why and how difference makes a difference. *Psychological Inquiry*, 21(2), 77–99. <https://doi.org/10.1080/10478401003676501>

United Nations (2015), Transforming our world: the 2030 Agenda for Sustainable Development, Resolution adopted by the General Assembly on 25 September 2015. <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement>

Woodson, T., & Boutilier, S. (2022). Impacts for whom? Assessing inequalities in NSF-funded broader impacts using the Inclusion-Immediacy Criterion. *Science and Public Policy*, 49(2), 168–178. <https://doi.org/10.1093/scipol/scab072>