ECONOMIC AND SOCIAL INNOVATIONS IN ARMENIA: CHALLENGES AND OPPORTUNITIES

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Abstract. Innovation is a key driver of economic growth and social progress. Economic and social innovations are essential for fostering inclusive, creative, and sustainable societies. While economic innovations enhance productivity, competitiveness, and technological advancement, social innovations address critical societal needs by improving quality of life, education, and public well-being. In Armenia, the interplay between these two forms of innovation is crucial for sustainable development. However, social innovations often face underinvestment in free-market economies due to their public good characteristics, necessitating strategic interventions from governments and other stakeholders. Governments and private interest groups can play an important role in institutionalizing social innovation through incentives to social innovators.

This paper examines the role of economic and social innovations in Armenia, analyzing their interconnectedness within regional and global contexts. It explores the challenges of fostering social innovation in a developing economy and highlights the importance of government involvement, international collaborations, foreign direct investment, and diaspora engagement. The study emphasizes the need for increased investment in research, education, and human capital to ensure that social progress keeps pace with economic growth. Ultimately, the paper argues that a balanced approach to economic and social innovation is essential for Armenia's long-term prosperity.

Introduction

Recent economic and societal development has essentially been based on the development of high technology, its effective utilization and determined increases in exports. One of the reasons underlying differences in economic growth and income level between developed and developing countries is undoubtedly the technology infrastructures these countries have. While many factors such as the workforce, natural resources, economic and political stability, educational status, density of R&D activities, innovation and so on lead to differences in development and growth among countries, the most important

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factor is the technology on which production is based (Kabaklarli E. et al., 2018). For developing countries like Armenia, it is very important to focus on quality education and research and development activities which will allow to produce and export competitive products or services. In this process for long-run effect, it's also very important not to underestimate the role of social innovations and discuss it as an inseparable part of economic innovations. The European Commission, through Innovation Union, supports innovation due to its capacity to create job opportunities for all, especially the young; get the economy back on track; make companies more competitive in the global market; solve the challenges of an ageing population; secure resources like food and fuel; fight global warming; and improve smart and green transport (Lakatos El. et al., 2016). Social innovation refers to activities and services designed to address social needs, as opposed to business innovation, which primarily focuses on maximizing profit. It is widely recognized that new technologies and products impact social relations, behavior, and attitudes. Additionally, it is understood that the successful development and introduction of new products and technologies depend on their alignment with a specific social context, which includes the organization of social relations, established norms and values, and accepted behavioral patterns. For example, inventions are often only adopted once society is "ready" to embrace them.

The aim of this paper is to find out how parallel with economic innovations social innovations can be created and promoted in the Republic of Armenia and to present the concept, content and essence of social innovation from the RA's economic system perspective. This paper underlines the interconnected nature of social and economic innovations and highlights the government's critical role in promoting social innovation, particularly in education and human capital development.

Innovations must take a social responsibility into account. Innovations should not only focus on the profit aspect but also on the planet and profit aspects of sustainability. Moreover, taking into account that innovation is also disruptive, this can be a challenging demand. Although economic/business innovation is a generator of human well-being, there are other innovations, like social innovations, that have a significant impact on social performance. Economic innovations that help to produce consumer products or services usually increase welfare allowing those goods and service available for us. In this aspect we can divide economic innovations into 3 main groups 1. Information and communication technologies (ICT), 2. Digitalization process and 3. Artificial Intelligence. Although we can consider that most social innovations are economic innovations there will be some kind of social innovations that are subject to market failure because they are not providing profit. That's why, besides economic innovations, countries systematically have to input into producing social innovations which in turn will prevent social development from diverging from economic and technological development.

The main purpose of using social innovations is to create a better life for society. In this aspect we can state that the main feature of social innovations is improvement in quality of life. We can consider quality of life in individual (micro-level) and group of people (macro-level) aspects. On a micro level quality of life determinants could be material well-being, individual characteristics and other sets of valuable options. On a macro level quality of life determinants could be the welfare of society, education and healthcare systems, job security, political stability and security, etc. As a whole country will benefit for social innovations but we can state that none of individuals has sufficient

incentives to pursue them. So, we can consider social innovations as public goods. Therefore, a free market economy will not create a sufficient amount of social innovations. In free-market economies, social innovations are often neglected, requiring deliberate intervention from governments and institutions. That's why governments need to play an important role in order to overcome that market failure. For example, there are many innovations in teaching and learning emerging from universities and other centers of learning that are in the nature of a public good. This suggests that to explain fully the improvement in the living conditions of humankind one has to introduce a new class of innovations that cannot be identified with the set of business innovations. We refer here to the class of social innovations (Pol E., Ville S., 2009). So here we have to differentiate social innovation from economic/business innovations and identify a subset of social innovations that require government support, for example, education and healthcare systems, rural development, poverty, etc.

We can consider innovation as a social process between different actors. In that aspect we can state that innovations bear risks as well as opportunities for society. The concept of social innovation originates in critiques of traditional innovation theory. By calling for social innovation, new theories point at the need to take the social mechanisms of innovation into account. Besides these not only commercial activities need innovation, but also social and public activities, for example, rural development, poverty, healthcare system, etc. Talking about the social innovation concept, we can refer to three main interpretations: 1. The social mechanisms of innovations, 2. The social responsibility of innovations, 3. The innovation of society.

Social innovation has been seen as a way of solving social problems based on a new form of Economics which uses elements of current logics connected with other elements that aim at contributing to social welfare. It deals with changes in the social context in which new institutions and social systems are created in a logic that moves from the individual to the collective. Therefore, different types of social innovations may emerge, such as social businesses. Unlike profit organizations, this kind of business is related to the agreement that a social enterprise should combine profitability and socio-environmental objectives (Bittencourt B., 2017).

Taking into account that social innovations are mainly considered public goods, we have to understand how social innovations can be created and promoted in Armenia. It is clear that developed countries have more chances for economic and social innovations than developing countries but it does not mean that small developing countries like Armenia have no chances at all. We think that in the case of Armenia social innovations can be created and promoted 1. By the Government of Armenia, 2. International Organizations, 3. FDI inflows, 4. Diaspora.

Many studies of social innovation point to the role of networks and collaboration as drivers of success, although we cannot say conclusively that these are necessary conditions for social innovation. In countries like Turkey, China and Russia, for example, the data shows that governmental support for social innovation is indispensable. Secondly, networks and collaboration operate differently in Europe than elsewhere, due to societal differences. In many European countries, people have relatively high trust in the government/democratic system. Moreover, several social innovation cases represent innovative

ways of solving social issues without public body involvement[1]. Taking into account the above mentioned we can state that governmental support for social innovation is crucial for any developing country. In this aspect we think that in the case of Armenia governmental support for social innovation is indispensable because social innovations require resource mobilization and only the government is able to mobilize sufficient resources.

Social entrepreneurship, social enterprise, social cooperation and social partnership are the main forms of social innovation implementation. So, social entrepreneurship is understood as entrepreneurial activity aimed at mitigating or solving social problems, characterized by the following features: social impact, innovativeness, self-sufficiency, scale, replicability (Kisova A., 2021). Despite economic innovation development in Armenia, the country is facing an educational crisis. Every year there are more than 600 teaching vacancies across the system, especially in science, technology, engineering, and mathematics (STEM). Some schools, particularly in rural communities, have gone without STEM teachers for years on end. Teach for Armenia launched several programs to overcome those issues. Tech4Armenia (T4A) is a collaborative initiative between Teach For Armenia and Armenia's leading technological companies. In short, they are working together to provide tech sector staff members at partner companies the opportunity to work remotely with flexible hours so that they can also teach in Armenia's rural public schools with Teach For Armenia. In addition to attracting existing talent from the tech sector into our two-year Teacher Leadership Program (a.k.a. "Program"), Teach For Armenia is also partnering with the Armenian Code Academy to train our alumni to become programmers who aspire to work in educational technology[2]. Teach for Armenia also launched the first incubator in Armenia dedicated to education. The Káits Social Innovation Incubator is one of the Leadership Pathways specifically available to Teach For Armenia's alumni (meaning individuals who have completed our two-year Teacher Leadership Program, a.k.a. "Program"). Káits provides our alumni with the opportunity to continue building upon their experience implementing Student-Led as well as Teacher-Led Innovation Projects. Through Káits, they continue to work with students and their communities in order to co-create and co-implement innovative projects that have the potential to scale[3].

Another project is Impact Hub Yerevan, which is a social innovation incubator. Impact Hub Armenia Social Innovation Development Foundation (aka Impact Hub Yerevan) is a non-profit organization registered and based in Armenia. Impact Hub Yerevan has a mission to support social impact projects and enterprises that propel the positive development of Armenia. Impact Hub Yerevan is also part of a global movement of 107+ Impact Hubs around the world. Part innovation lab, part business incubator, and part community center, Impact Hubs offer their members a unique ecosystem of resources, inspiration, and collaboration to grow impact. Since 2016, Impact Hub Yerevan has designed and implemented 20+ incubation/educational programs, hosted over 500 educational workshops and events, and now hosts more than 350 members with upwards of 100 projects/organizations representing every sector in Armenia within its inspiring social innovation space[4].

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[1] Social Innovation in World Regions. https://www.socialinnovationatlas.net/fileadmin/PDF/kapitel/02_SI-in-World-Regions_v02.pdf, web page visited on 01.10.2024.
[2] Tech4Armenia (T4A) web page. https://www.teachforarmenia.org/en/tech4armenia visited on 28.10.2024.
[3] Kaits web page. https://www.teachforarmenia.org/en/incubator visited on 28.10.2024.
[4] Impact Hub Yerevan web page. https://yerevan.impacthub.net/about-us/ visited on 25.10.2024.

Finally, through the efforts of UNDP and the European Union, Kolba Lab was born as an incubator for citizen-led social innovation. Kolba Lab offered a platform for citizens and innovators to involve themselves in the development process, defining the problem they want to solve, and providing the space to incubate their idea, project and social start-up. Kolba Lab now implementing project "Future Skills and Jobs for Armenia's Rural Youth". This project seeks to enhance opportunities for employability as well as promote self-employment and entrepreneurship amongst youth in the regions of Armenia such as Lori, Shirak, Tavush and Gegharkunik[5].

As we can notice for this stage the government of Armenia's involvement in core social innovation programs is limited and they are mainly conditioned by international organizations working in the Republic of Armenia in that field. We think in order to have more impact government of Armenia has to implement its own social innovation programs based on the need of the country's development strategy policy. Here we think that these social innovations, first of all, have to be created and implemented in the field of education. Taking into account that education is the foundation for innovation, addressing the education gap is critical to Armenia's future social and economic progress.

Table 1

Government expenditure on education, total (% of GDP)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
World	4.4	4.3	4.4	4.2	4.3	4.2	4.1	4.4	4.2	3.7
Low & middle income	3.8	3.7	3.9	3.8	3.8	3.7	3.6	4.0	3.7	3.5
Middle income	4.2	3.9	4.2	4.0	4.0	3.8	3.7	4.2	3.7	3.5
Armenia	2.7	2.2	2.8	2.8	2.7	2.3	2.6	2.7	2.8	2.5

Source: *World Bank Development Indicators 2024.*

Based on the data of Table 1 comparing with the world average government expenditure on education in Armenia is below 1.2%. Moreover, government expenditure on education in Armenia is below that of low- and middle-income and middle-income country groups, with 1%:

Taking into account that Armenia is a developing country with relatively low FDI inflows we can state that the main research and development projects which are very important for innovations have to be financed by the government. Unfortunately, during the recent 10 years (2013-2022) despite economic development research and development expenditures share of Armenia's GDP remained unchanged at 0.2% (Table 2). Comparing with low- and middle-income countries' average indicator, we can see that Armenia's indicator is 10 times lower. In this situation, public and private sectors need to increase investments in R&D.
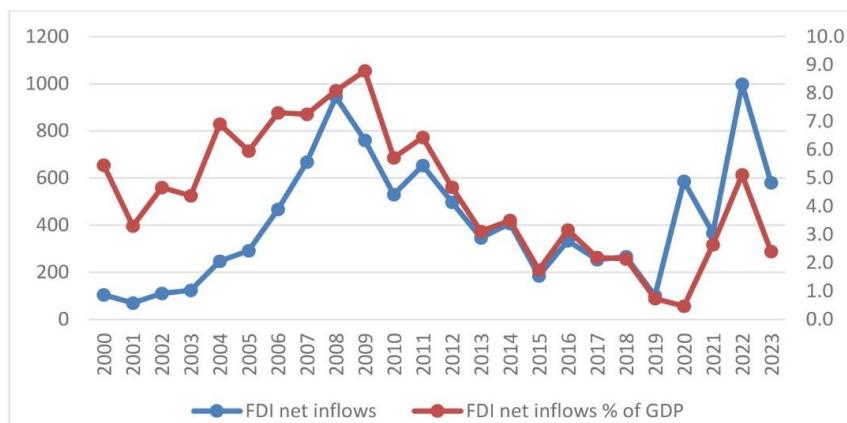
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[5] Kolba Lab web page. https://kolba.am/projects/future-skills-and-jobs-for-armenias-rural-youth visited on 24.10.2024.

Research and Development expenditures (% of GDP)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
World	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.5	2.6	-
Low & middle income	1.2	1.4	1.4	1.4	1.4	1.4	1.5	1.7	2.0	-
Middle income	1.2	1.4	1.4	1.4	1.4	1.4	1.5	1.7	2.0	-
Armenia	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Source: *World Bank Development Indicators 2024.*

According to UNCTAD's World Investment Report 2023, FDI inflows to Armenia stood at USD 998 million in 2022, almost three times the level recorded the previous year. The total stock of FDI was estimated at USD 7.1 billion, around 36.5% of the country's GDP[6]. The electricity and gas supply sector leads the sectoral distribution of FDI flows into the real economy, accounting for 58% (USD 578 million), followed by the mining and real estate sectors, accounting for 15% and 7%, respectively. Russia remained the most prominent investor in Armenia, with approximately 70% of the FDI inflow, amounting to USD 697 million, ahead of Cyprus (7%) and Jersey (4.6%). According to data from the Ministry of the Economy, the volume of foreign direct investment in 2023 was about USD 350 million. As we can see from Figure 1, in 2023, FDI net inflows as a percent of GDP in Armenia accounted for 2.4% compared with the low- and middle country group, where the same indicator accounted for 1%.

FDI net inflows in Armenia from 2000-2023, million dollars

Source: https://www.mineconomy.am/en, web page visited on 01.10.2024.

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[6] Lloyds Bank, Armenia: Investing in Armenia, https://www.lloydsbanktrade.com/en/market-potential/armenia/investment visited on 19.11.2024.

Diasporas can enhance connectivity by promoting trade and FDI, creating businesses and spurring entrepreneurship and innovation, and transferring new knowledge and skills. The largest Armenian population exists in Russia (around 3 million) followed by the United States (around 1.6 million), France (around 650,000), Georgia (200,000–400,000), Iran (60,000–80,000), and Germany (around 60,000). There is increasing recognition that beyond providing economic support through remittances, diasporas can be important sources of knowledge, skills, investment, and business connections. The ICT services sector has a proven track record of building and enhancing business opportunities through diaspora links. In the early 2000s, diaspora connections and prominent Armenians in various ICT hubs around the world played a pivotal role in the accelerated development of the ICT sector. Since then, they have been critical in bringing multinational technological companies to Armenia, setting up local research and development centers, investing in IT educational and infrastructure programs, generating leads for local IT companies, and linking with knowledge and funding sources[7]. As mentioned in the Global Innovation Index 2024, Armenia ranked 63rd place among 132 countries[8]. It seems that not such a bad position among 132 countries, but if we look at innovation pillar indicators here, the picture is not so good. For example, by human capital and research pillar, Armenia has the worst position, 89, followed by business sophistication, 85, and market sophistication, 83. We think that economic innovations have to bring improvement in human capital by social innovations, which in turn, by increasing productivity, will positively impact the future economic growth of Armenia. The low productivity of the labor force continues to be a major development challenge for Armenia. Based on the recent data of the WBG Human Capital Index, Armenia accounted for 0.58 out of 1.

Conclusion

Social innovation is a complex and multidimensional concept that encompasses the social mechanisms, objectives, and societal scope of innovation. The social mechanisms of innovation highlight that the development, diffusion, and use of innovations always take place within a social context, interacting with social relations, practices, norms, and values.

As we found for this stage, the government of Armenia's involvement in core social innovation programs is limited, and they are mainly conditioned by international organizations working in the Republic of Armenia in that field. We think that in the case of Armenia, social innovations can be created and promoted 1. By the government of Armenia, 2. by international organizations, 3. by FDI inflows, and 4. by the diaspora. For Armenia, it's very important to focus on quality education and research and development activities in order to spread social innovations. Unfortunately, during the recent 10 years (2013-2022), despite economic development, research and development expenditures' share in Armenia's GDP remained at 0.2%. In the case of most countries, especially in the case of developing countries like Armenia, government intervention is needed in order to create social innovations or in order for economic and social innovations to take place. Moreover, for this stage, in the case of Armenia, governmental support for social

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[7] Armenia The Second Systematic Country Diagnostic, Beyond Boundaries: Unlocking Potential for a Sustainable Tomorrow, WBG, 2024.
[8] Global Innovation Index, https://www.wipo.int/web-publications/global-innovation-index-2024/en/ visited on 19.11.2024.

innovation is indispensable. In order to have more impact, the government of Armenia has to implement its own social innovation programs based on the needs of the country's development strategy policy. Here we think that these social innovations, first of all, have to be created and implemented in the field of education.

We think that economic innovations have to bring improvement in human capital by social innovations, which in turn, by increasing productivity, will positively impact the future economic growth of Armenia. Without sufficient public investment, Armenia risks falling behind in innovation and societal progress.

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