

African Higher Education
Leadership in Advancing Inclusive
Innovation for Development /
AHEAD

585919-EPP-1-2017-1-RO-EPPKA2-CBHE-JP



-  Characteristics
-  Challenges
-  Technology, business & policy
-  Bridging inequality gaps
-  Business model innovations
-  Good practices

Inclusive and Grassroots Innovation

Work Package 2.2



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Open Educational Resource “Inclusive and Grassroots Innovation”

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Inclusive Innovation for Development / AHEAD

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Introduction to Module

“Inclusive and Grassroots Innovation”

Overview

There is an increasing interest in inclusive and grassroots innovations. Inclusive and grassroots innovations are concepts referring to innovations developed by and for low-income groups. The concept of inclusive innovation provides frameworks and action guidelines to measure and reduce the inequality-increasing effects of innovation. This learning material covers the following topics:

- Characteristics of inclusive and grassroots innovation and challenges in building an ecosystem for inclusive innovation;
- Role of technology, business and policy in supporting inclusive and grassroots innovations;
- Business model suitable for inclusive innovation;
- Economic concepts relevant to inclusive innovation and inclusive growth.

Each lecture in this module contains reading text, further reading material – articles, research papers, and websites, relevant to the topic, short glossary and multiple-choice questions.

Learning outcomes

As a result of engaging with the materials in this module, learners are expected to develop the following knowledge, skills and competences:

Knowledge	<ul style="list-style-type: none">• Inclusive and grassroots innovation and its importance for low- and middle- income countries;• Inclusive innovation ecosystem and the interrelations between its key actors;• The role of technology, business and policy in supporting inclusive and grassroots innovation;• Business models applicable to inclusive innovation;• Economic growth; inclusive growth; inequality; poverty; gender equality; pro-poor growth; social safety nets; productive employment; and social inclusion.
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Skills	<ul style="list-style-type: none"> • Describe the specific characteristics of inclusive and grassroots innovation and distinguish them from “mainstream” innovation; • Identify the major challenges that affect the market realization of inclusive and grassroots innovations in low- and middle-income countries and the ways they can be overcome in an effective innovation ecosystem; • Analyse and explain the impact of business, technology and policy on inclusive and grassroots innovation; • Apply the Business Model Canvas as a tool for developing and communicating an inclusive or grassroots innovation idea; • Analyse examples of inclusive and grassroots innovation and draw out from them good practices that could be transferred to other contexts.
Competences	<ul style="list-style-type: none"> • Demonstrate awareness of inclusive and grassroots innovation and their value for low- and middle-income countries; • Generate and rationalize an inclusive innovation idea applicable to the local context.

Module structure

Lecture.1	Characteristics of inclusive and grassroots innovation
Lecture.2	Challenges in building an ecosystem for inclusive innovation as a prerequisite for scaling up inclusive and grassroots innovation
Lecture.3	Role of technology, business and policy in supporting inclusive and grassroots innovation
Lecture.4	Business model innovations suitable for inclusive innovation
Lecture.5	Economic terms and concepts relevant to inclusive innovation and inclusive growth
Lecture.6	Examples and Good Practices

Lecture 1.

Characteristics of Inclusive and Grassroots Innovation

Annotation

Inclusive and grassroots innovation should be distinguished from the so-called “mainstream” or “market” innovation. The ultimate aim of the latter is to deliver profit-making goods or services. In contrast, inclusive and grassroots innovation improve the life of the community by providing goods and services covering basic aspects of life such as transport, sanitation, electricity and water. Their social bias and the strong community involvement that they entail are their main characteristics. This lecture focuses on the concepts of inclusive and grassroots innovations, their intrinsic characteristics as well as their suitability for low- and middle-income groups.

Key words

Inclusive Innovation, Grassroots Innovation, Bottom-up Approach, Empowerment, Local Communities

Learning outcomes

After engaging with the learning material in this lecture, you should be familiar with the concepts of inclusive and grassroots innovation and their specific characteristics that distinguish them from “mainstream” innovation. You should be able to outline the benefits of inclusive and grassroots innovation for low- and middle-income countries.

Furthermore, after implementing Learning activities 1.1 and 1.2, you should be able to identify and describe examples of inclusive and grassroots innovation originated in your local context.

Structure of the learning content

- ▶ Definition and characteristics of inclusive innovation
- ▶ Definition and characteristics of grassroots innovation



Lecture

Introduction

The concept of innovation has many definitions. One of the most well-known and accepted interpretations of it goes back to the Austrian economist Joseph Schumpeter (1934), who defined innovation as the process through which new ideas are generated and commercialized. Schumpeter distinguished innovation from invention, because innovation is an activity carried out in the economic sphere and aimed to bring market success, while inventions are not necessarily intended for commercialization. In that, innovation is closely linked to entrepreneurship, and an entrepreneur is viewed as a human agency behind innovation.

Later on, the American management consultant Peter Drucker (1985) also linked the concepts of innovation and entrepreneurship. He defined innovation as “the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service”. Drucker made it clear that innovation represents new business opportunities presented by new technologies, products, services, processes or business models; and that it is a structured process that can be learned and practiced. Hence, innovation is the process that starts with a new idea and finishes with its introduction on the market, and its main objective usually is the achievement of commercial success.

Innovation in low- and middle-income countries have traditionally been associated with large organisations either focusing on export markets or producing goods for more affluent local consumers. Often, innovation in these countries has little relevance to the majority of local population. Recently, however, new models of innovation seeking for the development of lower income communities have emerged. These models are known as “inclusive innovation”, “grassroots innovation”, “pro-poor innovation”, and “base of the pyramid innovation”. All of them are associated with the efforts to address the needs of low-income people.

In this module, we are focusing on the concepts of “inclusive innovation” and “grassroots innovation”, which are most commonly used by researchers, aid-agencies and policy-makers.

Inclusive innovation

In the conventional understanding, innovation is viewed as a key driver of productivity, business competitiveness, economic development and growth. Inclusive innovation, in contrast, is viewed as a driver of social development associated with the inclusion of marginalized and excluded groups in the mainstream development (Heeks et al, 2013).

Although the term “excluded group” may in principle refer to women, elderly or disabled, in the context of inclusive innovation it is mostly associated with the poor. Therefore, inclusive innovation aims at delivering goods and services to the ones living on lowest income. These innovations are usually the means to improve the quality of life of poor people. They most often focus on delivering products or services for basic aspects of life such as access to water, sanitation, electricity and transport; access to health care services; access to education, access

to affordable technology; access to financial services; food security, etc. Examples of inclusive innovations include the following inventions: foot-pedalled washing machine, rainwater purification system, mobile water-free toilets, bio-digesters, and eco-friendly homes. By delivering these products, inclusive innovations improve the quality of life of low-income groups as more people gain access to quality products and/or services at affordable prices.

Inclusive innovation often substitutes for failing or absent public services, including health, infrastructure, education, waste management, transport, water, etc. An example is the South African company Amanz' Abantu that has delivered clean drinking water to poor peri-urban and rural populations in the Eastern Cape by installing pay-per-use standpipes. Similarly, the Tedcor Company in South Africa appoints entrepreneurs from disadvantaged backgrounds from the local community to provide waste collection services in their own community (as sub-contractors). In this way, it creates employment for the local community and provides waste collection in areas where the service may have previously not existed.

The concept of inclusive innovation is relatively new. The term emerged about 10 years ago in World Bank's and OECD's actions and projects on innovation for inclusive growth and development (e.g. Goel, 2011; OECD, 2013). The World Bank (2013) defines inclusive innovation as *any innovation that helps expand affordable access to quality products and services that create and increase livelihood opportunities for excluded populations*.

An innovation can be defined as inclusive, if it has the following characteristics (UNCTAD, 2014):

- ▶ **Social:** inclusive innovation takes into consideration the social development needs. It aims to provide low-cost solutions to immediate basic needs like access to water, electricity or sanitation.
- ▶ **Affordable:** inclusive innovation is reasonably priced so to be afforded by the lower-income population, while the quality and efficacy of the new product/service are not compromised. Affordability can be achieved by reducing production and distribution costs, by recycling materials or utilizing available free resources (e.g. rainwater).
- ▶ **Accessible:** inclusive innovation relies on effective distribution and commercialization strategies that take into account life and work patterns of the targeted consumers and strive to remove possible barriers that would hinder the access of the excluded groups to the new product or service (e.g. physical barriers like a long distance to the store).
- ▶ **Impactful:** inclusive innovation has positive impact on the lives of the excluded groups. In addition to economic benefits, inclusive innovation generates new knowledge, stimulates social learning, improves communal literacy, expands capabilities of the lower-income groups, and enhances their wellbeing.
- ▶ **Participatory:** inclusive innovation encourages the excluded groups to engage in innovation activities, in order to participate in the process of delivering goods and services.
- ▶ **Relevant:** since inclusive innovation aims to involve excluded groups by engaging them in the process of innovation, the delivered outcome (be it a product or a service) has strong connection and relevance to the population it is intended for.

Researches differentiate between different levels of inclusion of the excluded groups in inclusive innovation. Heeks et al. (2013) identify six levels of participation in the innovation process (Figure 1.1).

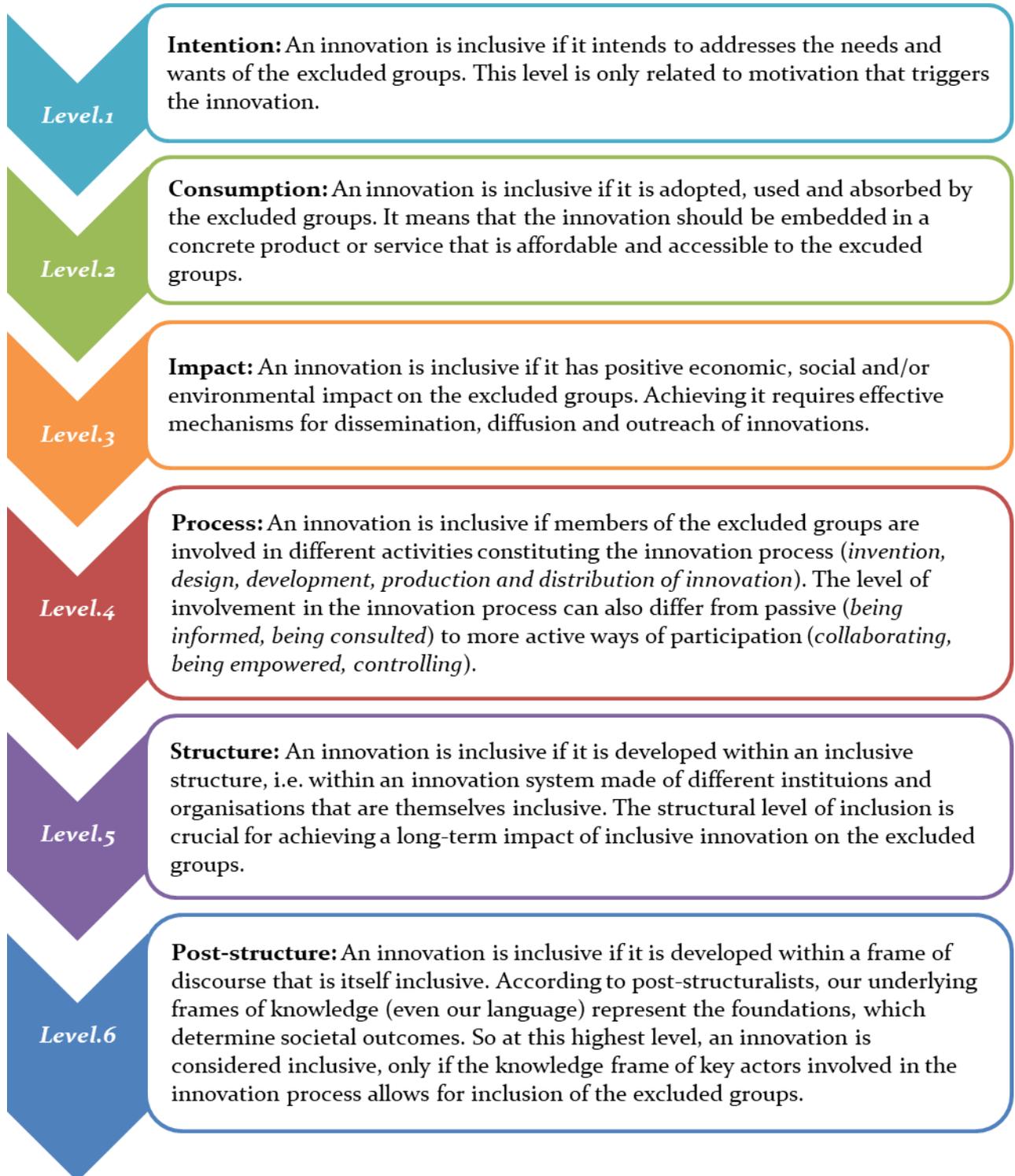


Figure 1.1. Levels of inclusion in innovation (Source: adapted from Heeks et al., 2013)

These levels form a kind of a ladder where each consecutive step is deeper and broader in terms of inclusion. Each level accepts the extent of inclusion at the lower levels and fosters the transition to the higher levels. For example, if the members of the excluded groups feel the inclusion at the level of impact, they automatically recognize the inclusion at levels of intention and consumption, but may wish to extend it to the higher level, i.e. participation in the innovation process.

An important form of inclusive innovation is the so-called **frugal innovation**. This type of innovation tackles resource scarcity. Frugal innovation results in production and delivery processes that minimize the use of resources or leverage existing resources in more effective ways. In this way, frugal innovation translates into lower-cost products and services. The reduction of costs can sometimes be very significant. Frugal innovation can also be employed to lower the costs of services. The examples of well-known frugal innovations include the Tata Nano car – a very low-cost car produced in India, and the General Electric’s MAC 400 Electrocardiograph (ECG) machine.

Inclusive innovation does not have to be limited to incremental innovation (a small improvement or upgrade) and low-tech innovation as frequently believed. Not all products of frugal innovation are of lesser quality or with lower specifications than products designed for the affluent markets. Even though most of the examples of inclusive innovation are innovations that originate from or are targeted at less developed countries, inclusive or frugal innovation does not have to be limited to those countries. It can be developed in the affluent economies and can be used in the same economies to improve the welfare of excluded groups or poorer sections of the population there. For example, Aki Energy is a Canadian social enterprise working in Manitoba indigenous communities to develop and implement sustainable energy solutions. They facilitate the transition of local households to solar and geothermal power in order to make them self-sufficient for energy while providing young people with opportunities for training and employment on renewable energy projects (Employment and Social Development Canada, 2018).

All in all, inclusive innovation differs from mainstream innovation in its target consumers, its purpose and sometimes in its producers. Inclusive innovation can also be practiced in education in order to allow children and adults from disadvantaged groups to gain knowledge and skills necessary to participate fully in economic activities and social/cultural life.

Inclusive innovation has a number of benefits for low- and middle-income countries:

- ▶ It addresses the needs of the low-income population in these countries and is accessible to them. Hence, it reduces inequality and improves the quality of life of this group;
- ▶ It fosters creation of new firms, thus raising the level of employment;
- ▶ It facilitates technology transfer systems for disadvantaged communities and fosters rural development;
- ▶ It relies on recycling or utilizing already available resources and is thus suitable for conditions of resource scarcity;
- ▶ It addresses pressing social needs without the need of public funding.



Learning activity 1.1:

Provide examples of “inclusive innovation” from your context. Describe the new solution (product, service, process, business model); give details about who and when invented it; explain why it can be called “inclusive” (e.g., how it fits with the main characteristics of inclusive innovation: Social, Affordable, Accessible, Impactful, Participatory, Relevant, and what is the level of inclusion associated with this innovation: Intention, Consumption, Impact, Process, Structure). Present these to your groupmates.

Grassroots innovation

Grassroots innovation seeks to employ a bottom-up approach to developing solutions for the excluded groups. Similar to inclusive innovation, these solutions are usually socially or environmentally driven; they respond to the local situation and the values of the involved communities. In contrast to inclusive innovation, however, grassroots innovation is not only targeted at the excluded groups, it is also initiated and led by these groups. The members of the excluded groups are actively involved in grassroots innovation. Moreover, they have control over the innovation process and its outcomes.

Grassroots innovation is different from mainstream innovation in its priorities, key actors, driving factors, resources, types of knowledge and appropriation strategies used. The key differences are summarized in Table.1.

	Grassroots innovation	Mainstream innovation
Key actors	Local communities, civil society organizations, social entrepreneurs, grassroots activists, NGOs, social movements	Universities, R&D centres, ministries of science and technology, firms, entrepreneurs
Priorities	Social values, livelihoods, sustainable development	Economic growth, productivity, competitiveness
Drivers	Social need, voluntarism, cooperation	Market demand, expert authority, reputation
Resources	Social capital, grassroots ingenuity, local indigenous knowledge, development assistance, grant funding, public finance	Public finance, venture capital, corporate investment, scientific expertise and training
Types of knowledge	Tacit knowledge (experiential and subjective knowledge, observations and skills of individuals incl. their values and beliefs)	Explicit knowledge (rational and objective knowledge, codified scientific and technical knowledge)
Activity location	Local communities, villages, neighbourhoods, social movements	R&D centres, laboratories, ministries, markets

Appropriation strategy	Knowledge commons, open source and freely shared practices, media	Intellectual property, licensed technologies, scientific journals
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Table 1.1. *Difference between grassroots and mainstream innovation*
 (Source: adapted from Smith et al, 2016)

In contrast to mainstream innovation that is led by R&D centers, universities and entrepreneurial firms operating in formal markets, grassroots innovation is driven by local activists, social entrepreneurs and volunteers operating in civil society arenas. While mainstream innovation is aimed at enhancing economic growth, grassroots innovation strives to contribute to social and environmental sustainability of the local communities. While mainstream innovation mostly relies on scientific and technological knowledge, grassroots innovation originates from local indigenous knowledge that is often based on the values and beliefs of the local population. Grassroots innovation movement, in its attempt to encourage collective learning and co-creation, supports open ways of producing new knowledge, technologies, products or services. It promotes open access to innovations through knowledge commons, rather than protection of intellectual property rights through patents and licences.

Hence, grassroots innovation is distinguished by the following key characteristics:

- ▶ **Community-led:** grassroots innovation is usually initiated and shared by community members. The reasons behind it relate to local needs, events or ideas emerging from the interaction of community members. More often than not, an informal community leader binds the civil actors together into achieving a common goal. By creating a sense of membership, communities mobilize support that is crucial for the successful delivery of the envisaged outcomes.

- ▶ **Responding to local context:** grassroots innovation aims to provide solutions that respond to the local context and needs of the communities involved. In this, it can produce greater sustainability than top-down approaches. Utilizing local knowledge and expertise brings more benefit since community members know what is relevant to their local context. Moreover, responding to local problems and socioeconomic conditions and taking into consideration local values makes it meaningful to communities.

- ▶ **Empowering local communities:** grassroots innovation enables local communities and individuals to convert their ideas into products and services. Thus, communities can directly channel their knowledge and ideas into the process of outcomes development. Grassroots innovations give voice to everyone in the community to suggest ideas and initiatives. Shared decision-making by community members facilitates a sense of ownership and empowerment. Among the benefits of the open nature of grassroots innovations are the passion, commitment and persistency in achieving the common goal. Maintaining control over the innovation processes and outcomes, communities are more likely to achieve sustainability.

- ▶ ***Driven by ideological commitment***: the ultimate goal of mainstream innovation is to generate profit. Unlike it, grassroots innovation is ideologically driven and intended to meet social needs or provide alternatives. It embraces alternative values as opposed to the ones favoured by the mainstream. Some examples include: local food economies as opposed to industrialized food; socially reproductive labour as opposed to formal labour market.

Grassroots innovation occurs in such sectors as food, agriculture and housing, water and sanitation, mobility, manufacturing, energy, health and education. Examples include low-cost self-build housing developments, community recycling and renewable energy initiatives, farmer-led irrigation systems, urban food production schemes, water and sanitation projects, home-based nurse training schemes, farmers' markets and open-source energy monitors (UNCTAD, 2017).

Historically, grassroots innovation has been advocated and promoted by several movements and networks:

- ▶ ***The movement for socially useful production*** (UK, 1976 – 1986): emerged in the context of manufacturing jobs loss in the UK caused by the industrial restructuring and technological change. It involved engineers, workers and activists who promoted innovative alternatives to closures in manufacturing through re-orientation to human-centered design and development of socially useful products. An emblematic example of this movement is a grassroots response of workers at Lucas Aerospace to job cuts, who proposed the ways of using computer power for enhancing skills rather than displacing human labour. They also came up with many ideas of expanding the product line of their plant from military to civil products. Their suggestions included hybrid engines for cars, wind turbines, devices for disabled and other products that companies are trying to develop decades after their inception (Smith, 2014).
- ▶ ***The appropriate technology movement*** (originated in South America and spread worldwide, 1970s – 1980s): aimed to use contextually appropriate, accessible and affordable technology as a tool for social and economic development. Appropriate technology is usually characterized by: low cost; use of local materials; reliance on local skills and labour; small scale; control and wherever possible maintenance by local people without requiring a high level of education; intension for collective use; open source and avoidance of property rights and patents. The main objective of the appropriate technology movement was to help poor communities to develop out of the conditions they were living in by providing technologies suitable for these conditions. The movement involved diverse actors ranging from local activists, educational institutions, donors, policy-makers, and (to a lesser extent) firms (Smith et al., 2013).

Although the appropriate technology movement as a worldwide phenomenon is referred to 70-80s of the 20th century, several international networks inspired by this movement are still active nowadays. An example is the ***International Network on***

Appropriate Technology (founded in 1998) whose activities are focused on Global South countries, and particularly on Africa. They organize an annual conference on appropriate technology to promote the integration of locally-grounded knowledge with cutting-edge science and technology for community empowerment and job creation (INAT official website: <https://appropriatetech.net/>).

- ▶ **The People's Science Movement** (India, 1960s – present): emerged from various popular science movements and focused on upgrading traditional techniques through the application of science. The members of this movement pay particular attention to the upbringing of “social agents” of innovations for inclusive local development. This movement involves scientists, technologists and civil society organizations. Their activities include science and communication (publications), policy critique, and development interventions. The latter covers several areas such as health, environment and technology development. Some examples of the specific interventions include:
 - 1) “Arogya Iyakkam” programme that covered more than 1000 villages where local health volunteers were trained in first aid, basics of child nutrition, and maternal and child care;
 - 2) TNSF initiative for reclamation of abandoned large water tanks across the Telangana State (India) in order to reuse them;
 - 3) Technology-related projects such as using biomass as replacement for cement in civil constructions, introducing windmills and bio-mass based energy systems, creating small-scale oil presses and other food processing units (Smith et al., 2012).

- ▶ **The Honey Bee Network** (India, 1990s – present): originated from the group of academics, scientists, farmers and others interested in documenting and spreading traditional knowledge and innovation in national languages to local people. The network is supported by the National Innovation Foundation (NIF) and the Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI). Twice a year the members of the network organize field trips to local communities to identify and document unrecognized ingenuities. Thus far, they have documented more than 100,000 traditional practices and local innovations. Some examples include natural pest control measures for locally adapted fruit trees, irrigation systems for local crops, cost-effective machines, e.g. for processing bamboo and weaving sari cloth into low-cost sanitary napkins (Smith et al., 2012; <http://honeybee.org/>).

- ▶ **The maker movement** (international, present): is a contemporary grassroots innovation movement whose activities are focused on linking traditional knowledge about carpentry, mechanics, and metallurgy with new skills in programming, electronics and robotics. It incorporates several global networks such as fablabs, hackerspaces, and makerspaces – community-based digital workshops that provide innovative spaces for people to learn about, co-create and use different technologies. The main objective of this movement is to experiment with artefacts and re-design them for new purposes. The movement relies mostly on open-source hardware and

software, and endorses unrestricted access to technology for wider public. The new digital technologies and virtual collaboration platforms provide opportunities for a wider spread of the maker movement. The examples include such websites as www.instructables.com, www.thingiverse.com or www.sourceforge.net that allow practitioners to share their own ideas, designs, and tutorials in order to develop open software, build, create or modify items ranging from toys to robots and houses (UNCTAD, 2017).

Historically, from the appropriate technology movement to the contemporary maker movement, governmental and non-governmental organisations, development agencies and funders have paid attention to alternative models of social development and technological change originating in grassroots innovation. Recently, grassroots innovation has been brought into the foreground of development, as a way for achieving UN's Sustainable Development Goals that emphasize inclusion and equity, especially in such areas as education, health, work and poverty reduction. Since 2015 – the year when the Sustainable Development Goals were launched – the UN Headquarters has held an annual event called “Solutions Summit” to lift-up exceptional grassroots innovators who are addressing one or more of the 17 goals. In the Summit of 2019, 10 solution makers were selected, including for example:

- ▶ **Technology for Social Change and Development Initiative** (Tech4Dev) – a non-profit organization founded in 2016 in Lagos (Nigeria) to empower African communities with digital skills. Tech4Dev has launched **The Women Techsters program** that will train 5,000,000 women across Africa in coding by 2030. Their core objective is to educate women coders who will establish technology-enabled businesses that will promote the economic development in Africa (<https://tech4dev.com/programs/women-techsters.html>).
- ▶ **Ghana Bamboo Bike Initiative** – an organisation that designs and builds a range of bamboo bikes to promote healthy lifestyle and green transportation as a way of reducing adverse impact of human activities on the environment. Furthermore, they continuously expand their bamboo plantations to restore degradable landscape and serve as a carbon sink. They also distribute bamboo bikes for free to far-away regions of Ghana to support school kids with limited mobility (<http://ghanabamboobikes.org/impact/>).
- ▶ **Conservation Music** – a volunteering organisation that confronts environmental breakdown and humanitarian disaster in the developing world and beyond through the power of music. They produce eco-minded songs for distribution by radio, TV and different online channels; develop open resources for eco-education; mobilize youth and organize concerts, life workshops and other events to benefit musicians, local communities, and all people interested in the union of music with the environment. They are active in Botswana, Lesotho, Tanzania and Zambia (<https://www.conservationmusic.org/about>).

However, it is important to understand that the impact of grassroots innovation on inclusive and sustainable development may be limited because of the following problems. First, grassroots innovation is supposed to be focused on the needs of a specific local community,

while funders may seek its diffusion and adoption by a wider community. This can undermine the purpose of grassroots innovation to be tailored to the local context. Second, grassroots approach seeks to achieve inclusion of the excluded groups in the mainstream development; however, it does not address wider social structures that precondition unsustainability and exclusion. Overcoming this dilemma requires rethinking of the relations between grassroots innovation and conventional innovation systems. For example, national innovation policies could foster the integration of grassroots in the National Innovation System by incentivising researchers who work with local communities, and recognizing how this work supplements conventional scientific outputs, i.e. patents and publications (Smith et al., 2012).

Another problematic issue is intellectual property. Although grassroots innovation movement promotes open and free distribution of novel ideas and solutions, some activists believe that innovators should be recognized for their inventions, and be protected from bigger firms that may steal and patent grassroots inventions. For example, the Honey Bee Network supports the protection of intellectual property and the commercialisation of innovations by linking grassroots inventors with universities and other research institutions. Securing grassroots intellectual property is another domain, which innovation policies can regulate (ibid).

Hence, in order to tap into the potential of grassroots innovation for enhancing inclusive and sustainable development, National Innovation Systems should promote the participatory approach, in which: 1) research institutions engage with the local communities; and 2) grassroots inform research agendas and funding priorities.

Despite these challenges, grassroots innovation has a number of benefits for low- and middle-income countries:

- ▶ Draws on *local resources*
- ▶ Focuses on *solidarity and community building*
- ▶ Builds *social capital*
- ▶ Facilitates *mutual help* and *social exchange*
- ▶ Facilitates the *reuse of goods* or their use in new ways
- ▶ Values *co-production* and reciprocity
- ▶ Can achieve *sustainability* without external resources
- ▶ Recognizes *locally developed solutions* to improve livelihoods
- ▶ Provides *alternatives* to costly mainstream solutions
- ▶ Creates and enhances *jobs*.



Learning activity 1.2:

Provide examples of “grassroots innovation” or local ingenuities from your context. Describe the innovation/ ingenuity (what it is, who and when developed it); explain the local need behind it; explain how it involved local community members; and evaluate its impact on the community (particularly, in terms of improved inclusion and sustainability). Present it to your groupmates.

Further reading

<http://www.grassrootsinnovations.org>

The website provides a number of academic articles dedicated to grassroots innovations and a number of projects that help to see real examples and better understand the concept of grassroots innovation.

<http://www.bopinc.org/inclusive-innovation>

The BoP (Base of the Pyramid) Innovation Center is an independent foundation that was founded by a consortium of partners, to create a one-stop shop for businesses, investors and advisors with a clear interest in inclusive business. The website presents a number of real-life projects as successful examples of inclusive innovations.

<http://www.oecd.org/sti/inno/oecd-inclusive-innovation.pdf>

OECD. (2013). *Innovation and inclusive development, Discussion report revised February 2013. Paris: OECD.*

<https://steps-centre.org/wp-content/uploads/Grassroots-innovation-and-innovation-democracy.pdf>

Smith, A. and Stirling, A. (2016). *Grassroots Innovation and Innovation Democracy, STEPS Working Paper 89, Brighton: STEPS Centre*

Summary of key points

- ▶ Inclusive innovation focuses on delivering products or services for low-income population. It aims at producing long-term impact on the lives of the poor in terms of quality of life, assets or capabilities. It does not seek financial return.
- ▶ Inclusive innovation is participatory, affordable, accessible, impactful, and relevant for the excluded groups.
- ▶ Grassroots innovation aims to create social good by utilizing local resources.
- ▶ Community members are at the heart of grassroots innovation – they lead and own it. They deliver their knowledge and experience in the innovation process and are in charge of the decision-making.
- ▶ Grassroots innovation responds to local situations and employs bottom-up approaches to provide solutions tailored to the local needs.
- ▶ Grassroots innovation is ideologically-driven, community-led and empowering.
- ▶ Inclusive and grassroots innovations have numerous benefits for low- and middle-income countries.
- ▶ However, in order to have wider impact on sustainable and inclusive development of low- and middle-income countries, inclusive and grassroots innovation should be integrated in the National Innovation System and supported through innovation policies.



Self-assessment test

Please, select all response options that you believe are correct. More than one answer is possible.

Q1: Which of the following characteristics refer to inclusive innovation?

1. Focuses on economic development
2. Reduces production or distribution costs to achieve affordability
3. Takes into consideration the needs of excluded groups
4. Encourages excluded groups to participate in the innovation process
5. Seeks financial return

Q2: Which of the following characteristics refer to grassroots innovation?

1. Local values and situations are taken into consideration
2. Aims at providing universal solutions to problems
3. Authorities are in control of the innovation process
4. Facilitates job creation
5. Local knowledge and traditions play role in the innovation process

Q3: What is “frugal innovation?”

1. Any innovation that originates in less developed countries
2. Innovation that relies on ground-breaking scientific discoveries
3. Innovation that minimizes the use of resources or leverages existing resources so that the cost of the product or service can be lowered significantly
4. Innovation in the services sector
5. Innovation that optimizes the use of resources so that the product or service are more environmentally-friendly

Q4: What are the benefits of the bottom-up approach to innovation?

1. It helps achieve financial sustainability
2. It creates a sense of ownership of the product or service
3. Decision-making is in the hands of the few people in charge of the innovation process
4. The process starts at the highest level thus ensuring high-quality of the final outcomes
5. The delivered outcomes are context-driven and relevant to the local situation

Q5: Which of the following are examples of grassroots innovation?

1. Eco-housing

2. Local organic food schemes
3. Community currencies
4. Prepaid card systems for energy consumption
5. Industrialized food

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Glossary

Inclusive innovation	Innovation focused on marginalized and excluded groups that aims at delivering goods and services to the ones living on lowest income
Grassroots innovation	Innovation that employs a bottom-up approach (involving local community members and drawing on local knowledge and expertise) in developing solutions for marginalized and excluded groups
Bottom-up approach	Approach that starts at the lowest levels and represents the ideas and values of a large group of people (e.g. community members)
Co-production	A process that involves society members in the creation of goods and services. It is opposed to the process in which members of society are consumers of goods and services designed and provided for them by higher authorities.
Social capital	A set of shared values, shared understanding, shared sense of identity in a society that enables social members (individuals and groups) to trust each other and work together
Excluded groups	Groups of society that are isolated, uninvolved or insufficiently involved in social, economic and cultural life, and deprived of rights and benefits available to other members of society. The term may refer to people with disabilities, immigrants, racial minorities, women, unemployed, and people with little or no economic resources.
Mainstream innovation	A new product or service that aims to bring financial success and increase economic growth
Community	A group of people living together and sharing common characteristics, e.g. particular area, professional interests, common history, etc.
Ownership	The state of control over an object or idea; taking responsibility for an idea or problem
Empowerment	The state of having the right and power to do something or to control something

Lecture 2.

Challenges in building an ecosystem for inclusive innovation as a prerequisite for scaling up inclusive and grassroots innovation

Annotation

An ecosystem for inclusive innovation can be defined as the sum of a number of actors (communities, innovators, policy makers, research organizations, educational and financial institutions) and their interrelations. As in all ecosystems, the malfunctioning of one agent can affect the performance of the whole. Mutual interdependence can result in either successful scaling up of inclusive innovations or total failure. This chapter analyses the specific challenges that inclusive and grassroots innovators meet and the behaviour of the ecosystem that can either hinder or facilitate their market realization.

Key words

Ecosystem, knowledge exchange, financing mechanisms, regulations, scaling up, replication

Learning outcomes

After engaging with the learning material in this lecture, you should understand the structure of an ecosystem for inclusive innovation and the interrelations between its key actors. You should be able to identify the major challenges that affect the market realization of inclusive and grassroots innovations and the ways to overcome them in an effective ecosystem.

Furthermore, after implementing Learning activity 2, you should be able to analyse the innovation ecosystem in your country or region and assess the extent to which it supports inclusive and grassroots innovation.

Structure of the learning content

- ▶ Introduction to the concept of ecosystem for inclusive innovation
- ▶ Challenges in building an ecosystem for inclusive innovation: limited access to knowledge and skills; insufficient dissemination; lack of access to adequate financing; lack of market information; regulatory and policy challenges



Lecture

Introduction

When speaking of an ecosystem one usually makes analogy with the biological ecosystem that is made of all living organisms in a certain area plus the physical environment surrounding it. These two components function together as a unit. In the context of innovation an ecosystem is formed by the actors and entities that function together to enable innovation. These include governments, civil society, entrepreneurs, investors and other material and human resources that are interconnected and need to work together to develop innovations. In the case of inclusive innovation, what needs to be taken into account is the importance of every factor that plays a role in the creation of an environment in which innovations thrive.

To this aim, it is necessary to create a culture of trust that allows people and institutions to interact successfully. Ultimately, an effective ecosystem for inclusive innovation will create conditions for market realization, scaling up and replication. Figure 2.1 below presents an example of different actors that make an ecosystem of inclusive innovation. These need to be interrelated, interdependent and mutually influential rather than acting separately from each other. Since innovation cannot thrive in isolation, an inclusive approach by all sectors is necessary, including government, industry, business and the community. Therefore, the actions of all listed actors in an inclusive innovation ecosystem will determine whether the innovation will succeed or not.

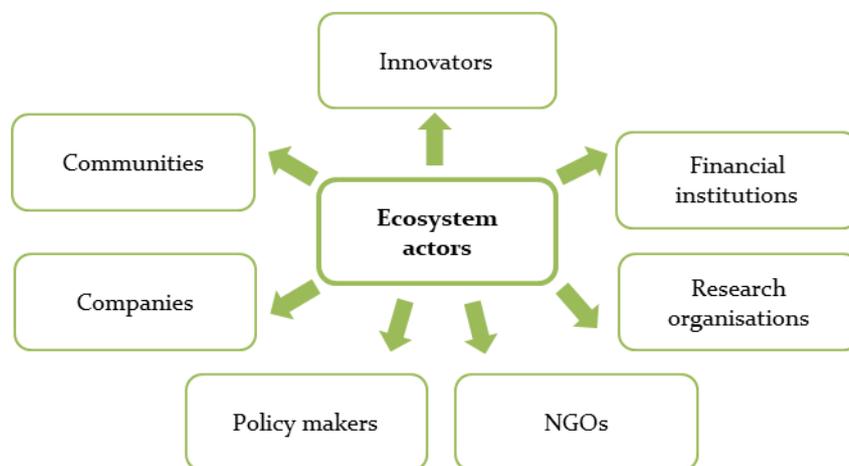


Figure 2.1 *Ecosystem actors*

In order to reach the state of an effectively functioning ecosystem, however, all players in inclusive innovations need to cooperate to overcome several key challenges. These challenges are also the reason why the majority of inclusive and grassroots innovations are unable to achieve market realization and scaling up. Therefore, overcoming the obstacles listed below may be considered as a prerequisite for further development of inclusive and grassroots innovations.

Challenge: limited access to knowledge and skills

An inherent characteristic of inclusive and grassroots innovation is the involvement of local community members in the process of innovation. In this, special attention is paid to local members' skills, knowledge and expertise. Although community knowledge is precious in creating products and services relevant to local situations, it is generally limited to knowing specific problems and circumstances. This is not sufficient for further scaling up and commercialization of innovation. Moreover, because of the informal nature of businesses, it is more difficult for innovators to access knowledge resources that hinders the innovation process.

For example, the inventor of a machine for making affordable sanitary napkins (Arunachalam Muruganatham, the founder of “Jayaashree Industries”, India) had to work year to find out how napkins produced by multinational corporations worked, and what materials they were composed of. It took him additional years to create a machine for producing raw material for napkins and then a machine for forming and sealing the product. He faced difficulties in obtaining information about the production process from the formal sector that significantly delayed his invention. Later on, however, The National Innovation Foundation helped him patent the machine and provided resources for his innovation to reach scale (IMT Hyderabad).

Knowledge exchange with relevant actors such as private companies, NGOs, educational institutions or research institutions is thus instrumental in delivering innovations as these external knowledge sources add to their capacity. To this aim, it is necessary to facilitate cooperation between actors and supporting intermediary institutions, involving as many members of the ecosystem as possible, including poor communities, the private sector, the financial sector, public research institutions and NGOs. Another way to overcome this challenge is to provide access to training for innovators in order to build internal capacity. Either educational institutions or private companies can deliver formal and non-formal trainings to the benefit of innovators.

Figure 2.2 below illustrates how the components of an inclusive innovation ecosystem can interrelate and function together to ensure knowledge exchange.

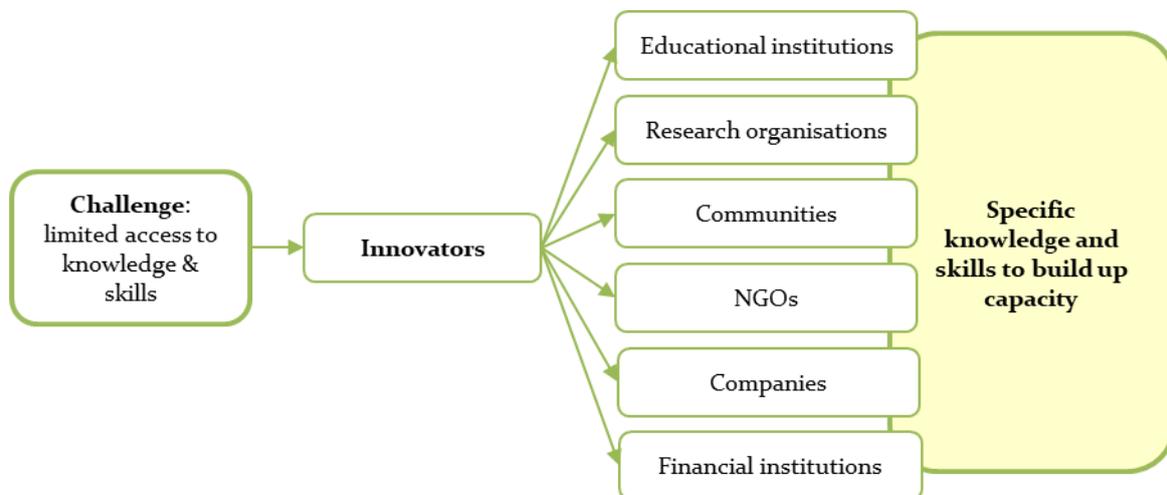


Figure 2.2 Knowledge exchange in the inclusive innovation ecosystem

Challenge: insufficient dissemination

Limited access to knowledge and skills leads to another challenge that is inherent to inclusive innovations, namely insufficient dissemination. Disseminating the developed product or service to outside users is challenging. The reason behind it is that while innovators have detailed knowledge on their own communities' needs, they lack information on the needs elsewhere. This often makes the solutions that work at local level inadequate to different circumstances. Therefore, as far as inclusive innovations are concerned, dissemination (if at all) is very limited. Insufficient dissemination hinders the diffusion of the invention more widely.

In an effective ecosystem, the exchange of knowledge between the different actors should run smoothly allowing for replication of innovations to new geographies and scales of operation. Partnerships between grassroots innovators (who have insights into local needs) and bigger firms (that have the advantage of scale) could be useful for developing tailor-made products both at the local and larger scale. Such partnerships can be fostered by governments, NGOs and networks. In India, for example, the Honey Bee Network supports documentation, dissemination and scaling up of grassroots innovations (see Lecture 1).

Challenge: lack of access to adequate financing

Inclusive innovations experience higher risks regarding product delivery, and the size of their potential future markets is perceived as low. This is the reason why access to financing is usually limited. Moreover, the informal nature of businesses makes it difficult for them to enter into rigid contractual agreements. As a result, the financial loans inclusive innovations can receive are small and usually insufficient for the business to operate and grow. Therefore, alternative financial mechanisms are needed for inclusive innovation initiatives as well as credit options tailored to their scale.

One possible solution would be the uptake of microfinancing models. Here comes the role of both policy makers and financial institutions to collaborate with inclusive innovators and find a flexible solution suitable to all interested parties of the ecosystem. Developing *micro-loan schemes* would fit the needs of borrowers who have difficulties accessing loans from traditional banks or credit institutions. For example, an Indian microfinance institution "Swayam Krishi Sangam" cooperated with Nokia and local service provider "Bharti Airtel" to deliver mobile phones, together with a microloan to pay for them in locations where mobile phones were not used before (OECD, 2015).

Equity financing is another possible mechanism in which the business sells company stock to investors. Thus, the business does not have regular payments to the investor but rather gives them ownership shares that lead to gains in case of good performance or losses in case the business performs badly.

Financial education on the other hand will increase awareness of inclusive innovators as regards access to financial resources and the various financial mechanisms available for funding their businesses. It is by no means necessary that education is formal. Various educational institutions, NGOs and even companies may provide non-formal and informal trainings to innovators on basic financial business skills and on developing entrepreneurial behaviour. This will be helpful in establishing a culture of financial literacy.

Figure 2.3 below shows an ecosystem of inclusive innovation, in which actors function to provide conditions for access to financing.

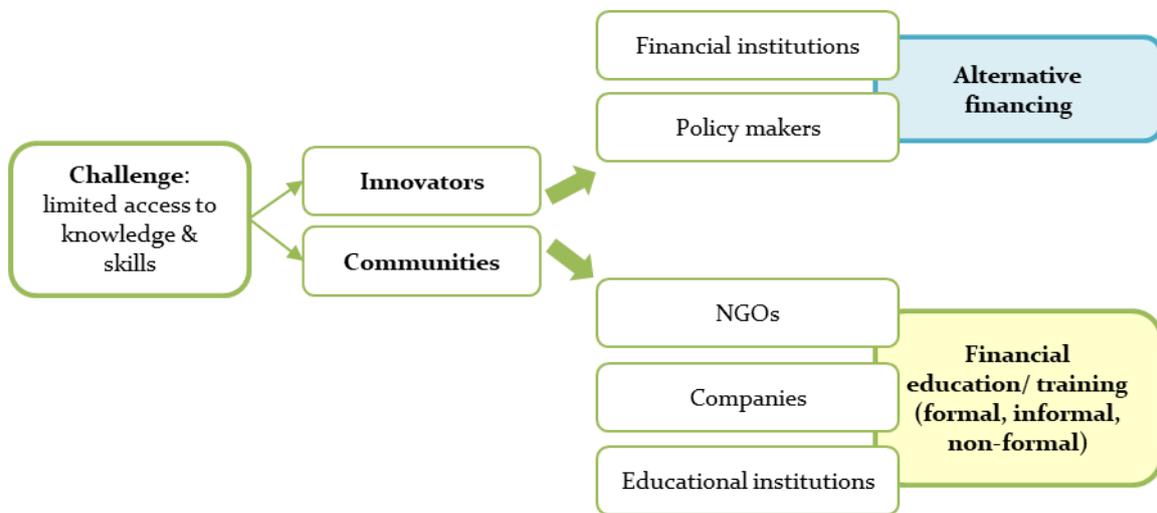


Figure 2.3 Financing in an inclusive innovation ecosystems

Increased knowledge of financial mechanisms and facilitated access to financial resources will help build financially sustainable business models. By obtaining financing, the businesses receive fresh capital to operate, which in most cases is crucial for their surviving and going beyond the initial prototype to commercialization and dissemination.

Challenge: lack of market information

Inclusive and grassroots innovations usually arise in response to immediate local needs such as access to basic resources like water and electricity, or as an intent to provide low-income citizens with quality services at a reasonable price (for example, mobile banking). Therefore, inclusive and grassroots innovations are based on adequate local needs analysis (including good understanding of social context and local environment), but lack market information.

There are two reasons behind this challenge:

- ▶ As regards inclusive innovation, the research carried out is non-formal, if any, and
- ▶ Production and commercialization are usually limited to own use.

Operating locally without doing research on different markets hinders innovations from scaling up. This challenge can be overcome by facilitating knowledge flow between the different actors of an ecosystem. Research institutions and companies can deliver market information to innovators, thus helping to scale up their inventions.

Regulatory and policy challenges

It is important that regulations are adapted in a way that do not constrain or prohibit innovations serving the excluded groups. This is particularly important as regards public services. At most times they are inadequate to inclusive innovations and do not cater for their needs like access to assets such as land, credits or even intellectual rights. The risk of not adapting policies and regulations to inclusive innovations is that they may unintentionally increase social exclusion and thus cause harm instead of improvement. Therefore,

governments should work intentionally to establish regulations that support the development of policies and markets for inclusive innovations.

A good example of regulatory support in favour of inclusive innovation is the case of M-PESA – a mobile payment company that became omnipresent in Kenya, but failed to develop in other countries (e.g. South Africa) due to rigid regulatory frameworks. When the market demand was conceived, the government provided an enabling environment for the growth and development of the financial infrastructure in Kenya. The Communications Law (2006) recognized electronic units of money, thus giving the legal basis for telephone companies to store monetary value in SIM cards. This enabled person-to-person money transfers through mobile phones. Then, the Central Bank of Kenya issued regulation that allowed M-PESA to connect with individual savings accounts at commercial banks. This helped the company to evolve from using a common trust account for all users to providing a connection with individual savings accounts. Later on, several other regulatory improvements were made to allow for mobile microcredits and international remittance services (Ndung’u, 2017).

Government policies should make sure that low-income entrepreneurship is integrated into formal education and offered also by means of informal training programmes such as community or rural trainings. A comprehensive policy approach considers facilitating inclusive innovations by providing a complete spectrum of factors needed for it to thrive: adequate incentives, policies, institutions and infrastructure. A well-structured policy support helps overcome market failures including underproduction of goods and services. The involvement of the beneficiaries in the design of inclusive innovation policies and their collaboration with other parties involved in the implementation of these policies play an important role in filling the existing information gaps as regards low-income markets.

Figure 2.4 below shows how collaboration between participants of an inclusive innovation ecosystem can facilitate knowledge flow.



Figure 2.4 Knowledge flow in an inclusive innovation ecosystem



Learning activity 2:

Prepare for in-class discussion on the topic of this lecture.

How innovation ecosystem in your country/ region supports inclusive and grassroots innovation as regards overcoming the challenges discussed in this lecture:

- *Are there any initiatives allowing for knowledge exchange between inclusive/ grassroots innovators and formal institutions such as universities, research centers, and public bodies?*
- *How is the process of dissemination and diffusion of inclusive innovations facilitated?*
- *What kind of financing schemes can grassroots innovators access to support their inventions?*
- *Are there any training opportunities that could help inclusive/ grassroots innovators to learn to analyse the market?*
- *How does the legal and regulatory framework support inclusive and grassroots innovation?*

Further reading

<http://www.know-hub.eu/knowledge-base/videos/innovation-ecosystems-as-drivers-of-regional-innovation-validating-the-ecosystem.html>

The website presents an article by Meirion Thomas with visual representation of an innovation ecosystem and the relations between the different actors involved in it.

<https://www.oecd.org/innovation/inno/scaling-up-inclusive-innovations.pdf>

OECD (2015). Innovation Policies for Inclusive Development: Scaling up inclusive innovation.

<https://opportunityhub.co/ecosystem-building/>

This opportunity hub invested in creating inclusive innovation, entrepreneurship & investment ecosystems. The website also presents a number of success stories of inclusive innovations.

<http://africaninnovation.org/?news=aif-blog-series-1>

The website presents a series of blogs on investing in inclusive innovation ecosystems for Africa's prosperity.

<http://www.growinginclusivemarkets.org/>

The website presents documented business cases that have been successful in inclusive markets. Selection of case studies by theme, country and sector is possible.

Summary of key points

- ▶ An inclusive innovation ecosystem involves various actors: policy makers, community members, research centres, educational organizations, financial institutions, and they need to be considered as interrelated rather than acting independently.
- ▶ The exchange of knowledge between the actors of an ecosystem will facilitate scaling up of inclusive innovations as this will add up to the internal capacity of inclusive innovators.
- ▶ Dissemination is challenging for inclusive innovations. Local solutions often do not fit in a different context. Dissemination can be improved by improving the knowledge flow.
- ▶ Inclusive innovations need flexible financial mechanisms. Microfinancing and equity financing have proved to be adequate schemes for securing funding.
- ▶ Policy initiatives tailored to the needs of inclusive innovations are strongly encouraged. This includes access to adequate public services as well as integrating low-income entrepreneurship into education



Self-assessment test

Please, select all response options that you believe are correct. More than one answer is possible.

Q1: Which of the following statements are true?

1. The actors of an inclusive innovation ecosystem include governments, companies, educational institutions, research centres and communities and they act independently to achieve their goals.
2. Policies need not be adapted to inclusive innovations since this could alter their nature and impede their development.
3. It is important to invest in financial formal or non-formal training for inclusive/grassroots innovators as this will build their capacity for scaling up and market realization.
4. Equity financing means that the innovators give their business to investors in return for funding.
5. Collaboration between the different actors of an inclusive innovation ecosystem will facilitate knowledge flow, which, in its turn, will provide conditions for developing sustainable business models.

Q2: Why is knowledge exchange between the actors of an inclusive innovation ecosystem important?

1. Inclusive innovators have sufficient knowledge on their local needs but it is not enough for market realization
2. The more the actors cooperate the bigger are the chances for scaling up.
3. Delivering context-specific knowledge to research centres and policy makers is one of the conditions for their support.
4. Increased knowledge of financial mechanisms will facilitate access to financing which is a crucial condition for inclusive innovations to survive.
5. Research carried out by inclusive innovators is either very scarce or none which limits their possibilities for scaling up.

Q3: Financial mechanisms for inclusive innovation initiatives:

1. Need to be adapted to their specific needs
2. Should be developed by banks or credit institutions
3. Could involve microfinancing
4. Are risky and, therefore, should be avoided
5. Should be developed in collaboration by policy-makers and financial institutions

Q4: Why is dissemination for inclusive innovations challenging?

1. Inclusive innovators possess detailed context-specific knowledge but often this cannot be applied to other situations.
2. Inclusive innovators do not consider dissemination important.
3. There is insufficient exchange of information between the different actors of the ecosystem, which hinders dissemination.
4. Dissemination is scarce due to lack of financial resources.
5. Inclusive innovators do not understand the meaning of dissemination.

Q5: What are the conditions for a functioning ecosystem for inclusive innovations?

1. Collaboration between all actors in the ecosystem.
2. Ensuring knowledge exchange between the actors of the ecosystem.
3. Providing well-structured policy support.
4. Providing adequate formal and/or non-formal trainings for the inclusive innovators.
5. Working on improving the internal capacity of inclusive innovators.

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Glossary

Ecosystem	<i>The complex of a certain environment, the components occupying it and their interrelations.</i>
Dissemination	<i>The act of spreading something widely, e.g. information, idea, products, services, etc.</i>
Micro-loan	<i>A small amount of money lent usually to start-ups and/or entrepreneurs who experience difficulties accessing financial loans from regular bank or credit institutions.</i>
Equity financing	<i>The process of raising capital by selling company shares to investors or financial institutions. As a result, the business receives money to operate while the investors become shareholders with ownership interest.</i>
Scaling up	<i>The process of making something larger in size or reach. In business context scaling up refers to reaching larger number of clients in a broader geographic area.</i>
Commercialization	<i>The process of introducing a new product/service to the market.</i>
Replication	<i>The process of repeating something.</i>
Regulations	<i>Rules designed and maintained by the government or other authorities in order to control actions or behaviours</i>
Sustainability	<i>The ability to maintain and support an activity or process over a long period. In the context of business, sustainability is understood as the management of a situation to ensure responsible and ongoing success.</i>

Lecture 3.

Role of technology, business and policy in supporting inclusive and grassroots innovation

Annotation

The potential of the Bottom of the Pyramid (BoP) market is enormous and consumers in the BoP have many unmet needs. This chapter discusses the role of business, technology and policy in supporting inclusive innovation. It reviews the strengths and weaknesses of different companies to support inclusive innovation. We review the possibilities for the application of technology in the inclusive innovation process. Finally, we examine how policy instruments can support inclusive innovation.

Key words

Small and Medium Enterprises (SMEs), Technology, Government policy, Bottom of the Pyramid (BoP)

Learning objective

After engaging with the learning material in this lecture, you should understand the opportunities and challenges of inclusive and grassroots innovation for all types of business. You should be aware of the application of new technologies in the inclusive innovation process and understand the role of the government policy in supporting inclusive innovation projects.

Furthermore, after implementing Learning activity 3, you should be able to identify an example of technology that supported an inclusive/grassroots innovation in your country or region, and analyse internal and external factors that supported and/or hindered the application of this technological solution.

Structure of the learning content

- ▶ Inclusive innovation and business: market opportunities and challenges
- ▶ Local SMEs, large national companies, multinational companies, social business and non-profit organisations as actors of inclusive innovations
- ▶ Technology as an enabler of inclusive innovation: advantages and drawbacks
- ▶ Policy as an enabler of inclusive innovation; drawbacks of policies supporting inclusive innovation



Lecture

Introduction

Traditionally, innovation has responded to the demand of consumers with disposable incomes and has been concentrated in the affluent countries, where the business has also enjoyed access to well-developed infrastructure (Kaplinsky, 2014: 54-55). As a result, innovation has been exclusive rather than inclusive, with almost all of the research and development concentrated in the highly developed countries and some of the less developed Asian countries (notably China). In 2007, the share of Africa in the global Research and Development (R&D) was 0.9%, while the share of Sub-Saharan countries was 0.2% (Arond and Bell, 2009: 19).

According to the latest available data (for 2013), in Sub-Saharan countries, the share of R&D as a percentage of GDP has not changed, even as global R&D has reached a record high of almost US\$ 1.7 trillion. According to the analysis of R&D Magazine Survey, in 2017 total spending by African countries (South Africa excluded) in R&D was \$12.42 billion. In Kenya, 2017 R&D spending stood at the rate of 0.55% of its GDP. This figure was 0.52% for Tanzania and just 0.35% for Uganda (2018 Global R&D Funding Forecast). The primary focus of R&D programs in African countries (except South Africa) is on products and services for improving the state of the local communities.

Innovation is considered as a driver for growth, and it is expected that in the long-run it will improve the welfare of all. In reality, large parts of the population, even in developed countries, are often excluded from enjoying the full benefits of innovation.

The concept of inclusive innovation emerged in response to this reality. It is particularly relevant to less developed countries, where large parts of the population are not just excluded from the benefits of innovation but also from access to basic products and services.

Inclusive innovation and business

Despite the preoccupation of business with profit and shareholder wealth, business can do a lot to address social issues and the needs of the poorer sections of the population – the so-called Bottom of the Pyramid (BoP). In recent years – in the context of prolonged economic crisis and pressing societal challenges – societies and governments are increasingly demanding from companies to assume a greater share of responsibility for social welfare and environmental sustainability. The business has several roles to play – to provide jobs for excluded groups, to address some of the needs of excluded groups through Corporate Social Responsibility and to develop affordable goods and services suitable for the low-income consumers. Inclusive innovation can allow business to successfully play the third role (UNCTAD 2014: 6).

Inclusive innovation presents a number of opportunities for business:

- ▶ The BoP is a sizable market. The aggregated purchasing power of consumers in the low-income segment has a significant potential market. Globally, the BoP market

includes between 4 to 4.5 billion people - the majority of the population in most of the countries in Africa, Asia, Eastern Europe, Latin America, and the Caribbean. The BoP is defined differently for different purposes. For the purpose of these training materials, we will define the BoP as comprising the people that earn around \$ 8 per day in local purchasing power. Even though the purchasing power of one such consumer is very low, the large size of BoP consumers actually adds up to a very substantial purchasing power. In 2007, the World Resources Institute estimated the size of this market segment at the astonishing 5,000 billion dollars. It estimated that the BoP in Africa at that time was almost 500 million people (95% of the population) representing 70% of the total market (Hammond et al., 2007: 9). While there are substantial controversies as to whether or not this is an overestimation and what the real size of the market is, it is nevertheless beyond dispute that it comprises a large segment of the population.

- ▶ The BoP market is growing fast due to the high growth rates in less developed countries. It is also expected that BoP consumers in high-growth markets will move to higher income tiers, so business presence in today's BoP may secure presence in an even more profitable market in the future.
- ▶ The BoP market is characterised by less competition than saturated high-income markets.
- ▶ There are opportunities for cost savings due to lower cost structures, especially if local suppliers and distributors are used (Confederation of Danish Industries, 2007: 20-21). These opportunities have led many to believe that private companies can actually make a profit while serving the BoP (see, for example, Prahalad, 2006).

When considering the potential market for innovation targeted at the BOP segment, it is essential to consider the following issues:

- ▶ BoP consumers are value-conscious. They expect quality products at an affordable price.
- ▶ BoP consumers also are brand-conscious. For them, the brand may represent a better life.
- ▶ Due to distributional inefficiencies, BoP consumers in less developed countries may end up paying more for some products than consumers in affluent countries. A large share of Africa's BoP market is in rural areas, which makes the distribution more problematic.
- ▶ The spread of mobile phones among BoP consumers enhances connectivity and creates business opportunities.
- ▶ BoP consumers are willing to adopt new technologies (Prahalad, 2006: 14-16).

However, the quest to find market opportunity through inclusive innovation also faces a number of challenges. In fact, according to critics, there are actually few examples of profitable business that has marketed socially beneficial products or service targeted at the BoP at a large scale. Some of the widely publicised examples, such as the Grameen Bank and the Aravind Eye Care are actually non-profit organisations (Garrette and Karnani, 2010: 2).

Whether the critics' overall scepticism of the compatibility between market solutions and inclusive innovation is justified or not, businesses targeting the BoP through inclusive innovation are likely to face many challenges:

- ▶ ***The BoP consumers have limited purchasing power, which tends to limit market opportunity.*** While the unmet consumer needs in the BoP segment can create business opportunity, the actual market opportunity has to be judged carefully by determining whether there are consumers willing and able to pay the price of the innovated product.
- ▶ ***Conducting market research is more difficult in the BoP markets than in the affluent markets,*** because the BoP consumers often lack enough information about the potential product. In addition, there are few or no similar products that the entrepreneur can refer to extrapolate by analogy (ibid: 7). Thus, for inclusive innovations to be successful, the entrepreneur may also need extensive market research and an educational campaign for the consumers.
- ▶ ***True affordability of the product is very difficult to achieve while also maintaining profitability.*** If quality is not sacrificed, the product will often not be affordable enough. Innovations that rely on technological inventions are often likely to reduce cost significantly without lowering quality. However, this is very difficult in areas where technology cannot be applied. In such areas, inclusive innovation may call for some difficult cost-quality trade-offs. While such trade-offs may not be unethical, business is threading a fine ethical line, and it may also open it up for criticism. As a general rule of thumb, the reference point for quality should not be the standard prevailing in the affluent markets but the status quo in the BoP market. If innovation can improve the status quo even while failing to meet the quality standards for affluent markets, then it is an effective one. The challenge that business faces is that the appropriate cost-quality trade-off is unlikely to bring significant profit, and it may contradict the brand image of the company (ibid: 11).
- ▶ ***The consumption patterns of the BoP consumers often limit the market for innovative non-basic products.*** Basic goods represent a rather substantial part of BoP spending, and this leaves little opportunity for the consumption of non-basic products.
- ▶ ***Business often needs to rethink completely its business model if it wants to find a market-based solution that would be effective for the BoP segment.*** Many otherwise innovative BoP products and services have failed due to the fallacy that the company can deliver them following the business model it has created in affluent markets.
- ▶ ***BoP markets have weak physical and institutional infrastructure that can complicate business.*** Effective distributional networks to reach the poor sections of the population are generally expensive and complicated to create.

The challenges faced by the business targeting consumers with low-income lead to high transaction costs that can render businesses unprofitable, particularly in the short run. They require inclusive innovation promoters to adopt very long-term frames that complicate business activities.

Business can integrate the BoP in two ways:

- ▶ **As customers** (demand side) by providing products and services that they need;
- ▶ **As employees, suppliers, distributors** (supply side), and thus generate jobs and incomes (Koirala, 2018).

The potential of the BoP market is enormous, and these consumers have many unmet needs. These create opportunities for business. However, the companies differ in their ability to apply strategies to overcome the challenges described above.

Local SMEs

Local SMEs play a major role in Africa's economy. SMEs account for more than 90% of businesses and contribute about 50% to Gross National Product (GDP) (Muriithi, 2017). In the Africa context, local SMEs are the main source of employment and income for millions of people. They have an advantage when it comes to an understanding of the needs of BoP consumers, and they can benefit from being well anchored in the local community. Their core business often involves selling to, and sourcing from, low-income populations. Local SMEs are adept at developing low-cost products and services as well as adequate distribution strategies. On the other hand, SMEs often have little access to adequate human, information and financial resources. Individuals and SMEs with innovative ideas rarely possess the right skills to develop a sophisticated business plan and may find it hard to attract financing in the early stages due to the high risk of a new, unproven business. Related problems occur when the amount of capital needed falls, or when the company lacks collateral. Having little access to technologies and information beyond the local context can hinder a company's capacity for innovation. Operating with a low-profit margin can slow down growth processes and make it difficult to scale up operations.

Example: AgroCenta - a Ghanaian agritech start-up - is founded in 2015 to solve two critical problems of small rural farmers in Ghana: 1) access to market, and 2) access to finance. It provides farmers with two platforms that solve these problems: AgroTrade – a supply chain platform that enables farmers to trade directly, and AgroPay – a financial inclusion platform that farmers can use to access loans.

Source: Nsehe, M. (2018). Ghanaian Agritech Startup Agrocenta Wins \$500,000 Investment in Seedstars World Competition. Forbes. Retrieved on 25.09.2019 from <https://www.forbes.com/sites/mfonobongnsehe/2018/04/13/ghanaian-agritech-startup-agrocenta-wins-500000-investment-in-seedstars-world-competition/#7a57145d7d54>

Large national companies

Large national companies combine a good general understanding of clients' needs, established local supplier networks, widely known brands, and adequate human and financial resources. They are used to conducting business in a difficult environment, and national companies, in particular, are well-connected locally. However, such companies might still need support in increasing the social value and the 'inclusiveness' of their products and services, in finding civil society partners, in further adapting their products and services to customers' needs, and in unlocking additional financing or engaging in the policy dialogue. As the potential partners and suppliers for doing business with the BoP tend to vary from country to country, large national companies or emerging market multinationals will need support to establish strong networks when entering new markets.

Example: Fan Milk Ltd. was founded by a Danish entrepreneur and some other investors in Ghana in 1959. Today Fan Milk is a leading producer of frozen dairy products (like ice cream and yoghurt), juice and juice drinks in West Africa. Fan Milk distributes its products primarily via franchised street vendors on bicycles. The company provides free equipment repair services to all vendors and rewards top sellers. Twice a year, vendors receive training on product handling and hygiene; some qualify for health insurance. One of the reasons for success is the development of sales and distribution systems. The company first introduced bicycle vendors, and now they are experimenting with new vending equipment including motorcycles and solar-powered kiosks. The other reasons for success are: 1) quality (standards are based on Danish dairy traditions) and affordability of products; 2) strong brand (consumers are not asking for ice cream; they are asking for Fan Milk).

Source: FanMilk Group Annual Report. Retrieved on 25.09.2020 from http://fanmilk.com/uploads/media/FanMilkGroup_annualreport_web_01.pdf

Multinational companies

Multinational companies from industrialised countries are well equipped with human and financial resources, as well as R&D capacities. They can make more substantial investments to overcome barriers, adapt products and services, and engage in policy dialogue. However, they are often unfamiliar with the ideas and approaches of inclusive innovation models, and they might question the effectiveness of such models for them, particularly when they are pursuing short-term objectives to maximise shareholder value. The concept of inclusive business often runs counter to established internal processes and standards, such as minimum profit margins or maximum investment horizons. Other challenges include the lack of market information, and poor understanding of the peculiarities of the low-income target market (such as consumption patterns, informal competition, weak supply structures). These larger multinationals also encounter practical challenges in implementation, such as language barriers or cultural differences.

Example: General Electric (GE) Healthcare is a global manufacturer of medical imaging equipment. For GE, the BoP market has double importance – as a business opportunity and as a source of innovations. GE launched its “Healthymagination campaign” intending to deliver

low-cost quality products for the BoP market. They developed MAC 400 - a portable ECG machine for rural clinics. The biggest challenge was to design and produce a quality product at an affordable price and to create new distribution models. As the profit margin was low, the revenue model of GE included high volume.

In the process of manufacturing, GE used local (Indian) partners, suppliers and distributors. GE collaborated with the State Bank of India, which was able to provide credit to rural clinics to buy ECG equipment (with no interest-rate and fast payback time). GE held numerous sales pitches to promote the advantages of the machine and made donations to drive diffusion and acceptance of this innovation.

Source: Aalto University BOP research group. Doing Business at Emerging Markets: Guide for Inclusive Innovation. Retrieved on 01.12.2020 from

<https://wiki.aalto.fi/download/attachments/93562678/Guide%20for%20Inclusive%20Innovation%20in%20BOP%20markets.pdf?version=1&modificationDate=1398693467941&api=v2>

Social business

Commercial business opportunity in the BoP segment should not be confused with social business and social entrepreneurship. There is no unified definition of social enterprise and social business. It was famously defined by the Nobel Prize winner M. Yunus (the founder of Grameen Bank) as a “not-for-profit” and “not-for-loss” business tackling social issues such as poverty. The European Commission defines social enterprise as economic entities in which:

- ▶ Social or societal objectives related to the common good are the reason for the commercial activity, often in the form of social innovation;
- ▶ Profits are mainly reinvested to achieve the set social objectives.

The common characteristic of the different definitions suggests some differences between types of business serving the BoP. Social business does not generate profit for shareholders. Commercial business targeting the BoP would probably try to do it. While both types of business can take up inclusive innovation, the challenges described above are likely to bring more troubles for commercial business than for social business, inasmuch as the latter would be content only to cover its operational costs and can afford to be less concerned about the market opportunity. However, scaling up inclusive innovation is likely to be much more difficult for social business as it would not have the opportunity to attract the capital needed for scaling up unless it generates large profits that it can re-invest (which is unlikely). Thus, social business is more likely to experience the same challenges as non-profit organisations in that it would have to find philanthropists and donors to finance its scaling-up stage. This has led some to suggest that social business is not consistent with the logic of “market solutions” to poverty and exclusion (Garrette and Karnani, 2010: 34). As a result, social business undertaking inclusive innovation appears to need a substantial donor or government support.

Non-profit organisations

The non-profit sector is currently operating in a rapidly changing environment. As social problems are becoming harder to deal with, many traditionally operating non-profits – the

traditional charities – end up being ineffective due to a cumbersome, institutional, donor-dependent and self-interested model of operation. Both recipient social groups and funders expect these organisations to become more entrepreneurial, so that they can achieve the maximal possible results at the lowest possible cost in the shortest possible time. Social innovation and venturing, non-profits adopting commercial strategies, social cooperative enterprises, and community entrepreneurship emerge as the new citizen sector trends of the 21st century. All these forms are often grouped in the umbrella term social entrepreneurship, although they are not social enterprises. These new trends blur traditional boundaries between the public, private and citizen sectors (Dimitrova, 2017: 7). It is important to acknowledge, however, that inclusive innovations can emerge within any of these sectors, and if they receive proper support from the innovation ecosystem, they can be successful or even scaled up.

Enablers of inclusive innovation

It is important to recognise that business alone – whether commercial or social – cannot adequately address the needs of BoP consumers and ensure inclusive social development that is conducive to social peace and sustainability. The business also cannot be expected to take on the challenges of inclusive innovation alone. For inclusive innovation to become widespread and for the BoP market to be better served, it is necessary to utilise the advantages of emerging technologies and to involve multiple actors, including local governmental authorities, NGOs, communities and financial institutions.

Inclusive innovation and technology

The pace of development and adoption of new technologies has accelerated dramatically in recent decades. Technology is constantly changing and with its exponential growth, there is much to look forward to in its role in ending world poverty. Transformative technologies can be one of the factors driving inclusive innovation. Today, technological aids are increasingly employed to improve and amplify the innovation process. Now new social methods, especially crowdsourcing, have fundamentally altered how innovation is achieved and even who does it (Hinchcliffe, 2013).

Computer based technology such as microelectronics, fiber optic, satellite communications, robotics and multimedia are playing a vital role in shaping the world by addressing pressing issues of poverty and health - the polio vaccine; new seed varieties developed by Norman Borlaug, which led to agricultural self-sufficiency through much of Asia; insecticide-treated bed-nets that helped control malaria; antiretroviral drugs that help manage HIV/AIDS.

Technologies also provide new possibilities for economic development by offering solutions that are **better** (they solve problems more effectively and efficiently), **cheaper** (a significant advance in technology can significantly reduce costs, for example in telecommunications), **faster, scalable** (technologies can offer a small-scale solution that can be rapidly scaled up to meet consumers' needs), and **easy to use** (technologies have rendered previously complex, laborious and time-consuming tasks much easier to perform by a variety of users).

“The effect of the Internet in broadening and enhancing access to information and communication may be greatest in poorer nations,” according to Harvard University. If developing countries gain more access to the Internet, it can be a driving force to lift families out of poverty. The knowledge provided through the Internet can maintain health, educate families, and open doors for boys and girls who are unable to attend school.

High technologies like mobile phones can also help grassroots innovations to succeed. The use of mobile phone technology has proven important in assisting people communicate with each other, access market information, sell products across geographic areas, reach new consumers, enter mobile payment systems, reduce fraud and crime, and empower women and the disadvantaged. Mobile payment systems represent a way to reduce the cost of financial transactions and thereby help promote entrepreneurship. If people can transfer funds quickly and efficiently, it becomes easier for small and medium-sized businesses to sell their products. This improves the efficiency of the marketplace and removes barriers to growth (Chetty, 2013). The online lending systems are handy in helping people apply and get loans quickly within a short time (OECD, 2015).

Wireless communications broaden access to information, improve capital access, overcome geographic limitations and expand market access. The rise of the 5G network is increasing our ability to move, manipulate, and analyse data across wireless platforms. As 5G rolls out more fully, it shall foster the development of more solutions to existing problems. 5G will help emerging markets realize the same speed of business as their mature counterparts (Rayome, 2019).

Africa’s large segment of young people are coming of age in a time of social media and accelerating the adoption of mobile-first lifestyles. They are shifting the conversation from analogue and local to digital and “glocal” (local conversations broadcast globally via digital media). Conversations are fast moving from under trees and community halls to global platforms like Facebook, Whatsup, Twitter, email lists and blogs. There are now more channels of communications available to reach many people within shortest time possible (Ruge, 2015). Social media has made it possible for people to network across borders. Networking is an important step of grassroot innovations for upscaling and transcending. The success of grassroot innovations largely depends on pre-existing networks in context, place, scale, space, and socio-technical change (Feola & Nunes, 2014).

The new concept of artificial intelligence is growing up fast, and it is gaining much popularity. The reason behind is that this might bring a whole new era of revolution. No humans would have to think anymore because the possibilities are that an AI System would be able to think about how to improve it. This would give a break to the human generation and probably one of the greatest favours of modern technology on us. AI is significantly affecting the way customers interact with business via intelligent and bots. These tools are becoming increasingly commoditized and integrated into daily work. AI impacts on all sectors from retail, healthcare, finance, education, agriculture among others. AI improves data security, decision-making, speed and accuracy (Rayome, 2019).

The use of drones and drone Ops centres makes it possible to access areas which seem inaccessible, such as areas of terrain that are risky or difficult to traverse. Internet of things (IoT) is driving business by providing the data needed to improve marketing, increase sales and decrease cost. 3D printing offers a solution for the low volume manufacturing of complex parts as well as fast local production of difficult to find products. As more affordable products become available, more opportunities arise (Rayome, 2019). These are other technologies, which have made it easy for innovations to emerge and see the light at grassroot level.

Future high-tech breakthroughs can lead to inclusive innovation through the third mechanism. The LIGTT, Institute for Globally Transformative Technologies, Lawrence Berkeley National Lab (2014) issued a report listing the 50 potential technological breakthroughs that can help tackle pressing social issues related to poverty. They cluster in 9 areas:

- ▶ Global health
- ▶ Food security and agricultural development
- ▶ Education
- ▶ Human rights
- ▶ Gender equity
- ▶ Water
- ▶ Access to electricity
- ▶ Digital inclusion
- ▶ Resilience against climate change and environmental damage

The potential breakthroughs include, for example, a new method for desalination of water; 'smart' electronic textbooks, which dynamically adapt content for different skill levels, languages and other user-specific needs; biometric ID systems; affordable smartphones that support full-fledged Internet services; new methods to produce fertilizers; a complete cure drug for malaria; malaria and HIV vaccines, etc. (for a full list, read the report).

These breakthroughs, however, have not yet happened, at least not in the right ratio of cost and effectiveness. This is because they are irrelevant in industrialised countries, and business cannot profit enough by developing them for less developed country markets. As the Institute admits, they

“have to be dramatically different from existing technologies in industrialised settings: available at a fraction of the cost, requiring only a fraction of the energy, significantly less reliant on technical skills to operate, not needing elaborate infrastructure, and being generally robust and maintenance-free” (ibid: 1).

Inclusive innovation can be greatly successful, if it focuses on or uses appropriate technology. An additional challenge for innovators is to “contextualise” technologies, i.e. to make them useful to the specific place and context, concrete needs of the target population, the market dynamics and the institutional deployment mechanisms.

Appropriate technology for inclusive innovation tends to be more labour-intensive and small in scale, as well as to use more local materials and products. Countries are encouraged to use the technologies that are better suited for their context, reflecting local production factors, skills and endowments (OECD, 2013).

Information and communication technologies (ICTs) are one of the most transformative innovations of the recent years. For example, a variety of ICT-based applications are used to provide services to the BoP market:

- ▶ **Support for agriculture:** For example, Kenya Agricultural Commodity Exchange (KACE) provides daily market information on commodity prices, offers and bids to match farm outputs with demand from wholesalers. It thus facilitates links between farmers and buyers. KACE has invested heavily in modern ICT in order to provide farmers with reliable low-cost market information and to enhance the bargaining power of the farmer for a better price in the market (Kundu & Mukhebi).
- ▶ **Health services:** Project Masiluleke, South Africa leads to a significant increase in the number of people who have been tested for HIV/AIDS and have received information on prevention and follow-up treatment. The innovation uses mobile phone technology to inform and provide support services to encourage people to access HIV testing and treatment. The mobile technology increases the reach of the programme much more than using the traditional advertising channels like TV and radio: sends out about 1 million messages a day and covers nearly all county mobile phone users in a year. (Craighall, 2010).
- ▶ **Educational tools:** The Virtual University of Pakistan is information-technology based university offering more than 20 programmes. It uses the national telecommunications infrastructure and delivers lectures through satellite broadcast TV channels with interaction provided over the Internet (Official website of the Virtual University of Pakistan).
- ▶ **Mobile banking:** The most popular example of mobile banking is M-PESA in Kenya. This mobile payment service was launched in 2007 by Safaricom and became an instant success, with 2.37 million subscribers in its first year.

Another technology used for inclusive innovation is **crowdsourcing**. For example, Ushahidi is an open-source platform for crisis response, election monitoring and human rights reporting. It aims to help people at the BoP raise their voices and get the help they needed. The platform started as an effort to secure more transparency in Kenya's elections in 2008, and has now expanded worldwide with more than 150 000 deployments in 160 countries (Ushahidi Impact Report, 2018; Doran, 2018).

Drawbacks of technology as an enabler of inclusive innovation

Though technology is an excellent enabler of inclusive innovation, there are serious challenges when putting it to use. Grassroots organizations struggle between recognizing appropriate technology supporting grassroots ingenuity and context sensitive solutions. Moreover, they have a risky reliance on external support (Smith et al., 2014).

Technology environment in developing countries suffers from poor business models, political instability and governance conditions, low education levels because of lack of world-class research universities, undeveloped physical infrastructure and lack of solid technology based on trained human resources (Ali, Ullah & Khan, 2009). In developing countries, the literacy levels of the rural communities are often low. As a result, integrating technology into their everyday lives gets difficult. Furthermore, Internet and mobile connectivity in many rural areas is still a major problem. This hinders the connection of the community with the larger world.

Additionally, these areas also suffer from excessive power shortages, making it difficult to use or even keep the equipment charged. Thirdly, finances of the community towards purchasing these technologies are a matter of concern. Promoting quality and affordable technology products and services thus becomes very important. Another challenge is developing technologies, which are based on the needs and demands of the community. Understanding user behaviour and acceptance is highly important and most of the technology firms put a limited focus on the same.

Policy

The OECD defines inclusive innovation as policies that help “disadvantaged individuals to engage in innovation activities”. Inclusive innovation policies “aim to remove barriers to the participation of individuals, social groups, firms, sectors and regions that are underrepresented in innovation activities in order to ensure that all segments of society have the capacities and opportunities to successfully participate in and benefit from innovation” (Planes-Satorra and Paunov, 2017: 6). Government policy has an important role to play in creating an enabling institutional environment for inclusive innovation.

There are several reasons to consider introducing policies that support inclusive innovations:

- ▶ There is a high chance for market failure in the BoP sector. Combinations of factors make inclusive innovation risky.
- ▶ Much of the inclusive innovations are public services (health, transport, education) from which the BoP are excluded. As a critical provider or regulator of these services, the government is the most relevant stakeholder in related innovation activities.
- ▶ By supporting inclusive innovation, the government has the opportunity to empower lower-income groups and help them move out of poverty.
- ▶ Bottom-up innovations can serve growth objectives while not requiring much public funding.

Adequate policy responses and policy instruments from the side of the government include (OECD, 2015):

- ▶ ***Support for cooperation efforts both at national and international levels***

The government has to ensure cooperation between different institutions and agencies in charge of health, education, infrastructure, and investments, with the ultimate goal of poverty alleviation. Coordinating committees and jointly shared budgets for innovation projects are

the two mechanisms that can ensure policy effectiveness. Efficient implementation of this policy requires not only coordination at the national level but also at the regional and local level. The government should also consider providing opportunities for bottom-up local innovation initiatives that seek to implement national policy guidelines. Effective coordination requires involving lower-income and excluded groups in the innovation process to reduce the risk of failure and low product uptake. Support by local communities is critical to an innovation's success. Coordination efforts should extend to the excluded group themselves, as well as to NGOs, and other development agencies, financial institutions, businesses, universities, and public research institutions. Public-private partnerships are the means for better coordination, facilitation, and commercialisation of inclusive innovations. The government may partner with citizens to involve them in the innovation process and delivery of public services.

To support inclusive innovation, the government may consult international institutions, which have knowledge and experience in this type of innovations. International cooperation ensures using the best practices in this policy domain. One example of an international network created to improve the livelihood of the poorest through science and technology is the Global Research Alliance (GRA). The network includes nine research organisations from the USA, India, South Africa, Australia, Denmark, Germany, Netherlands, Finland and Malaysia. GRA works with local organisations ensuring implementation of appropriate inclusive innovation in areas such as water supply, health services, energy and food.

▶ ***Financing for innovators and entrepreneurs***

One of the barriers to inclusive innovation is the lack of financial support. It requires alternative financing mechanisms, and the government may improve financial opportunities by launching specific inclusive innovation funds. Other financial incentives are reduced interest credit, feed-in tariffs, tax reductions for businesses serving BOP, public-private partnerships, and low-interest credits for consumers. For example, the Inclusive Innovation Fund in India aims at supporting and investing in projects of Indian entrepreneurs that focus on the problems of the poor and inclusive growth.

▶ ***Enabling better access to knowledge***

Providing access to knowledge is a powerful instrument for the government to promote inclusive innovations. The government may provide incentives for universities and research institutions to support inclusive and grassroots innovations. Another way to support this policy is to build a connection between universities and people at the grassroots level, between innovators and companies, and between people in local communities. One of the main tasks of government is to raise the educational levels of people in lower-income groups that will create many opportunities for facilitating the process of innovation.

▶ ***Market and product regulations***

Market regulations are an essential condition for inclusive innovation. Innovations can be effectively stimulated by strengthening competition. The instruments for this are lower barriers to trade, reduced administrative burdens, and liberalisation of services. Product regulation that is too restrictive can impede innovation. Setting standards is a slow and

bureaucratic process. However, the role of government in this process is often limited because setting standards is the responsibility of industrial associations, and some standards are set at the international level.

▶ ***Intellectual property rights (IPR)***

Despite the critical role that intellectual property rights play in traditional sectors, in the informal economy they are rarely used. Intellectual property protection, such as geographical indications, can increase the reputation of local products (e.g. agricultural products and handicrafts). IP protection might generate resources for regional development and help integrate previously excluded groups in innovation systems (OECD, 2015).

▶ ***Prizes and competitions***

The government can use such instruments (prizes, awards and competitions) to draw attention to inclusive innovation. Competitions can be held at local, regional, national and even international level. While most of these instruments can be linked to financial support for social entrepreneurs, they also help raise awareness of inclusive innovation and improving the visibility of social entrepreneurs.

Drawbacks of policies supporting inclusive innovation

Administrative policies in support of inclusive innovation may encounter difficulties that are similar to the problems related to innovation policy in general – e.g. difficulties in the identification of the needs of the target group, in setting policy objectives, problems with institutional barriers, and difficulties in the evaluation of policy impacts. In addition, policy programs for inclusive innovation face specific problems. Planes-Satorra and Paunov (2017) named four of them: low levels of awareness about the policy programs, problems of reaching the target groups, insufficient capabilities of the target group to undertake activities; and low level of expertise among public sector officials and experts.



Learning activity 3:

Find an example of inclusive technological innovation or technology that supported development and spread of inclusive/grassroots innovation in your country or region. Provide general information about this technological solution and develop a SWOT analysis for it using the chart below.

INTERNAL FACTORS	
- What internal factors enabled (strengths) or hindered (weaknesses) the inception, development and diffusion of this solution (e.g. company's human, physical, financial and other resources)? <i>and/or</i> - What are the benefits (strengths) of the solution itself (e.g. added value for customers/ users); what are its limitations (weaknesses)?	
Strengths (+)	Weaknesses (-)
-	-
-	-
-	-
-	-
-	-
EXTERNAL FACTORS	
- What external factors enabled (opportunities) or hindered (threats) the inception, development and diffusion of this solution (e.g. policy frameworks, regulatory environment, funding, demographics, relationships with partners, economic and market trends)? <i>and/or</i> - What factors enabled (opportunities) or hindered (threats) the use/ application of this solution in the given context?	
Opportunities (+)	Threats (-)
-	-
-	-
-	-
-	-

Further reading

<https://www.idrc.ca/en/project/pathways-inclusive-development-through-innovation-technology-and-structural-change>

International Development Research Centre (IDRC) supports research in developing countries to create real and lasting change. This knowledge can be used as a tool for addressing pressing global challenges.

<https://www.innovationpolicyplatform.org/inclusive-innovation-development>

The Innovation Policy Platform (IPP) developed by the Organisation for Economic Co-operation and Development (OECD) and the World Bank is a web-based interactive space that provides easy access to knowledge, learning resources, indicators and communities of practice on the design, implementation, and evaluation of innovation policies.

http://endeava.org/wp-content/uploads/2014/11/Endeva_IBPolicies_2013-2.pdf

Tewes-Gratl, Ch. et al. (2013). Inclusive Business Policies: How Governments can Engage Companies in Meeting Development Goals. ENDEVA: Enterprise solutions for development.

<https://nextbillion.net/future-african-smes/>

NextBillion is a community of business leaders, social entrepreneurs, NGO managers, policy makers, academics and others exploring the connection between development and enterprise.

<https://www.transformative-technologies.com/>

Transformative Technologies is introducing advanced Western technologies into emerging and frontier markets with a focus on sub-Saharan Africa. The web page presents examples of transformative technologies in areas of water purification and exploration, mobile health, road constructions, and lighting systems.

<https://businessfightspoverty.org/activities/?category=technology>

Business Fights Poverty is a community that connects practitioners and experts across sectors, organisations and geographies. The website provides the latest insights, trends and practical examples from members and Content Partners.

http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di_wp61.pdf

This paper outlines a systemic approach that explains the rationale, objectives, goals, instruments and governance, which will help governments support the expansion of inclusive innovation.

<https://www.oecd.org/mcm/documents/C-MIN-2018-5-EN.pdf>

The Framework for Policy Action on Inclusive Growth aims to help governments to sustain and ensure a more equitable distribution of benefits from economic growth, which is supported by a dashboard of indicators. It consolidates key policy recommendations.

<https://grassrootsinnovations.org/tag/policy/>

This website presents the latest news and updates from a series of research projects on grassroots innovations, including sustainable energy and complementary currencies, based at the University of East Anglia and University of Sussex.

Summary of key points

- ▶ The BoP are a sizable and fast-growing market by virtue of their large number. The BoP market stands out for less stiff competition and possibilities for cost reduction. This creates opportunities for market solutions in meeting the needs of the poor, and companies that approach the task well can build successful business models in this sector. They need to aim at making their products affordable for low-income consumers and accessible to them despite distributional difficulties. Inclusive innovation is what can enable companies to realize such business models.
- ▶ The BoP market creates many challenges to business that should be carefully navigated: very low purchasing power, lack of information, limited infrastructure and distribution challenges.
- ▶ All types of business - local SMEs, large national companies and multinational companies have the necessary capacity to engage in inclusive innovation. However, all of them also need support in order to ensure that such innovation is viable on the market.

- ▶ Social business is well adapted to take up inclusive innovation and the challenges described above are likely to be less of a hurdle, inasmuch as social enterprises would be content to only cover their operational costs and can afford to be less concerned about market opportunity. However, since social business does not generate stakeholder wealth, scaling up inclusive innovation is likely to be much more difficult for it as it would have difficulties finding capital for scaling up and would need to rely on philanthropist investors and donors to finance its scaling-up stage.
- ▶ Business alone cannot be expected to deliver adequate inclusive and social innovation that can ensure inclusive economic development, social peace and sustainability. The enabling factors of technological development and policy should be added to the mix, and inclusive innovation should be developed within a complex and effective innovation ecosystem.
- ▶ Many technologies offer solutions that are better, cheaper, faster, scalable, and easy to use. These characteristics open the possibility of application of technology in the inclusive innovation process.
- ▶ Government policy can significantly affect inclusive innovation. Effective policy responses include proper cooperation initiatives that can mobilize a variety of actors in support of inclusive innovation projects, international cooperation, provision of financing for innovators and entrepreneurs, enabling better access to knowledge, suitable market and product regulations, support for IPR, competitions and prizes.



Self-assessment test

Please, select all response options that you believe are correct. More than one answer is possible.

Q1: Which of following are advantages of SMEs in supporting inclusive innovation?

1. Understanding of people's need in local communities
2. Adequate distribution system
3. Access to technologies
4. Access to financing
5. Operating with low-profit margin

Q2: Technologies have a direct effect on productivity in several ways:

1. By increasing the value added per worker
2. By getting faster results
3. By solving problems more effectively and efficiently
4. By reducing costs
5. All is correct

Q3: Which of the following are NOT characteristics of BoP consumers?

1. They expect a lower quality product.
2. They expect quality products at an affordable price.
3. BoP consumers are less willing to adopt new technologies.
4. The BoP consumers are brand-conscious.
5. The BoP consumers are value-conscious.

Q4: Which of the following are challenges for business when trying to serve the BoP market?

1. Small market size
2. Lack of market information
3. Difficulties to achieve low prices
4. Distribution problems
5. Declining market

Q5: Please, mark all obstacles for inclusive innovations that require special policy attention

1. Knowledge and information of consumer needs
2. Access to finance
3. Low cost for providing solutions
4. Market conditions
5. Intellectual property rights

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Glossary

Appropriate technology	<i>The technology, which best makes use of a country's resources and helps the country achieve its development objectives.</i>
Industrial Inclusiveness	<i>Innovation policies for industrial inclusiveness aim to support innovation activities in less innovative firms (including micro-entrepreneurs, small and medium-sized enterprises and start-ups) and traditional sectors. The focus is on strengthening their innovation capacities, as well as on building the adequate business environment for innovation.</i>
Information and Communication Technology (ICT)	<i>ICT includes all technologies for the communication of information. It encompasses any medium to record information (e.g. magnetic disk/ tape, optical disks - CD/DVD, flash memory etc.), as well as technology for broadcasting information - radio, television; any technology for communicating through voice and sound or images - microphone, camera, loudspeaker, telephone to cellular phones.</i>
Intellectual property rights	<i>A right that is had by a person or by a company to have exclusive rights to use its own plans, ideas, or other intangible assets without the worry of competition, at least for a specific period of time. These rights can include copyrights, patents, trademarks, and trade secrets.</i>
Policy instruments	<i>Interventions made by government/public authorities in local, national or international economies, intended to achieve outcomes that conform to the objectives of public policy.</i>
SMEs	<i>The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises that employ fewer than 250 persons and have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.</i>
Social business	<i>A business whose purpose is to solve social problems in a financially sustainable way.</i>
Social inclusiveness	<i>Innovation policies for social inclusiveness aim to include in innovation activities individuals and groups that do not usually participate in innovation, so as to broaden the group of innovators.</i>
Territorial inclusiveness	<i>Innovation policies for territorial inclusiveness target lagging and less innovative regions with the aim of narrowing their performance gap (as compared to leading innovation regions). They foster the innovation capacity of individuals and firms located in peripheral regions, as well as in disadvantaged neighbourhoods within large urban areas.</i>
Transformative technology	<i>Hardware- and software-based tools designed to enhance human psychological well-being, cognitive function and physical capabilities.</i>

Lecture 4.

Business model innovations suitable for inclusive innovation

Annotation

A business model is a sustainable way of doing business. This chapter focuses on the basic concept of the business model and business models suitable for inclusive innovation. Inclusive business models include the poor into a company's supply chain as employees, producers or business owners or develop affordable goods and services for the BoP consumers. The chapter presents a business model innovation, proposed by Angeli and Jaiswal, by describing its four dimensions: value creation, value appropriation, value proposition, and value discovery. Finally, the Business Model Canvas is introduced as a tool for developing and communicating inclusive/ grassroots innovation ideas. The tool is described in its nine elements: Customer segments, Value proposition, Channels, Customer relationships, Revenue streams, Key resources, Key activities, Key partners, and Cost structure. The advantages and drawbacks of the Business Model Canvas are also explained.

Key words

Business model, Business model innovation, Business model canvas

Learning objective

After engaging with the learning materials in this lecture, you should understand what a business model is and how it can be applicable for inclusive innovation. You should get familiar with the business model innovation of Angeli and Jaiswal, as well as the Business Model Canvas tool.

Furthermore, after implementing Learning activity 4, you should be able to apply the Business Model Canvas to analyse cases of inclusive innovation.

Structure of the learning content

- ▶ Definitions of business model and business model innovation
- ▶ Types and examples of business model innovations suitable for inclusive innovation
- ▶ Tools for business model innovation: Business Model Canvas



Lecture

Business model and business model innovation

There is no generally accepted definition of the business model. Osterwalder and Pigneur define a business model as “*how an organisation creates, delivers and captures values*” (Osterwalder and Pigneur, 2010: 14). According to Amit and Zott, a business model is “... *a structural template of how a focal firm transacts with customers, partners, and vendors; that is, how it chooses to connect with factor and product markets*” (Amit and Zott, 2001: 511). The business model is, therefore, the platform that connects resources, processes and the supply of a service, ultimately leading to profitability in the long run. A well-constructed business model focuses attention on the activities that add value to consumers. It answers the following questions:

- ▶ What is the problem that our product/service is trying to solve? People do not need a new product; they need a new way to solve a problem. Unserved or underserved markets provide the best opportunity for a successive business model.
- ▶ Who needs the problem solved - who will be the customer?
- ▶ How will we solve this problem better, cheaper, faster, or differently than others?
- ▶ What is the value proposition?
- ▶ What is the revenue model? How will we charge for the product?
- ▶ What partners or other complementary products should be used? (Muehlhausen, 2013)

A good business model solves problems for customers creatively and generates profit. For inclusive innovation, however, we need a business model that puts sustainability in the centre. Business model innovation is the process of fundamentally rethinking the business model around a clear, but not always visible, customer need, then realigning the key resources, processes and profit formula with this new value proposition. In their study, Amit and Zott (2012) argue that competitive advantage can be achieved through the mechanisms of creating novelty, lock-in, complementarity or efficiency and that business model innovation can occur in several ways – but typically in three categories:

- ▶ By adding novel activities;
- ▶ By linking activities in novel ways;
- ▶ By changing one or more parties that perform any of the activities.

The business model innovation is needed especially in situations such as reaching a new market and trying to grow. Business model innovation finds ways to overcome challenges at the BoP market: difficult market conditions, lack of or limited market information, ineffective regulatory environments, infrastructure problems, missing knowledge and skills, high cost and restricted access to financing (UNDP, 2008: 5).

Business model innovation suitable for inclusive innovation

In order to be successful, a business model for inclusive innovation must cover the four “A” requirements:

- ▶ *Acceptability* – the product must be adapted to the needs of the BoP consumers

- ▶ *Availability* – the product is accessible to poor people
- ▶ *Awareness* – BoP consumers are aware of the product, solution, brand
- ▶ *Affordability* – the price must be affordable for the people (Anderson and Billou, 2007).

Mathur et al. (2016) suggest that a business model for BoP needs to have a social profit component in addition to the others that conventional business models have.

Inclusive business models expand access to goods, services, and livelihood opportunities for those at the base of the pyramid in commercially viable, scalable ways (Jenkins et al., 2011). Business models suitable for inclusive innovations are formulated as suitable business solutions that 1) increase access to products that are both in line with the BoP customers' needs and at an affordable price; 2) create new sources of income for BoP consumers as suppliers, employees, or entrepreneurs. These business models may involve low-income people through different parts of the company's value chain: supply, production, distribution and marketing. By focusing on business viability, these new models can be increased in scale.

Depending on the role of the poor in a business model, three types of business models can be distinguished (Gradl, and Knobloch, 2010):

- ▶ ***The poor as a supplier*** (for example, Bionexx, Malaria medicine production in Madagascar). The benefits for a company using this business model are cost reduction, better supply chain, and product design. The benefits for the poor as suppliers are “increased incomes, building skills, and empowering communities” (Gradl, and Knobloch, 2010: 10);
- ▶ ***The poor as a customer*** (for example, M-PESA – mobile banking service in Kenya). Although M-PESA does not target exclusively the poor population (their services are used by rich people too), including BoP customers in their target group helps the company increase revenue, on the hand, and allows BoP customers to get more choice, better price (cost savings) and better quality of life, on the other;
- ▶ ***The poor as an entrepreneur*** (for example, Honeycare – honey production farmers in Kenya). For the poor, this leads to more income opportunities, development of skills and empowering.

Angeli and Jaiswal (2016) reviewed practices in delivering health care services at the BoP. Based on the findings of six case studies, they propose business model innovations that are suitable for inclusive innovation:

▶ ***Co-creation of value involving consumers***

The fundamental first step when formulating a value proposition is to ensure that consumers are aware of their needs and recognise the value of the proposed solution (or product). A successful business model can be built after careful research and understanding the values that consumer could attach to the solution. However, directly involving customers in the very formulation of the value proposition can be even more successful in creating awareness and improving consumers' understanding that product (or solution) is available at an affordable price. The challenge is to organise the co-creation process, which may entail involving an

intermediary. However, there are examples when the Internet was used to get customers' input into the design of products.

Example: In India, the lack of sanitation has a huge impact on human health. A very small proportion of the cities in India have sewer systems. Sulabh International was founded in 1970 and has worked to provide low-cost, safe sanitation technology. Sulabh International offers two solutions: pay-per-use public toilets and residential toilets. Sulabh's goals include the provision of accessible, affordable and easily available latrines and means to maintain them. The achievement of these goals involves changes in the attitudes and personal habits of the people. One of the problems is that people are less likely to feel social responsibility for environmental conditions in the cities. Ensuring community participation has been central to Sulabh's success. Sulabh has laid special emphasis on health education and creating awareness in the community about sanitation and environment. It has set up primary health care centres. As a result, considerable awareness has been created about the importance of personal hygiene and sanitation. This has helped in bringing about lasting change in the values and hygiene habits of the urban poor and helped them adopt cleanliness and sanitation as a part of their daily routine.

Source: Official website of Sulabh International Social Service Organisation. Accessed on 01.12.2019. URL: <https://www.sulabhinternational.org/>

► *Community engagement*

The traditional business model focuses on the individual consumer. However, for inclusive innovation, it may be important that the business model focuses on communities. The reasons for this focus change can be the differences (cultural, psychological, linguistic, media access, skills, and beliefs) across communities. Informal reference groups influence the behaviour of some communities and relations with the community are important determinants of individual consumer behaviour. The trust created through community engagement is essential for some products and some markets for successful acceptance of proposed solutions (or products). By understanding the relevance of community for the individual and his or her behaviour, it is possible to develop a successful business model, which increase the awareness and trust toward the proposed solution and enhance the acceptance of the solution.

Example: Aravind Eye Care System (AECS) is a private non-profit hospital system, which operates in India since 1976. AECS design appropriate processes that enable it to provide high quality and affordable eye care services to the patients. The findings from research conducted by AECS show that a very small proportion (15%) of people who need treatment actually visit a hospital to receive treatment. The reasons that people mention are fear from surgery, low income and inability to travel to the hospital. Community outreach is a cornerstone of AECS work, and this approach encourages the active involvement of the community in providing eye care services.

Source: Official website of Aravind Eye Care System. Accessed on 01.12.2019. URL: <https://aravind.org/>

► **Continuous monitoring of customer needs**

Development of low-cost solution needs continuous research and understanding of consumers and their requirements. The goal of this process is to collect relevant insights about the extent of use of products, problems and difficulties faced in using them, how the products are being used, and the overall experience of the consumers. The continuous engagement with the customers will help to develop solutions that are affordable, suitable for local needs, and can be used regularly.

Example: Research of consumer preferences is at the heart of the introduction of Mac 400 (ultra-portable electrocardiogram (ECG)) by GE in India. The MAC 400 is battery-operated and intended to be easy to use. The market for this product consists of doctors and small clinics in rural areas in India - medical specialists who cannot afford more expensive ECG because their patients are from BoP. The whole process of design and manufacturing is done in India.

Source: Aalto University BOP research group. Doing Business at Emerging Markets: Guide for Inclusive Innovation. Retrieved on 01.12.2020 from

<https://wiki.aalto.fi/download/attachments/93562678/Guide%20for%20Inclusive%20Innovation%20in%20BOP%20markets.pdf?version=1&modificationDate=1398693467941&api=v2>

► **Technological innovation**

The introduction of new technological solutions is a fundamental way to lower production and delivery costs. New products can also replace some crucial components with indigenously produced similar components. One of the rapidly evolving technologies for household use is batteries and power packs. In developing countries, many systems have emerged built around batteries of different kinds, initially powered by renewable energy and pay-as-you-go models, which lease batteries and related equipment, followed by full ownership after making payments over several years.

Example: M-KOPA Solar in Kenya sells at an affordable price battery-based solar household systems. The system includes solar panels with options for led lights, phone chargers, and television.

Source: M-KOPA Solar official website. Accessed on 29.11.2020. URL: <https://m-kopa.com/?lang=sw>

► **Focus on cost reduction**

Business model innovation can use innovative solutions that enable the supply of products or services with a lower price due to the use of low-cost human or other resources. This can be achieved by relocating production tasks to the BoP communities where labour costs are likely to be lower. Business models for inclusive innovation operate with low margin and should utilise every possible way to reduce costs. Economies of scale can be an important mechanism for cost reduction.

Example: Vaatsalya Healthcare is a network of hospitals providing affordable, accessible and

appropriate primary and secondary healthcare services in rural India. Their cost reduction strategy includes engaging locals as nurses and paramedical staff.

Source: International Partnership for Innovative Healthcare Delivery. (2013). Vaatsalya. Retrieved on 05.12.2019 from <https://www.innovationsinhealthcare.org/Vaatsalya%20profile%202013.pdf>

► **Cross-subsidisation**

A cross-subsidisation model utilises a mechanism wherein affluent consumers in one segment pay a relatively higher price for a product than the consumers (with low income) in other market segments who pay a lower price for the same product through a price discrimination approach.

Example: An essential part of the business model of Aravind Eye Care System (AECS) is cross-subsidisation. Patients that are more affluent pay substantial amounts for an eye operation. This allows performing about 2/3 of surgeries at a very low or no cost for patients from BoP households. Notably, the quality of operations does not vary depending on the rate and is consistently kept very high.

Source: Official website of Aravind Eye Care System. Accessed on 01.12.2019. URL: <https://aravind.org/>

Angeli and Jaiswal (2016) have proposed a new conceptualisation of business models in the context of inclusive health care at the BoP - a business model innovation with four dimensions. The first one is the process of **value creation**. This process recombines internal and external resource to create value for customers. The second dimension is called **value appropriation**. In the case of inclusive innovation, the business model innovation should be sensitive to the affordability of prices to BoP consumers. Business models for inclusive innovation rely on innovative ways to lower costs. The third dimension is the **value proposition**. This dimension means that the proposed service or product must adequately respond to identified customers' needs. Formulation of the value proposition is the end point of a much longer process. One of the challenges for inclusive innovation appears due to the lack of sufficient awareness on behalf of the consumers. An additional dimension of business models suitable for inclusive innovation is **value discovery**. This process is fundamental for the effective and efficient delivery of the solution through co-creation and community engagement.

In sum, business model innovation for inclusive innovation is centred on customer engagement and community involvement. It promotes early and deep involvement of consumers in the design of a solution or product. The goal of this process is to develop low-cost solutions through economies of scale and cross-subsidisation.

Tools for business model innovation

In the field of business development, there are tools for identifying new business ideas. The most established tool is the *Business Model Canvas (BMC)* proposed by Osterwalder. This tool was created to design, analyse, and define value propositions and key principles of business by an organisation. The business model canvas is a tool to understand a business model in a

structured way. It is a tool that maps out the various key components of an organisation and shows how they work together. The BMC shows the layout of the business and outlines nine segments, which form the building blocks for the business model, as shown in Figure 4.1 (Osterwalder and Pigneur, 2010).

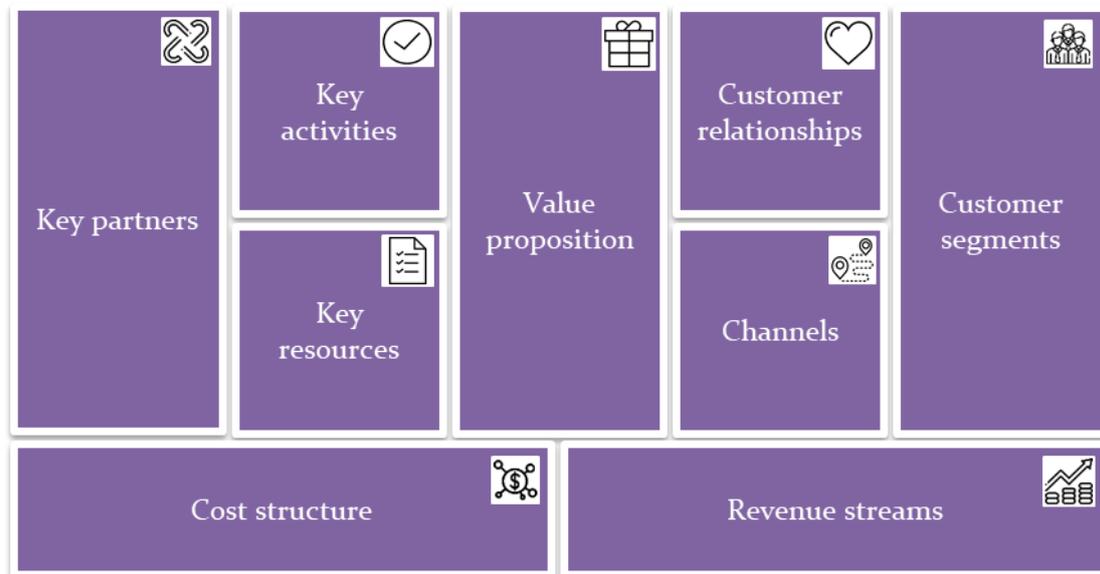


Figure 4.1 Business Model Canvas: structure and template

The BMC illustrates the value exchange between the business and its customers/ clients. The canvas can be divided into two areas: the right side focused on the customer and the left side focused on the business itself (i.e. on what a business needs to have or to do to deliver the “right side”). Both sides meet the value proposition.

The Business Model Canvas should be filled in from right to left, i.e. starting from the most important areas of (almost) any business – Customer segments and Value proposition. For the purpose of this lecture, we will illustrate the BMC with the case of M-PESA - the mobile banking and payment system in Kenya launched in 2007 by Safaricom.

Right side of the BMC

- ▶ **Customer Segments:** this block defines different groups of people or organisations that the enterprise aims to reach and serve. It should answer such questions as: *Who is the audience the business wants to serve? What are the needs and wants of this audience?* For a start-up, it is better to start with a narrow customer segment and then, when the business starts generating profit, expand it. Safaricom’s target market was urban male migrant workers sending money home.
- ▶ **Value Proposition:** this block defines the value the business brings to customers. It aims to give answer to such questions as: *What benefits does the business offer to its customers? How does it improve their lives?* Values may be quantitative (e.g. price, speed of service) or qualitative (e.g. design, customer experience). M-PESA proposes the customers who do not have access to a bank account but have a mobile phone to send and receive money, to make bill payments, or to deposit cash.

- ▶ **Channels:** this block describes how an organisation communicates with and reaches its customers or different market segments to deliver the Value proposition. Channels are customer touch points that play an essential role in the creation of customer experience. Channels serve several functions, including: raising awareness among customers about products or services; allowing customers to purchase products and services; and providing customer support. M-PESA uses such channels as website, mobile phones, stores and agents to distribute the solution and to create the customer experience.
- ▶ **Customer Relationships:** this block describes the types of relationships a company establishes with specific customer or customers in different market segments. It seeks the answer to the question: *How does the business create and retain customers?* To create awareness among customers, M-PESA uses TV, outdoor and radio advertisements. Agents are used to promote, educate and convince the customers to use the service.
- ▶ **Revenue Streams:** this block represents the cash flow an organisation generates from customer segments. It responds to the questions: *Who will pay and how will the business earn revenue?* In the case of M-PESA, the customer pays a fee for a transaction based on its amount.

Left side of the BMC

- ▶ **Key Resources:** this block describes the most valuable assets required to make a business model work. Key resources can be physical, financial, intellectual, or human. They can be owned or leased by the company or acquired from key partners. The key resources of M-PESA are mobile network, IT operations, partnership, R&D.
- ▶ **Key Activities:** this block describes the most important things a company must do to make business model work. The categories of key activities include production, problem-solving, platform/network. For M-PESA, the key activities are network (ecosystem) development, mobile platform operations, maintenance of platform, new service development.
- ▶ **Key Partners:** this block describes the network of suppliers and partners that help the business model work. Collaborating with others is very important, because key partners could help achieve what the business alone cannot, for example help to persuade stakeholders or provide the business with a channel to reach the customer base. The key partners of Safaricom are Vodafone, retail outlets, ICICI Bank, the community.
- ▶ **Cost Structure:** this block describes all costs (fixed, variable, direct or indirect) incurred to operate the business model. It answers the question: *What will the business have to pay for in order to deliver its value proposition to its customers?* For M-PESA, the variable costs consist of the commissions to agents, and a major part of fixed costs is the development and maintenance of the platform.

These nine blocks can further be groups in three bigger units:

- ▶ **Feasibility:** comprised of Key partners, Key resources and Key activities. It implies that the business works with the right partners, employees and tools.
- ▶ **Desirability:** comprised of Customer segments, Customer relationships, Channels and Value proposition. It implies understanding of the customer needs and wants, how the business engages with its customers and what makes a purchase decision.
- ▶ **Viability:** comprised of Cost structure and Revenue streams. It implies that the total revenue of the business should exceed the total costs for it to be viable, and not to go bankrupt.

The Business Model Canvas is a good tool that could offer several advantages to grassroots and inclusive innovators. The tool puts the value proposition at the heart of a business model and allows an innovator or entrepreneur to show how this value proposition can better serve the needs of the customers (e.g. BoP). The tool is rather simple and succinct: it allows for describing the basic elements of a business model in just nine interrelated blocks. This simplicity in its turn provides an opportunity for mapping out various business model options, out of which the most promising one can be chosen, validated, adjusted and updated according to the validation results.

Furthermore, the Business Model Canvas is a perfect tool for communicating the business model to internal and external stakeholders. This is particularly important for grassroots and inclusive innovators who often need to persuade investors to support their business, and customers - to buy their service or product. The following BMC characteristics make it a good communication tool: **1)** easy to present – it fits on a sheet of paper; **2)** easy to understand – it is intuitive to use; **3)** adaptable – it can be changed easily; **4)** condensed – it focuses on the most important issues; and **5)** open-ended – it allows for continuous improvement.

However, the BMC has some limitations. The canvas is structured around customer needs and value creation. This model is appropriate for for-profit businesses. However, it is not that applicable to non-profit and social enterprises. Such concepts as social value, social costs and benefits - relevant for inclusive innovation - are not explicitly included in the concept of the value proposition in the Business Model Canvas. The BMC does not capture vision, mission and strategic objectives of a business, which often contain the social value component.

Another important limitation of the BMC is the exclusion of the external forces from the model, such as competitors, regulatory environment, and social trends. These traditional elements of a business model should also be analysed when developing a business model for inclusive innovation to avoid a potential misalignment with the market.

The canvas provides an outline of a business model. Grassroots and inclusive innovators should consider incorporating the social value component in it, supplementing it by analysis of the external environment and further developing it in a story about how the blocks are interrelated and how the model can be applied. Hence, the BMC can be an effective tool for initial planning, concise representation and communication of a business idea to internal and external stakeholders.



Learning activity 4:

Read the Case Study “*Bringing Safe, Quality Medicine to All. Goodlife Pharmacy: A Health Hub for East Africa*” (December 2018), developed by the International Finance Corporation, World Bank Group. The Case Study is available at this webpage: https://www.ifc.org/wps/wcm/connect/oa387cc8-f8d4-45d2-b9f5-bde2769d8f93/Goodlife_FINAL_wCover_Low+res.pdf?MOD=AJPERES&CVID=mxngmef

Analyse this Case Study using the Business Model Canvas and discuss the building blocks of the Goodlife Pharmacy’s business model with your groupmates.

Template and supporting questions:

<p>Customer Segments: Who does the business serve? What are the needs and wants of the target customers? What problem(s) does the business solve?</p>
<p>Value Proposition: How does the business improve the lives of its customers? What benefits does it offer them?</p>
<p>Channels: How does the business communicate with and reach its customers to deliver the value proposition?</p>
<p>Customer Relationships: How does the business create and retain customers? How does the business create awareness among customers?</p>
<p>Revenue Streams: How does the business earn revenue? Who pays for its products and services?</p>
<p>Key Resources: What resources did/does the business need to use, in order to make the business model work?</p>
<p>Key Activities: What were/are the most important things the business needed/s to do, in order to make the business model work?</p>
<p>Key Partners: Who were/are the main partners of the business? How did/do they help the business model work?</p>
<p>Cost Structure: What did/does the business have to pay for, in order to deliver its value proposition to its customers?</p>

Further reading

<https://wiki.aalto.fi/display/BOP/Inclusive+business+models+in+low-income+contexts>

Aalto University has been studying inclusive business models in low-income contexts since 2006. The guide of inclusive innovation in the BoP market is targeted at Finnish SMEs interested in BoP markets and presents companies that operate in emerging markets with examples of their business models.

<http://www.rw.undp.org/content/rwanda/en/home/library/poverty/creating-value-for-all---strategies-for-doing-business-with-the-.html>

Creating Value for All: Strategies for Doing Business with the Poor is a groundbreaking report issued on 1 July 2008 by the UN Development Programme. Creating Value for All highlights five strategies used successfully to overcome the most common obstacles to providing business opportunities in low-income communities/countries.

<https://www.boardofinnovation.com/guides/50-business-model-examples/>

As a culture-driven global business design agency, the Board of Innovation wants to inspire over a hundred million people and move them to innovate. The link presents a guide with more than 50 examples of the most innovative business models.

https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Inclusive+Business

IFC is the leading investor in companies with inclusive business models, offering goods, services, and income opportunities to men and women at the base of the economic pyramid. The website presents market insights, cases studies and publications with focus at inclusive business models.

<https://www.devex.com/news/7-tips-for-successful-inclusive-business-models-82933>

Devex is the largest online community for international development, to network with peers, discover talent and forge new partnerships. In this article, the author Karen Newman presents seven tips for successful inclusive business models.

<https://www.bcg.com/capabilities/strategy/business-model-innovation.aspx>

According to the Boston consulting group, competitive advantage can be achieved not only by product or service innovation but by business model innovation. The publication presents four approaches to business model innovation.

Summary of key points

- ▶ The business model describes how an organisation creates, delivers and captures value.
- ▶ A generic conceptualisation of a business model can be represented with four dimensions: value proposition, value creation, value appropriation, profit and social outcomes.

- ▶ Business models suitable for inclusive innovation are formulated as suitable business solutions that 1) increase access to products that are both in line with the BoP customers' needs and at an affordable price; 2) create new sources of income for BoP consumers.
- ▶ A business model innovation suitable for inclusive innovation has four dimensions: value creation, value appropriation, value proposition, and value discovery.
- ▶ The business model canvas is a tool that helps to understand a business model in a structured way. It outlines nine segments, which form the building blocks for the business model.



Self-assessment test

Please, select all response options that you believe are correct. More than one answer is possible.

Q1: Which of the following are the dimensions of a business model?

1. Value proposition
2. Value creation
3. Value appropriation
4. Profit and social outcomes
5. Business mission

Q2: A business model innovation can occur in a number of ways. Typical examples include:

1. Adding novel activities
2. Linking activities in novel ways
3. Cost reduction
4. Market segmentation
5. All mentioned above are typical examples of a business model innovation

Q3: The business model innovation “Co-creation of value involving consumers” has two main steps in its implementation. Which are these steps?

1. Creation consumers' awareness of their needs
2. Creating consumers' understanding of the solution
3. Enhancing the overall consumer experience
4. Reducing cost
5. Introducing technological innovation

Q4: The Business model canvas includes the following building blocks:

1. Value proposition
2. Customer segments, customer relationships and communication channels
3. Resources, activities and partners the business has to deliver the value proposition to its customers
4. Competitors and regulatory environments
5. Cost structure and revenue streams

Q5: Mark all the options that apply to Value Proposition.

1. Price
2. Cost reduction
3. Convenience/usability
4. Usage fees
5. Subscription

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Glossary

Barriers to entry	<i>Describe difficulties or challenges that a company faces when attempting to enter a prospective market; for example: equipment, technology, economies of scale, knowledge, branding.</i>
Business model	<i>A structural template of how a firm transacts with customers, partners, and vendors; that is, how it chooses to connect with factor and product markets</i>
Business model innovation	<i>The development of new, unique concepts supporting an organisation's financial viability, including its mission, and the processes for bringing those concepts to fruition.</i>
Channel	<i>Channels comprise a company's interface with customers. Channels are customer touchpoints that play an important role in the customer experience.</i>
Customer segments	<i>Breaks customers into groups (or segments) describing who the customers are and what their needs or problems are.</i>
Customer validation	<i>Testing the value proposition against customers' responses with a view to adjusting the proposition appropriately.</i>
Inclusive business model	<i>Inclusive business models include the poor on the demand side as clients and customers and on the supply side as employees, producers and business owners at various points in the value chain. They build bridges between business and the poor for mutual benefit</i>
Minimum viable product	<i>The minimal value offer that you can present to the customer and that they are willing to consume.</i>
Opportunities	<i>Potential changes to the current situation that could contribute to the success of the business model.</i>
Risks	<i>Potential changes that could harm the business model.</i>
Value chain	<i>A value chain describes the full range of activities needed to create a product or a service and to deliver it to customers.</i>
Value proposition	<i>Value Proposition creates value for a customer segment through a distinct mix of elements catering to that segment's needs. Values may be quantitative (e.g. price, speed of service) or qualitative (e.g. design, customer experience).</i>

Lecture 5.

Economic terms and concepts relevant to inclusive innovation and inclusive growth

Annotation

The purpose of this lecture is to provide a brief overview of economic concepts related to inclusive innovation and inclusive growth. It reviews the concepts of economic growth and inclusive growth, the relationship between inequality and poverty, poverty reduction and pro-poor growth. In the end, we present some of the means for inclusion of poor people in the society, such as productive employment, gender equality, and social safety nets. The lecture also provides a basic understanding of the concept of social inclusion.

Key words

Economic growth, Inequality, Poverty, Inclusive growth, Pro-poor growth, Productive employment, Gender equality and opportunity, Social safety nets, Social inclusion

Learning objective

After engaging with the material in this lecture and implementing Learning activity 5, you should get familiar with the concepts of economic growth and inclusive growth, recognize the relationship between inequality and poverty, understand what pro-poor growth, productive employment and social safety nets mean, and gain basic knowledge about social inclusion.

Structure of the learning content (list of the terms explained)

- ▶ Economic growth
- ▶ Inequality and poverty
- ▶ Inclusive growth
- ▶ Poverty reduction and Pro-poor growth
- ▶ Productive employment
- ▶ Gender equality and opportunity
- ▶ Social safety nets
- ▶ Social inclusion



Lecture

Economic growth

Economic growth is a dimension of the concept of economic development and can be viewed as one of the instruments that could be used to achieve development goals. Economic growth leads to an increase in the size of the national economy (Wolla, 2013). It can be measured by the rise in GDP or GDP per capita. Factors that lead to economic growth are the efficient use of resources, innovation and increase in productivity. There are also factors that influence growth in the opposite direction. These include limited resources, infrastructure problems, and inauspicious institutional and cultural models. Economic growth can be positive, zero, or negative. Growth produces benefits to the people both directly and indirectly: the production of goods and services rises, unemployment rate decreases, the number of jobs rises, and the standard of living of the population increases. Likewise, growth increases the income of the government, enabling it to invest more in health, education and other welfare measures, indirectly delivering benefits to the poor sections of society. Economic growth can also have some negative consequences for the economy – these include higher inflation, overexploitation of resources, deficit in the balance of payments, increasing income inequality, etc.

Inequality and poverty

Economic inequality is defined as the discrepancy between poor and rich in terms of the income distribution, distribution of wealth, distribution of education and employment (McKay, 2002). Inequality has different dimensions: income, education, health, security. Economic inequality exists at different levels – between countries, or within a country. There are many examples of the existence of inequality within and between countries. Inequality is one of the factors leading to poverty. Increasing inequality leads to an increase in poverty. Inequality also affects economic growth.

The term poverty is connected with inequality, but it has a different meaning. Poverty focuses only on those people, whose standard of living is below a certain poverty line. Poverty is a multidimensional phenomenon that has many material and non-material aspects. Economic growth does not automatically bring benefits to the poor sections of the society. This goal can be achieved if policies are directed not only at accelerating growth but also at the distribution of income.

Inclusive growth

Achieving high economic growth does not automatically lead to a reduction of poverty. To reduce poverty, economic growth must be inclusive. According to the definition of OECD, inclusive growth is:

“Economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society”. (<https://www.jrf.org.uk/blog/what-inclusive-growth-and-why-does-it-matter>)

There are different definitions of inclusive growth, but they all have two common characteristics - higher growth and greater equity. Different approaches to defining inclusive growth emphasize different aspects, such as productive employment, pro-poor growth, health and educational status (OECD, 2014: 79). Inclusive growth is a multidimensional concept.

The OECD framework includes eleven essential dimensions:

- ▶ Monetary and non-monetary
- ▶ Housing, income and wealth
- ▶ Jobs and earnings
- ▶ Social connections
- ▶ Education and skills
- ▶ Environmental quality
- ▶ Civic engagements and governance
- ▶ Health status
- ▶ Subjective well-being
- ▶ Personal security
- ▶ Work-life balance (OECD, 2017).

Despite the relevance of all dimensions for people's well-being, four of them stand out as most important: income, health and educational status, and jobs.

Poverty reduction and Pro-poor growth

Poverty reduction is the most important goal of development policy (Government Offices of Sweden, October, 2015). According to the World Bank, poverty reduction means the promotion of strategies that would increase the productivity of labour. Poverty reduction is about improving human well-being, in particular, the well-being of poor people. It can be achieved by economic growth and by re-distribution of income. Strategies for poverty reduction focus on:

- ▶ Productive use of the labour of poor people;
- ▶ Providing basic social services for the poor;
- ▶ Investment in education, which is essential for higher incomes and economic growth;
- ▶ Improving health.

Pro-poor growth benefits the BoP members of a society and provides them with opportunities to improve their standard of living (OECD 2001). It enables the poor to actively participate and benefit from economic activity. Three factors affect pro-poor growth – economic growth, poverty and inequality. Without specific policies focused on inclusiveness, economic growth often leads to further marginalization of poor people. Specific policies like improvement of governance and institutions, better investment climate, increased access to credit and financing, programs to increase productivity, improving transport and infrastructure may help increase growth. However, more significant investment in health services, education, infrastructure and agriculture targeted at the BOP may ensure economic growth delivers benefits for the poor, too (World Bank, 2005). Additional policies at the macro level that can stimulate pro-poor growth are a progressive tax system, lowering the levels of indirect taxation, promotion of small and medium enterprises, etc. There are micro-economic policies

that can also improve the poor's welfare; examples include subsidizing public utilities (low water fees), subsidizing education (lower student fees), and housing policy.

Productive employment

Productive employment is one of the means for inclusion of the poor in the labour market and society. The key results of productive employment are higher incomes, knowledge and skills acquisition. The ILO (2009) defines productive employment “as employment yielding sufficient returns to labour to permit workers and their dependents a level of consumption above the poverty line”. Productive employment with improved job creation can lead to poverty reduction. Economic growth itself may create productive employment through optimal utilisation of labour and innovation. If labour shifts to sectors with higher productivity and better quality jobs, this will promote productive employment. For example, in African countries, the employment problem is more related to the quality of jobs than to the lack of jobs.

The increase in the number of productive jobs is strongly related to a continuous process of innovation. Inclusive innovation in particular can provide opportunities for productive employment for the BoP.

Gender equality and opportunity

Gender equality means equal rights, responsibilities and opportunities of women and men. It is one of the Millennium Development Goals and is widely regarded as a fundamental value. A number of studies demonstrate that gender equality is a driver for sustainable and inclusive growth. Inequality limits the participation of women in the economy. To measure the gender gaps, we use indicators such as the share of women and men in education, the share of women in employment, the average salary of women vs the average salary of men. Gender equality is related to inclusive growth. Among the key aspects of gender equality that influence inclusive growth are:

- ▶ ***Access of girls and women to primary, secondary and higher levels of education:*** Higher education for women leads to many personal and social benefits, including more autonomy, better and well-paid jobs, and more chances of sending their children to school. The rate of enrolment of girls and women in education continues to be insufficient, especially in countries in sub-Saharan Africa (OECD, 2015)
- ▶ ***Economic empowerment:*** Gender equality in quality employment, ownership and access to productive assets, and entrepreneurship are areas where significant improvement is needed. In order to reduce gender inequality, it is also important to lower the time that women spend in household work. Additional problems that must be addressed are women's access to better jobs, credit, financial services, the gap in earnings between men and women. Many working women have to put up with seasonal jobs, lower-paid jobs, and vulnerable jobs. Female-owned businesses are a minor part of the economy; they are small in size and they operate in a limited number of economic sectors.

Social safety nets

Social safety nets are non-contributory benefits provided to support the poor and vulnerable groups. Benefits are taken in the form of cash or in-kind. Social safety nets are part of the

social protection system. This system also includes contributory social insurance, labour market policies, child grants, social pensions, measures that facilitate access of the poor to basic services such as education, health care and housing. Other forms of non-contributory benefits are consumer price subsidies (especially for food and energy). Social safety nets are aimed to reduce poverty and to promote productive inclusion of the BoP. For example, one of the most popular types of social safety nets is public work programs. They provide temporary employment on labour-intensive projects, mainly at low wages. Research suggests that in the short term (1-2 years after intervention), the impact is significant (IEG, 2011). Long-term impact depends on sustainability of the achieved changes.

A critical issue in the design and implementation of social safety nets is the ‘targeting’ – selecting and reaching the beneficiary groups. The targeting may be narrow - focused on well-defined groups, or universal - mass targeting. The process of targeting depends on country context, governmental policy on poverty reduction, administrative capacity and time constraints. Targeting can also be used instrumentally, for example in order for a government to gain support before political elections. A critical issue for the effectiveness of social safety net interventions is to design a sound system for delivering benefits to the targeted groups. In addition, a monitoring system is necessary for adequate evaluation and improvement of the programs.

Social inclusion

The concept of social inclusion first appeared in France and was later adopted by the European Union as a key concept in social policy. It gained worldwide acceptance after the First World Summit on Social Development in Copenhagen in 1995. The vision of ‘social inclusion’ presented at this forum is for a society, "*in which every individual, each with rights and responsibilities, has an active role to play*" (UN, 1995). Social inclusion is a prerequisite for sustainable development. The goal of social inclusion is to achieve an inclusive society. The process of social inclusion involves the participation of people in decision-making activities that affect their lives. The outcome of social inclusion is reduced inequality, less discrimination, and social justice. Social inclusion creates conditions for eliminating obstacles for equal opportunities and access to all. Examples of social programs in the social inclusion framework include the Bolsa Familia programme in Brazil, Girinka programme introduced in Rwanda, and the Productive Safety Net programme developed in Ethiopia.

Social exclusion has multiple causes and takes diverse forms related to age, gender, disability, location and others. Concrete causes include discrimination; intolerance; stereotyping; lack of access to education, health services, labour market, credit, information; insecurity and others. Low income is a contributing factor, although it does not necessarily lead to social exclusion – it is possible for some poor groups to be socially included. Similarly, policies for poverty reduction do not automatically lead to social inclusion (Ghosh, 2010). There is variation between and within countries in the vulnerable groups that are subject to exclusion. Groups that are frequently excluded are women, poor people, children, youth and older persons, persons with disabilities, ethnic and religious minorities.

The challenge of policies for social inclusion is to ensure that a society promotes fair opportunities and guarantees equitable outcomes for all. To ensure social inclusion, it is necessary to take into account not only economic development, but also factors such as

culture, religion and gender (Dugarova and Lavers, 2014). Social inclusion requires the fundamental change of economic and social institutions, including beliefs, norms and attitudes at all levels of society.

Goran Therborn (2007) proposed five steps for promoting social inclusion:

- ▶ Visibility – all citizens need to be noticed and recognized;
- ▶ Consideration – policymakers must take into account the needs of different individuals and groups;
- ▶ Access to social interactions – all groups must be engaged in social activities and networks;
- ▶ Rights – all groups must have rights to act, legal rights, rights to access social services, etc.;
- ▶ Resources – all groups must have resources to fully participate in society.

Some observers question whether the costs of promoting social inclusion and participation are worth the benefits. Contrary to a widely shared view, the economic costs of efforts to redress inequality and exclusion are not that great and do not diminish competitiveness. Many countries that have achieved relatively equal societies demonstrate strong economic competitiveness (Therborn, 2007).



Learning activity 5:

*Fill in the blanks in the text below with the terms introduced in this lecture. Use the following words / word combinations: **inequality, social inclusion, social safety nets, poverty reduction, women, opportunities, inclusive, productive employment, pro-poor.***

“One of the biggest challenges for governments around the world is _____. Concerted efforts towards increasing _____ have to be made in order to secure significant improvement of the social standing and wellbeing of the poor. This could be achieved only by reducing _____ and ensuring a more equitable society through creating more _____ for employment of members of marginalized groups, such as _____ and the disenfranchised. Economic growth has to be _____ and _____.

Therefore, governments are deemed to create enough opportunities for _____. Another keystone of government social policy is to set up a robust system of _____, which are important in crises, during which typically lower overall employment levels create preconditions for lower consumption. In the long run, this could lead to heightened sense of lack of fairness in many groups of society. It also sometimes leads to lack of trust in the markets and could end up in social unrest - a phenomenon, which for the most part affects the poor and disenfranchised.”

Reflect on the interrelations between the terms introduced in this lecture.

Further reading

<https://gsdrc.org/topic-guides/inclusive-growth/concepts-and-definitions/>

GSDRC is a research and knowledge management centre specialising in governance, social development, conflict and humanitarian issues.

<https://www.jrf.org.uk/blog/what-inclusive-growth-and-why-does-it-matter>

The Joseph Rowntree Foundation is an independent social change organisation working to address UK poverty.

<https://medium.com/@inclusivegrowth/inclusive-growth-making-our-economy-work-for-everyone-a648022e2aa8>

The RSA's Inclusive Growth Commission aims to quantify costs & benefits of economic inclusion, and make recommendations for inclusive growth especially in cities.

<https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/3556.pdf>

Hanmer, L. and Booth, D. (2001). Pro-poor growth: Why do we need it? What does it mean? And what does it imply for policy? Paper prepared for Sida's Poverty Project. Overseas Development Institute: London.

This paper deals with a key issue for development cooperation – the relationship between economic growth and the reduction of poverty. It aims to provide an accessible summary of what economic theory, evidence, and the balance of specialist opinion, say about this, often controversial, subject.

<https://gsdrc.org/document-library/what-is-pro-poor-growth-and-why-do-we-need-to-know/>

This briefing note from the Department for International Development (DFID) examines the relationship between growth and poverty. Given DFID's aim of eliminating absolute poverty, it argues that the most appropriate measure of pro-poor growth is the average growth rate of the incomes of the poor.

<https://gsdrc.org/topic-guides/inclusive-growth/>

This Topic Guide summarises some of the most rigorous available evidence on the key debates and challenges surrounding inclusive growth.

<https://www.un.org/development/desa/socialperspectiveondevelopment/>

The website of the UN Department of Economic and Social Affairs provides useful resources and publications focused on social development issues.

<https://www.worldbank.org/en/news/feature/2013/02/05/povertyreductioninpractice>

This section of the World Bank website presents some of the key areas relevant to poverty reduction.

<https://www.wider.unu.edu/publication/poverty-reduction-and-economic-growth>

This publication by Nora Lustig presents research findings of the importance of growth in reducing poverty. It also demonstrates how pro-poor initiatives, in turn, can propel economic growth.

<http://www.chronicpovertynetwork.org/about-us>

The Chronic Poverty Advisory Network (CPAN) is a network of researchers, policy makers and practitioners across 17 developing countries focused on tackling chronic poverty and getting to zero extreme poverty and deprivation.

<https://www.worldbank.org/en/region/afr/brief/social-inclusion-in-africa>

This online publication of the World Bank deals with the issues of social inclusion in Africa and presents data and current trends.

<https://www.weforum.org/projects/closing-the-gender-gap-gender-parity-task-forces>

This webpage presents the project “Closing the Gender Gap”, which is part of the World Economic Forum’s Shaping the Future of Education, Gender and Work System Initiative.

<https://economictimes.indiatimes.com/definition/category/Economy>

This website presents a dictionary of basic terms in economics.

<https://www.oecd.org/inclusive-growth/#introduction>

This webpage of OECD presents information, events and resources that relate to inclusive growth.

<https://www.weforum.org/reports/the-inclusive-growth-and-development-report-2017>

The Report presents a new global index - the Inclusive Development Index (IDI) - which provides a richer and more nuanced assessment of countries’ level (and recent performance) of economic development than the conventional one based on GDP per capita alone. It also provides a policy framework showing the many factors that can drive a more inclusive growth process.

Summary of key points

- ▶ Poverty and inequality are intrinsically linked. Poverty reduction - especially for the poorest groups in society - can be significantly enhanced through distributional policies.
- ▶ More equal distribution of income and assets can foster growth, whereas high inequality can retard it.
- ▶ Inclusive growth can be viewed as a desired outcome of innovative initiatives that target individuals in disenfranchised sectors of society.
- ▶ Inequality has different dimensions: income, education, health, security. Economic inequality exists at different levels – between countries, or within a country.
- ▶ Pro-poor growth enables the poor to actively participate and benefit from economic activity.
- ▶ Productive employment with improved job creation is a factor for poverty reduction.
- ▶ Inclusive growth is strongly related to gender equality. Key aspects of gender equality are: 1) access of girls and women to primary, secondary and higher levels of education and 2) economic empowerment of women.
- ▶ Social safety nets are non-contributory benefits provided to support the poor and vulnerable groups. Benefits can be provided in cash or in kind.
- ▶ Social inclusion is a key prerequisite for sustainable development. It can lead to reduction in inequality and discrimination, and can result in social justice.



Self-assessment test

Please, select all response options that you believe are correct. More than one answer is possible.

Q1: Which of the following are among the benefits of economic growth?

1. Decrease in government tax revenue
2. Higher incomes for individuals
3. Increasing unemployment
4. Decreasing unemployment
5. Raised living standards

Q2: Please, mark possible negative consequences of economic growth.

1. Higher inflation
2. Overexploitation of resources
3. Increasing income inequality
4. Increase in government tax revenue
5. Higher profits for companies

Q3: Which of the following are correct?

1. Poverty is synonymous with inequality.
2. Inequality is one of the factors leading to poverty.
3. Economic growth is measured as percent change in GDP.
4. Inclusive growth is synonym with economic growth.
5. Inclusive growth diminishes trade-offs between growth and inequality.

Q4: Please mark the three factors that affect pro-poor growth.

1. Economic growth
2. Poverty
3. GDP per capita
4. Inequality
5. GDP

Q5: Which of the following statements are false?

1. Social safety nets are part of the social protection system.
2. Economic empowerment of women is key to achieving gender equality.
3. Productive employment is more related to the number of jobs than to the quality of jobs.
4. Policies at the macro level that tend to stimulate pro-poor growth include a progressive tax system, lowering the levels of indirect taxation, promotion of small and medium enterprises.
5. It is not possible for poor groups to be socially included.

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Glossary

Disposable income	<i>The income available in a household (made up usually of the salaries and payments from the state) minus what goes out in taxes.</i>
Poverty gap	<i>It represents the average income of people living below the poverty line.</i>
Poverty rate	<i>The number of people living below the poverty line.</i>
Gross Domestic Product (GDP)	<i>A measure of the total output of goods and services in the economy.</i>
Underemployment	<i>Situations where productivity and earnings are so low that a worker cannot make a decent living in a normal workweek, and thus has to work very long hours to survive.</i>
Vulnerable jobs	<i>Jobs with highly fluctuating and uncertain remuneration, and exhibiting an instable and insecure relation between employer and employee.</i>
Impact of structural change on productive employment	<i>Shifts of employment between sectors may promote productive employment by a shift towards more dynamic and high-productivity sectors that can absorb labour and provide jobs of better quality.</i>
Social exclusion	<i>Social exclusion is understood as the condition (barriers and process) that impede social inclusion.</i>
Inclusive society	<i>An inclusive society is a society that disregards differences of race, gender, class, generation, and geography, and thus ensures inclusion, equality of opportunity as well as capability of all citizens to determine an agreed set of social institutions that govern social interactions.</i>
Economic development	<i>A multidimensional process involving major changes in social structure, popular attitudes, and national institutions, as well as the acceleration of economic growth, the reduction of inequality, and the eradication of poverty.</i>
Absolute poverty	<i>A fixed daily income, such as a dollar a day, or an income below a certain level, which makes it impossible for the person or family to meet basic needs of life including food, shelter, safe drinking water, education, healthcare, etc.</i>

Lecture 6.

Examples and Good Practices

Annotation

In this lecture we present some cases of good practices in the field of inclusive and grassroots innovation. The examples are mapped and presented using the business model canvas elements (Osterwalder & Pigneur, 2010). The business model canvas presents the creation and delivery of value for target customers according to nine design parameters. A number of success factors for business model innovation can be derived from the cases presented in this lecture, such as the capability to create a large consumer base, to create economies of scale that keep costs low, to cross-subsidize between different customer segments, or to design a process that is standardised.

Key words

Good practices in the field of inclusive and grassroots innovation

Learning objective

After engaging with the learning material in this lecture and implementing Learning activity 6, you should be able to analyse examples of inclusive and grassroots innovation and draw out from them good practices that could be transferred to other contexts.

Structure of the learning content (list of good practices)

- ▶ M-PESA (Kenya)
- ▶ M-KOPA (Kenya)
- ▶ Narayana Health (India)
- ▶ Grameen Bank (Bangladesh)
- ▶ Aravind Eye Care System (India)
- ▶ River from the Sky (India)
- ▶ Kibo motorcycle (Kenya)
- ▶ Jua Kali enterprises (Kenya)
- ▶ The Mini Magical Child washing machine by Haier (China)
- ▶ Chotukool (India)
- ▶ Tata Nano car (India)
- ▶ The Foldscope (International)
- ▶ The Meechim Project (Canada)



Lecture

M-PESA (Kenya)

M-PESA is a mobile payment system launched by Safaricom (Kenya's largest telecom) in 2007. The name comes from M for mobile and the Swahili word pesa meaning money. In 2018, M-PESA had around 20.5 million active users (Safaricom, 2018). The business model of M-PESA focuses on "urban migrants" - typically men who travel to urban areas for work while their families stay at their rural homes. These people do not have access to bank services, and in order to send money to their families, they need to travel back home or send money through a bus driver.

The value proposition of M-PESA creates value for customers in different ways. First, it provides a new way to send money by using cell phones (many Kenyans have a mobile phone, and mobile infrastructure is well developed). Second, the M-PESA services (deposit money into a mobile wallet, transfer money, withdraw from a mobile wallet, pay bills) give the customers access to services they could not use before. Third, the pricing structure of M-PESA services (some of them are free) lowers the price. Delivering value proposition to customers has a critical role in M-PESA's success. Key resources that allow Safaricom to create and deliver value to the customers include mobile infrastructure and agent network.

Safaricom uses authorised agents (in 2018 the number of M-PESA's agents was above 154 000) who provide service and support to customers. The agent network grew with market penetration - typical transactions per agent per month are around 1000. In addition, Safaricom has spent a significant amount of resources on building the M-PESA brand and the story behind it. M-PESA's communication strategy has focused on customer education and awareness. To create awareness for the service, Safaricom uses advertising (the "Send money home" campaign), but most of the communication is based on word of mouth. Another critical element of M-PESA's success is the "networking effect" (Ngugi, Ogembo and Pelowski, 2010) - expanding the customer base through customer acquisition and retention.

The revenue sources in the M-PESA business model include charges that customers pay for using particular services. M-PESA charges depend on the amount that a customer is sending or withdrawing. The business model of M-PESA is cost-driven - the focus is on minimising costs where possible. The cost structure is highly variable, associated with agents' commissions. The business model is designed for a mass market with small margins from each money transfer.

Partnerships create opportunities for M-PESA to allow users to send money around the world (e.g. the partnership with Western Union), while partnership with Kenyan banks - to offer savings and loan products (Business Daily, 2019).

M-KOPA (Kenya)

M-KOPA is founded in 2011 in Kenya. It leverages mobile technology to develop a business model innovation in the power sector in Africa. The value proposition combines solar power and mobile technology to offer an affordable source of electricity for poor communities in Kenya, Tanzania and Uganda. In 2018, M-KOPA has connected over 600 000 homes with solar

power (M-KOPA website). Target segments include the households at the BoP without access to electricity that use kerosene and batteries to light their homes and power radios. The M-KOPA system is a combination of solar power with a pay-as-you-go mobile solution. This value proposition is based on technology that helps the customers to have a source of electricity while also reducing costs through switching to solar power instead of buying kerosene.

The real innovation of M-KOPA is not the solar panel but its payment plan. It is the latter that makes the solution affordable for poor customers. Clients pay small part upfront and agree to make small daily payments using mobile money (M-PESA). M-KOPA uses distributional network and sales teams to sell solar systems. Apart from putting efforts in customer acquisition and retention, M-KOPA tries to boost sales by selling more products to its existing customers. A key resource for achieving these goals is high-quality customer services. This is achieved by employing highly motivated young people but also by using technology - M-KOPA uses data analysis to improve customer experience. M-KOPA has forged many partnerships with donors (for example Shell Foundation), investors, and strongly cooperates with Safaricom (Faris, 2015).

Narayana Health (India)

Dr. Shetty founded Narayana Health (NH) in 2001 in Bangalore, India. From an initial capacity of 280 beds, it has now grown to a network of 26 hospitals and more than 7000 beds, employing 1500 doctors and 13000 staff (Narayana Health website). Services are offered in a flexible manner – in hospitals, through telemedicine and in mobile vans. The NH performs 150 major surgeries (including 44 cardiac surgeries) daily. About half (50%) of the NH's patients are from poor segments of the society that cannot afford the costly healthcare services. The value proposition of NH is delivering best-in-class affordable healthcare facilities to a broad spectrum of the population. This is possible by process innovations that bring the cost of surgery down. To optimise the surgical procedure, Dr Shetty uses the team approach to make a surgery. Each team includes a specialist, junior doctors, trainee, nurses and paramedics. A standard bypass surgery takes about five hours. The duration of critical manipulation takes an hour, and the highly qualified doctors are only engaged in this part. The other procedures are done by junior doctors. Nurses and paramedical staff handle the preparation of the patient. The design of the process, as described above, gives the specialist time to perform more surgeries a day.

In comparison with the surgery cost in other countries, the cost of NH surgery is much lower. Notably, lower cost does not mean lower quality; instead, cost is cut through the above-described process innovation and through economies of scale. NH has large hospitals that attract a large number of patients. Low-income patients are attracted by microinsurance schemes and telemedicine. The higher number of patients leads to a lower average per-patient cost of surgery. The large number of surgeries does not only cut costs but also increases quality by improving doctors' skills.

The cost structure is further optimised by leasing equipment rather than buying it, which decreases capital cost, and by sticking to a zero inventory system (just-in-time inventory management), setting up central buying unit and standardised purchase of consumables and devices. To improve efficiency across the board, NH uses technology-based business intelligence, "to map the performance of each doctor in terms of clinical outcome and financial

data such as consumable used during surgery; time patient has spent in ICU and duration of stay in the hospital" (Madhavan, 2014).

In addition to payments on the part of the patients (about 60%) who pay the full price, the other major revenue stream is donations. Partnership with the government has been key to establishing the telemedicine and micro-insurance programmes. This further contributes to a financial model that is able to address the constraints faced by the BoP consumers.

Grameen Bank (Bangladesh)

Grameen Bank is a not-for-profit organisation owned by its borrowers. Muhammad Yunus first conceptualised the Grameen Bank system - formerly known as "Bank of the Poor" - in Bangladesh in 1976. The Grameen Bank encourages the poor to harness their underutilized or unutilised skills by providing them access to small collateral-free loans. The group-based microfinance banking system sustains itself through mutual trust, accountability, participation and creativity. Grameen has focused on women borrowers (97% of all members) (Mainsah et al., 2004). The customers come from poor communities, live in rural areas, and are mainly unemployed and low educated. The target customers have limited or no access to services offered by commercial banks, so improving their access to loans has a social inclusion effect as it allows them to be included in economic activity.

The value proposition to the poor is to give them opportunities to earn better income by building and utilizing their existing skills. Grameen Bank creates customer relationships by personal assistance, community relations, and providing learning resources. The Bank's key activities include risk assessment, financial services, training, IT operations, research, call centre operations. It is 95% owned by the local poor and the remaining 5% by the government. It has a broad partnership network including the Grameen Family of enterprises, NGOs, developing and regulatory agencies. Grameen Bank uses a mix of channels to reach its clients - branches, fieldwork, call centres, Internet, and mobile devices. Revenue streams form by financial spread, service fees, interest rates, charges for training programs.

Aravind Eye Care System (India)

Aravind Eye Care System (AECS) is a non-profit eye hospital chain in India. It was founded in 1976 at Madurai by Dr Govindappa Venkataswamy. At present, AECS has a 4000-bed hospital and offers specialized care for eye problems. It treats 3.5 million patients annually and performs over 400 000 surgical procedures. To support the high volume of work, AECS reaches the masses through eye camps in rural and semi-urban areas. At the camps, patients are screened and those who need surgery are prepared for the intervention. The value proposition is to provide high-quality eye care that is affordable for everyone. To reduce the cost of surgery, AECS adapted the line approach used by McDonald's. This approach means standardisation of processes, economies of scales, and service efficiency. AECS does not use advertising. Its reputation is built on word-of-mouth and satisfied patients.

There are three pillars of the business model - high quality, high volume and affordable cost (Manikutty and Vohra, 2003). The hospitals care for all patients - irrespective to their ability to pay. The AECS serves everyone with need. The poor patients receive services without any compromise on the quality of treatment. Only around 40% of all patients pay for the treatment. However, both segments, paying patients and poor patients, are served by the same

medical teams. Paying patients receive additional services and can choose private rooms and, for example, better lenses. To manage the costs for the non-paying patients, AESC uses cross-subsidisation – the price paid by the wealthier patients is re-distributed to cover the costs for the poor patients. Paying patients are the main revenue-generating source. To attract them the AESC offers additional services.

River from the Sky (India)

Population growth is causing problems with the supply of quality water. Poor people and remote regions frequently have no access to clean water. There is therefore increasing interest in low-cost alternatives to piped water (Mohammed et al., 2018). Rainwater harvesting (RWH) is the accumulation of rainwater for reuse. It is viewed as a form of water supply source in areas where the provision of water is technically or economically unfeasible. The practice is common in different areas in the world - Brazil, Australia, India, Nigeria. The accumulated water is stored in rainwater storage containers. RWH uses a simple technology with low cost for maintenance. The technology has some disadvantages like difficulties to predict the rainfall, relatively high initial costs. In addition, the RWH system requires regular maintenance and has storage limits. Water accumulated through RWH is used by individual or household users, as well as by business users. For example, in Nigeria, RWH is used only for domestic purposes during the rainy seasons. In other countries, such as Brazil and Australia, it has been integrated into sustainable agriculture.

An example of successful inclusive innovation is the RWH system developed by an Indian non-profit organization led by Bhagwati Agrawal. The NGO addresses specifically the needs of the region of Rajasthan where water scarcity is extreme. The system, called Aakash Ganga (Hindi for "River from the Sky") is a network of rooftops, gutters, pipes and underground reservoirs that collect and store substantial amounts of rainwater during the monsoon rains and make this water available for use during the rest of the year. The innovation addresses not just the problem of access to clean and safe water. It also eliminates the need for women in poor and remote communities to walk far to sources of water each day. Women are thus able to get engaged in other productive activities.

Kibo motorcycle (Kenya)

Kibo Africa was founded in Kenya as a start-up company by Huib van de Grijspaad. Kibo designs and manufactures motorbikes that suit various African terrains - hybrid models between a street and an off-road motorbike. The value proposition is a solution for motorised transport that is designed to be appropriate to many parts in Africa and to different kinds of users, including those in remote and poor communities. The products of Kibo provide convenience, safety and have a cool design. The customer segments include bodaboda riders (motorcycle taxis) and individual users. Kibo provides safety training and equipment such as helmets and gloves. Motorcycles are an efficient mode of transport for people travelling short distances within a city or town, or longer distances that are not covered by other forms of transport. Kibo's value proposition includes security, efficiency, and high speed of travel compared to cars in traffic (ARK case study).

The price of a motorbike is not sufficiently low to make it a product widely affordable at the BoP, but it is affordable in comparison to cars. In comparison to cheaper alternatives of motorbikes, it offers better safety and suitability for a rugged terrain. In many ways, it would

be a good product for entrepreneurs in poorer and remote communities. The motorbike has advantages if used in cities but it also allows riders to reach many places outside cities where the road conditions are adverse. One of the problems with motorbikes is safety. Kibo Africa proposes two solutions for this problem - better design of the motorbike and rider training. Thus, this product can be considered as an example of inclusive innovation – while it does not boast a very low price, it offers less well-off communities an affordable high-quality alternative to much more expensive high-end motorbikes.

Kibo is perceived as a social mobility brand. The preferred media for advertising are social media platforms like Facebook. In Kenya, Kibo has open stores that sell and provide maintenance services of bikes.

Jua Kali enterprises (Kenya)

Jua Kali (fierce sun in Swahili) is the name of non-agricultural micro-sized informal enterprises in Kenya. It includes thousands of informal workshops or enterprises that are popular to BoP consumers because of their affordable articles and services, as well as notorious creativity to provide almost anything for a very low price. This sector has important social impact as it provides livelihood for unemployed young people in the country. Unlike getting formal employment, involvement in jua kali is relatively easy for young people with few qualifications. The sector relies on tutorage of more experienced artisans. The Jua Kali has a huge potential for jobs creation (Mang'unyi, Mwanzia, and Govender, 2018).

The Mini Magical Child washing machine by Haier (China)

Haier, a Chinese multinational electronics company, developed the mini Magical Child washing machine, which was designed as an alternative to more expensive washing machines and could be used for small daily loads. Haier targeted the largest customer segment in China – rural customers. The innovation was based on consumer complaints and the aim was to design a product that addresses their needs. Washing machines were expensive for customers in rural areas in China. There was also seasonality in using washing machines - most households did not use a washing machine in the summer. To address these problems, Haier developed a small washing machine with lower weight and low electricity and water consumption compared to more expensive brands. The Mini Magical Child washing machine has basic characteristics of a washing machine, but the price is much lower. The combination of essential characteristics of a washing machine and low price provides high value to customers. The product was successful not only in developing countries but also in developed markets (Hang, Chen and Subramian, 2010).

Chotukool (India)

Godrej Group was established in 1897 and had its roots in Swadeshi movement in India. In 1958, Godrej Appliances made the first refrigerator in India. Chotukool was an unconventional cooling solution targeted at the BoP segment in India. Refrigeration is an important innovation that addresses problems related to food spoilage and poor health. Populations living mainly in rural areas, with power supply issue and low income, have poor access to refrigeration. These market conditions create the need for a low-price refrigerator, alternative power options, and a small size that is easy to transport and fit into the small spaces available in houses. Chotukool addressed a market in which about 80% of households did not have or use a refrigerator at

their homes (McDonald, van Bever, and Ojomo, 2016). The value proposition was affordable food storage for BoP consumers who had never used a refrigerator. Chotukool is a 45-liter plastic container that can cool food to 8-10 degrees with power supply from a 12-volt battery. The refrigerator does not have compressor technology and uses the solid-state cooling system. The product had substantial potential to improve quality of life of households in rural areas. It was also well suited for use by small shops and kiosk and thus had potential to support economic activity and trade in rural and poor communities. Chotokuul was designed to meet the specific needs of BoP consumers, and its value was co-created by the target communities. Godrej used its partnership with the India Post network to distribute the refrigerator to the target customers. For the communication of its value proposition, Godrej relied on word-of-mouth recommendations, and various non-governmental organisations working to create awareness about the benefits of food refrigeration.

Tata Nano car (India)

Tata Motors Ltd. – part of the Indian multinational company Tata Group – launched Tata Nano in May 2003 with a selling price of one lakh Indian Rupees (about USD \$2500). At that time, two- or three-wheel vehicles had a dominant market share (along with commercial vehicles) in India’s car market. The segment “cars for individual customers” was only 16% of the total market (Tassilo and Holtbrugge, 2011).

The low selling price of Tata Nano was achieved through innovation in design, economies of scale and process innovations. Notably, it was achieved without compromising overall value and safety for the customer, as well as environmental requirements. The Tata Nano was safer than two-wheeler vehicles, which had a notorious fatality rate that was double that of cars. While it was small, slow and its safety was still below that of more expensive competitors, the Tata Nano managed to provide a functional design and to match safety and emission standards. In order to make the car even more attractive to lower-income customers, it was inexpensive to operate. For the segment of low-income and middle-income Indian families, the Tata Nano innovation clearly brought value for an affordable price.

Tata developed a radical design-to-cost concept. One way to lower the cost was the integration of the suppliers and partners at earlier stages of the development process. Tata relied on a system that allowed suppliers to collaborate but simultaneously compete with each other – a co-competition system. Collaboration between suppliers ensured the transfer of know-how. Competition resulted in cost savings and innovations. This process of co-competition enabled Tata Motors to use the know-how of a wide range of suppliers. To retain suppliers, Tata Motors offers guaranteed long-term contracts for components of the car. Tata Nano had a modular design. It was sold in construction kits that could be distributed, assembled and serviced by a vast number of local partners. Tata Motors thus produced mass items and ships them as kits. The independent dealers assemble the car, and this also reduced the costs of maintenance. It was believed that reliance on local dealers had a positive influence on the perception of Tata Nano and on customer loyalty. This innovation had a social benefit, too, as it provides employment opportunities for people in rural areas.

The case of Tata Nano is an important one, not least due to the fact that the innovation has ultimately failed on the market. It appears that the world’s ‘cheapest car’ will not survive after 2019, following several years of plummeting sales. Despite its affordability, the car’s popularity

has been damaged by its very reputation of being a bare-bones, stripped-down cheap product, indeed the cheapest possible. As many observers have noted, nobody aspired to own the world's cheapest car. The Tata Nano has not been perceived as an attractive purchase for most of the target group, and accordingly lost the competition to motorbikes, which were still a cheaper deal, and to slightly more expensive cars, which appeared as more aspirational purchases (even if it was not clear if their quality-to-price ratio was better than that of Tata Nano). It appears that while Tata Nano was quite an achievement in terms of frugal engineering, it failed in its marketing, as even the BoP cares about image, especially when it came to an important purchase like a vehicle.

While the Tata Nano failed as a product, it was an important case of frugal innovation and engineering. Its very existence instigated a change within the auto industry. Due to the publicity surrounding the car, in the year before it was actually launched, many other carmakers announced plans to design low-cost cars. There is now more awareness in the business of the need to address the BoP and the potential of this customer segment.

The Foldscope (international)

The Foldscope was invented by Manu Prakash and Jim Cybulski in 2010. It is a microscope that has a pierced water-proof sheet of cardstock, spherical glass lens, a light-emitting diode and a diffuser panel, along with a watch battery that provides power for the LED. It uses origami to make a solid cardboard microscope body and precision-manufactured glass beads for a lens. The problem that this innovation addressed is the lack of access to expensive microscopes in poor or rural communities. The design of the Foldscope is simple, and the end-user can assemble it herself. The production costs are less than \$1, which makes the Foldscope very affordable. The Foldscope instruments are shipped to over 130 countries. The main customer segments are kids. The value proposition is to create personal scientific experience providing access to the affordable tool (microscope) (Kabeja, 2018).

The foldscope promotes access to science education in developing countries by drastically reducing the cost of a microscope. The Foldscope program "A microscope for every child" aims at fostering interest in science. The Foldscope Team promotes the product by organizing workshops in rural areas (for example, in India).

Foldscope engages also in user co-creation of innovation. It maintains an online community (Microcosmos) to share tips, tricks and experience with the device, as well as to provide ideas for other innovations (Foldscope Instruments, 2019).

The Meechim Project (Canada)

The Meechim Project is an integrated social enterprise founded in 2015 and based in Garden Hill First Nation - a northern Manitoba community that is only accessible via air and ice roads. The project addressed the problem of food insecurity in the northern communities. It aimed to change the local food system, reduce dependency on southern food supplies, increase employment and training opportunities for locals, and create sustainable impact for the whole community. The project consists of a farm, food market, agriculture-based training, and educational programme for teaching children about food growing and healthy eating.

The value proposition of the project was centred around offering high-quality, healthy, locally grown and harvested food to the community at a more affordable price (compared to the

quality and price offered by southern suppliers). This value proposition was communicated to the local people through word-of-mouth, as well as through the implementation of educational programmes in cooperation with local schools (“School-to-Farm” programme).

The project was initiated and has been led and staffed by indigenous people. They received support for the purchase of farm equipment under the Government of Manitoba’s Northern Healthy Foods Initiative, and joined formal agricultural knowledge and local knowledge to improve crop growing and poultry operation. For example, they used fish as a natural fertilizer for soil to increase the yields.

The level of involvement of local people in the implementation of the project, as well as in sustaining further operation of the farm, has always been high. The First Nation community members have been involved at different levels:

- ▶ *Level of intention:* the project was conceived by a local social entrepreneur to meet the needs of the local community;
- ▶ *Level of consumption:* the produce is sold at the local food market and is consumed by the locals;
- ▶ *Level of impact:* the project has made positive impact on sustainable development of the local community, including:
 - *Environmental sustainability:* the farm does not use any chemicals as fertilizers thus preventing soil and water pollution;
 - *Social sustainability:* the project has generated new training and employment opportunities for youth and adults, and contributed to improving health of the local population by providing access to high quality, fresh and healthy food at affordable price;
 - *Economic sustainability:* the project attracted the financial support of the Manitoba Government, which supplied the initial capital needed for the purchase of equipment. Later on, the farm managed to generate revenue from the sale of produce, which was sufficient to cover their costs. Thus, the project achieved its goal as a social enterprise.
- ▶ *Level of process:* the local community members have been involved in the project from its inception and throughout its implementation. As we mentioned above, the farm is managed and taken care of by the local people.

The Meechim Project is community-led, responding to the local context, ideologically driven and empowering local community members to take part in it. Hence, it gives a good example of inclusive and grassroots innovation.



Learning activity 6:

Analyse these case studies. Identify the characteristics of inclusive and grassroots innovation in each of the cases. What good practices can be drawn from them? Explain the transferability potential, success factors and constraints of the good practices that you manage to identify in each case study.

Further reading

https://www.zef.de/uploads/tx_zefportal/Publications/ZEF_WP_178.pdf

<http://siteresources.worldbank.org/INTPOVERTY/Resources/335642-1124115102975/1555199-1124741378410/honeybee.pdf>

An excellent case study of grassroots innovation – the Honey Bee Network.

The Honey Bee Network is a network connecting innovators, enterprises and investors, which documents and disseminates traditional knowledge and local innovation in local languages, with a focus on ensuring the individual innovators would receive benefit.

<https://grassrootsinnovations.org/2012/06/20/sustainable-development-needs-inclusive-innovation/>

Grassroots innovations are community-led solutions for sustainability. They can offer promising new ideas and practices, but often struggle to scale up and spread beyond small niches. This website presents the latest news and updates from a series of research projects on grassroots innovations, including sustainable energy and complementary currencies, based at the University of East Anglia and University of Sussex.

<https://www.tandfonline.com/doi/full/10.1080/2157930X.2014.925246>

This paper explores the formation and functioning of IPs with the aim of providing lessons on the conditions and factors that play a role in making them effective.

<https://www.inclusivebusiness.net/ib-voices/inclusive-innovation-idea-impact>

The Inclusive Business Action Network (iBAN) is a global initiative supporting the scaling and replication of inclusive business models. Through its strategic pillars iBAN blue and iBAN weave, iBAN manages an innovative online knowledge platform on inclusive business and offers a focused Capacity Development Programme for selected companies and policymakers in developing and emerging countries.

<http://mashelkarfoundation.org/awards/inclusive-innovation/>

The Anjani Mashelkar Inclusive Innovation Award is an annual award of Rs. 1 lakh given to an individual or an organisation for an idea, prototype or a commercialized product, service and business model. The innovation must address the problems faced by the disadvantaged resource-poor people in India and offer an original and implementable solution.

<https://www.technologist.eu/10-great-african-innovations/>

The site presents examples and infographics of 10 great African innovations.

<https://www.worldbank.org/en/news/speech/2017/11/30/innovation-in-africa>

On this webpage you could read the speech “Innovation in Africa” presented by Makhtar Diop (World Bank's Vice President for Africa).

https://disruptingafrica.com/index.php/African_Innovation

Disrupting Africa Encyclopedia is the global site chronicling the lives of inspirational African Innovators and Entrepreneurs.

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Final Assignment

Objective

This learning activity is the final assignment of the module “Inclusive and grassroots innovation”. It aims to integrate the knowledge obtained through the engagement with the learning material in all six lectures and let you apply it to your own project.

After implementing this learning activity, you should be able to generate and rationalize an idea for an inclusive or grassroots innovation project.

Task

Develop an idea for inclusive/ grassroots innovation that is relevant to your local context. Describe your idea using the template provided below. Make sure that it is a realistic idea, which you yourself would consider implementing, should you have a chance to do so.

Template and guiding questions

This template is based on the Business Model Canvas, which is extended by two “building blocks” related to the analysis of the external environment that may either support or hinder the implementation of your idea. Fill in this template by answering the guiding questions. Make your narration up to the point and keep the text in each building block of the canvas within 2 000 characters (incl. spaces).

Title of your idea:
Customer Segment: What customer segment does your idea address? Who will it serve? What are the needs and wants of this target group? What problem do they have that your idea will solve?
Value Proposition: What is the essence of your idea? What makes it inclusive? How will it improve the lives of your target group (customers)? What benefits does it offer them?

<p>Channels: How will you communicate with and reach your customers to deliver your value proposition?</p>
<p>Customer Relationships: How will you create and retain your customers? How will you create awareness of your idea among your customers?</p>
<p>Revenue Streams: If your idea is implemented, how will it earn revenue? How will cash come from your customers, and how will it grow?</p>
<p>Key Resources: What resources will you need in order to implement your idea? Consider human, physical, financial and other resources.</p>
<p>Key Activities: What activities will you need to carry out to develop, implement, disseminate and/or commercialize your idea (solution)?</p>
<p>Key Partners: Who will you need to partner with? How will they help you develop, implement, disseminate and/or commercialize your idea (solution)?</p>
<p>Cost Structure: What will you have to pay for, in order to deliver your idea (solution) to your customers?</p>
<p>Market conditions: Who are your potential competitors? Why your idea (solution) is better than the alternatives currently offered by the competitors? What is your competitive advantage?</p>
<p>Other external forces: Are there any external factors that may support or hinder the development, implementation and dissemination of your idea (solution)? Think about national innovation policy, regulatory environment, demographics, financing opportunities, etc. How will you use the supportive factors, and how will you mitigate the risks arising from the hindering factors?</p>

Presentation

Prepare a text version of the assignment (filled in template) to submit to your lecturer, and prepare a power point presentation to share your idea with your groupmates.



Answers to Self-Assessment Questions

Lecture.1

- Q1: Correct answer(s): 2, 3, 4
- Q2: Correct answer(s): 1, 4, 5
- Q3: Correct answer(s): 3
- Q4: Correct answer(s): 2, 5
- Q5: Correct answer(s): 1, 2, 3, 4

Lecture.2

- Q1: Correct answer(s): 3, 5
- Q2: Correct answer(s): 1, 2, 4, 5
- Q3: Correct answer(s): 1, 3, 5
- Q4: Correct answer(s): 1, 3
- Q5: Correct answer(s): 1, 2, 3, 4, 5

Lecture.3

- Q1: Correct answer(s): 1, 2
- Q2: Correct answer(s): 5
- Q3: Correct answer(s): 1, 3
- Q4: Correct answer(s): 2, 3, 4
- Q5: Correct answer(s): 1, 2, 4, 5

Lecture.4

- Q1: Correct answer(s): 1, 2, 3, 4
- Q2: Correct answer(s): 5
- Q3: Correct answer(s): 1, 2
- Q4: Correct answer(s): 1, 2, 3, 5
- Q5: Correct answer(s): 1, 2, 3

Lecture.5

- Q1: Correct answer(s): 2, 4, 5
- Q2: Correct answer(s): 1, 2, 3
- Q3: Correct answer(s): 2, 3, 5
- Q4: Correct answer(s): 1, 2, 4
- Q5: Correct answer(s): 3, 5

Lecture.5 (learning activity 5)

Poverty reduction; social inclusion; inequality; opportunities; women; inclusive [and] pro-poor; productive employment; social safety nets.



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A large graphic of the AHEAD logo, consisting of a triangle made of smaller triangles in various colors (red, green, blue, yellow, orange, purple).

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