

14 Promotion of Innovation and ICT in the Progression of Economic Growth and Country Development

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14.1 Abstract

Innovation and Information and Communication Technology (ICT) are necessary to have sustainable development, improve processes, increase competitiveness, provide creative solutions and require qualified human resources, and that is why we need to connect the economy with education. Kosovo has the population with the youngest demographics in Europe and has the potential to turn a big opportunity for economic development. Kosovo is making great progress in the field of innovation and technology to have sustainable development of the economy, to improve processes, to increase competitiveness, to provide creative solutions and require qualified human resources. The digital agenda in the Western Balkans is becoming a reality and it is expected that these countries will integrate on this fast and equitable agenda of Europe. The commitment of Kosovo's citizens is to move towards a new society, a new society that can be built by building the economy and it must be a digital economy. To make the transformation for the next decade with the aim of the digital economy, the transformation of the economic thinking that is not an easy task, but is a process that has to be run by the state or by the community, since young generation is moving faster than the institutions. The young generation accepted the digital economy, they are living with it, and they want to transmit the knowledge.

Keywords: Innovation, ICT, Entrepreneurship, Digital Economy.

14.2 Introduction

Economic growth is based on technology, innovation and, more broadly, knowledge. In addition, Information and Communication Technologies (ICT) are key tools in promoting innovation activities, technology diffusion, and knowledge generation within societies. Indeed, as Information Society paradigm matures, effective use of ICT becomes an indispensable device in promoting sustainable growth [1].

There is concern that developing countries are deprived of the opportunities for economic growth and life improvement generally enjoyed by advanced economies because of the scarcity of ICT, particularly limited Internet connectivity. The lack of ICT is understood to be an important factor contributing to the widening of the gap between 'developed' and 'developing' countries, as shown by world socio-economic indicators published in the annual reports of international development agencies, such as those from the World Bank and the United Nations Development Programme (UNDP). Many high profile initiatives have been undertaken to remedy this problem. They typically aim to create awareness on the benefits of ICT, raise investment, and promote policy measures for the deployment of telecommunications infrastructures and the diffusion of ICT applications in all societal sectors [2].

Due to the unfavorable business environment and the lack of a creative entrepreneurship culture, Kosovo lacks innovative enterprises, which are the main contributors to job creation in the developed Western economies. Based on the SME Development Strategy 2012-2016 with vision 2020, Kosovo is still in the process of completing the basic institutional, legal and regulatory requirements related to SME policies. For this reason, in 2017, the Government of the Republic of Kosovo established the Ministry of Innovation and Entrepreneurship with the

fundamental aim of stimulating innovative activities in Kosovo, which will increase economic and institutional productivity through the development of information technology and efficient entrepreneurship. The two most important departments operating within the MIE are: Department of Innovation (with Division for Innovation, and Division for Technology), and Department of Entrepreneurship (with Division of Entrepreneurship Development and Division of SMEs Promotion and Advocacy).

The main objectives of MIE are to: (i) promote innovation and information technology in the service of economic growth and development; (ii) entrepreneurship development through training / consultancy programs; (iii) consolidation of the ICT fund to support the development sectors of the economy; (iv) the creation of a fund and the institutional support of women and young people in entrepreneurship; (v) the establishment of institutional coordination mechanisms between science, the private sector and policy-making. The specific objectives of MIE are:

1. Promotion of innovation by economic sectors in the service of economic growth and development;
2. Establish institutional coordination mechanisms among science, the private sector and policy-making;
3. Entrepreneurship development through training / consultancy programs;
4. Consolidation of the ICT fund and creation of funds for the support of development sectors (with focus on women and young people);
5. Supporting SME development for facing competitive pressures in the region, the EU and other markets.

Government through financial and non-financial schemes as well as training aims to support: (1) new products; (2) new production methods; (3) new supply methods; (4) the extent of new markets; as well as (5) new business organization methods. In order to further develop the innovation field, the Innovation Council has been established to ensure the establishment of a fund for promoting innovation, the development of public-private partnerships for investment in innovation, the consolidation of the legal infrastructure for "angel investors" and stimulation of innovative science accelerators. In order to support Innovation and Entrepreneurship in function of economic empowerment and creation of new jobs, the Ministry of Innovation and Entrepreneurship (MIE) in March 2019 has made a public call for Start-Up in the field of Innovation and Entrepreneurship.

In support of start-up and innovation businesses, government-level budget has been increased to promote Innovation and Entrepreneurship. By 2018, MIE has allocated over 10 million euros in total. Of this value, over 7 million euros have been allocated to the category of subsidies and transfers to be invested to support entities that within their mission and responsibilities address the innovation field and have a direct impact on SME performance growth and existing start-up businesses. Over 2 million euros from the government budget are intended to be invested in the creation of four Innovation and Entrepreneurship Centers and their functionalization (renovation, laboratory equipment and other accompanying equipment).

The "Start-up" Innovation and Entrepreneurship Funding Program is designed to finance new businesses and initiatives / ideas for creating new innovative businesses for the purpose of economic development and the creation of new job. "Start-Up" funding aims at the economic empowerment of young people, in implementing innovative ideas and business plans. The total call value is 1 million euros.

Approved grants are used to support the creation of innovative enterprises and the promotion of young people and women in business, so that the shared tools will impact on:

- Production or service activities in the field of ICT;
- Increasing export capacity;
- Opening up new jobs;
- Investing in research and development;
- Increase of competitiveness;
- Improving work processes and developing new products;

- Raise the level of youth.

14.3 SWOT Analysis

Based on the information presented in the National Strategy for Innovation and Entrepreneurship, the strengths, weaknesses, opportunities and threats of Kosovo in terms of innovation and entrepreneurship are summarized in the SWOT table below. Although the weaknesses currently seem to exceed the strengths, consultations with various stakeholders have shown the existing potentials in specific areas, where megatrends and social challenges provide prospects and opportunities for future development. Table 1 presents the SWOT analysis derived from the conducted analysis [6-7].

<i>Strengths</i>
Sustainable economic development and steady growth in the last decade; Innovation and Entrepreneurship are high on the political agenda and are well represented, Existence of the Ministry of Innovation and Entrepreneurship; Increasing the harmonization of Kosovo's industrial and innovative policy with EU policies and support programs for SMEs; Legislation and Strategic Sustainable ICT Framework; Good interconnection between municipalities, combined with the availability of hardware and software.
<i>Weaknesses</i>
Low Public Investment in Innovation and Entrepreneurship; Low private sector ability to invest in innovation; The institutional framework of innovation and entrepreneurship has not yet been met; Insufficient coordination between public institutions and private companies; Poor coordination between training and education actors; The academic sector is not willing to provide services to the private sector as a provider of innovation solution; Lack of creativity for academic-industrial cooperation; The legal framework related to innovation has not been completed.
<i>Opportunities</i>
The availability of a small number of graduate but well-educated professionals; The youngest population in Europe, capable of facing the digital transformation of society and industry; The growing number of highly innovative and competitive firms at the international level (mostly from the ICT sector); Rapid development of mobile and internet infrastructure; ICT as a facilitator for the digitization of other important industries; Good level of cooperation between companies; Cooperation between the private sector, the education sector and the government.
<i>Threats</i>
Insufficient co-operation between public and private actors may hamper rapid progress; The unclear role and low capacity of innovation intermediaries hinder their role in supporting the national industry to become more innovative; Brainstorming of young well-educated entrepreneurs due to lack of business opportunities; Innovative firms leave Kosovo or are purchased from foreign firms; The offer of ICT graduates does not meet industry demand; Lack of public investment in innovation and entrepreneurship will not lead to the desired impact.

Table 1. SWOT Analysis

14.4 Prioritizing Kosovo's Sectors with high Potential for Economic Development

A number of thematic pillars have been set for achieving strategic objectives and supporting innovation and entrepreneurship in Kosovo. These pillars form an integrated portfolio of support measures that can quickly adapt to changing market conditions and needs [7].

These pillars are as follows:

1. Developing an integrated system for innovation in the Republic of Kosovo and advancing the conditions of the legal and fiscal framework;
2. Increase the potential for innovation in Kosovar enterprises;

3. Support innovation and entrepreneurship among young people and women in businesses;
4. Promotion and treatment of innovations in sectors with potential for economic development.

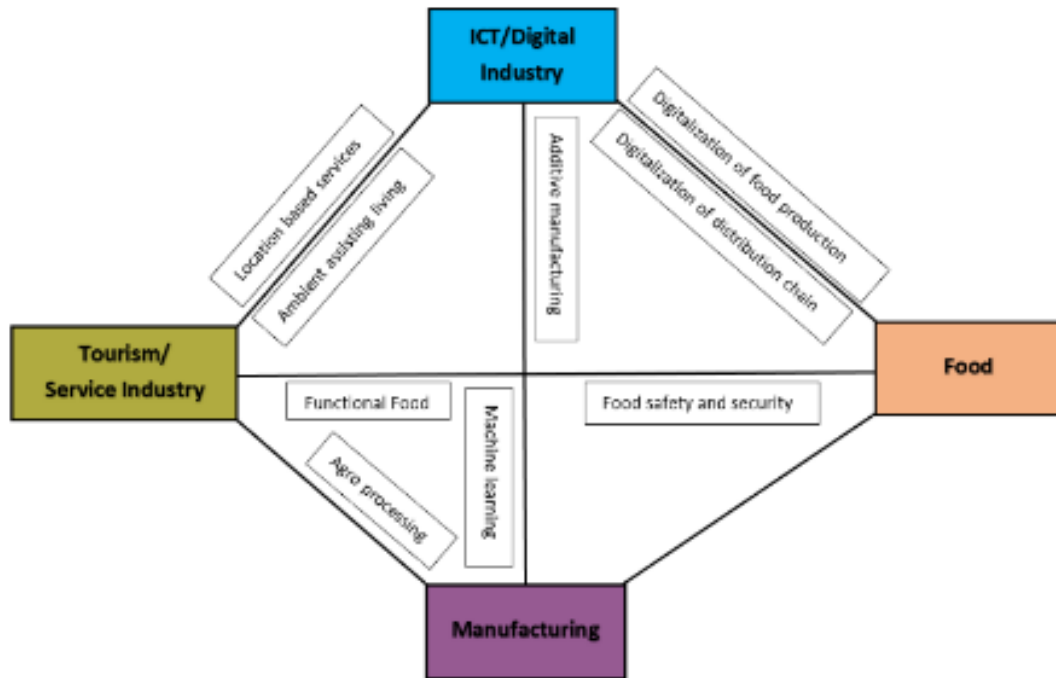


Figure 1: Diamond of synergy S3 of the Republic of Kosovo [7].

However, Pillar 4 emphasizes a more vertical and non-neutral intervention logic, for better review of capacity and transformation opportunities, and to create critical mass in new innovative areas with growth potential above the average. Transformational activities are innovation-related activities carried out by a group of stakeholders targeting the same (technical, market or industrial) field, having the potential to significantly transform existing industries as follows:

- ICT and the interconnected digital industry;
- Food production and processing;
- Industrial production;
- Tourism and interconnected service industry.

The S3 Diamond Symbol for Kosovo grouped the four identified Priority Fields and assumes the identification of Transformational Activities between them (Fig. 1).

14.4.1 Up to date Activities Related to the Implementation of MIE Plans

Promotion of innovation by MIE was done through the establishment of four regional centers of innovation and entrepreneurship (Ferizaj, Prishtina, Mitrovica and Prizren) [10]. In October 2018, in the municipality of Ferizaj, the project for the Center of Innovation and Entrepreneurship in Ferizaj was finalized, a project which will create extraordinary employment potential through the preparation of adequate jobs. Investments in this project are clear evidence of the economic agenda for job development in the region of Ferizaj. In November 2018 was inaugurated the Innovation and Entrepreneurship Center at the University of Prishtina "Hasan Prishtina" (UPHP). This center will be a space for students to work on their ideas for various projects that will contribute to opening new businesses and developing existing ones that enable new jobs. The Innovation and Entrepreneurship Center of the Faculty of Mechanical Engineering (FME) of UPHP will provide counseling and training aimed at linking

our students' knowledge with the market and the economy. The Center's accomplishment marks a step further in view of the objectives pursued by the Center for Reforms at this university, aiming to link the studies with the industry and the labor market, where the product of this will be the innovative and creative student.

The financing of the project for renovation of the premises of the FME-UPHP laboratory facility for the needs of the "Innovation and Entrepreneurship Center in UPHP" at the Faculty of Mechanical Engineering was made by MIE, while the realization of the project was done by the university itself. The Innovation and Entrepreneurship Center will provide space intended for UPHP students, innovative entrepreneurs in the process of para-incubation and incubation and for young people interested in professional innovation. In addition, this Center will also be available for other individual innovators who can use, for their research, innovative ideas. Some of the Laboratories of the Center have begun to equip with equipment that will serve for professional training, see Fig. 2.



Figure 2: MPS (Modular Production System) at the Laboratory of Mechatronics, FME-UP.

In March 2019, a new Innovation and Entrepreneurship Center in Mitrovica has been opened, where there will also be training, labs, investment, research and development for students, teachers, businessmen and all those who have ideas. This is the Center for Innovation at the University of Mitrovica "Isa Boletini" that will make a sustainable link among university, education and business.

In January 2019, the Innovation and Training Park in Prizren was opened, pointing out that Prizren will become the regional center for innovation in the Western Balkans, see Fig. 3. This Park will be functionalized in the space that has been used by German KFOR in Prizren and will be the opportunity for economic development of Kosovo through the creation of space for young people and the internationalization of Kosovo in the digital economy. It is foreseen that various companies that deal with the aforementioned fields will be operating. Its environments are thought to turn into a Kosovar-German center. In an area of 44 hectares, there are 36 large objects. In this country will focus on educational and educational institutions, which will prepare new staff, ready for the labor market. ALG "Loyola-Gymnasium" school has also announced the opening of a training Center.



Figure 3: Park of Innovation and Training in Prizren.

14.4.2 Other Centers of Innovation and Entrepreneurship in Kosovo

Innovation Centre Kosovo (ICK) was founded in 2011 to support entrepreneurship, innovation and commercially based business development, with a focus on information and communication technology. The center supports both start-ups and existing companies with the potential for growth [11]. ICK is a center whose aim is to connect research and development component of scientific field with the business sector, focusing on creating new job opportunities oriented towards the future, based on knowledge and new technology.

ICK offers incubator services, mentoring, consulting and training to entrepreneurs and managers in business planning, accounting, finance, product/service development, marketing/sales, human resources, technology development and transfer and matchmaking with local, regional and international businesses, see Fig. 4.



Figure 4: The ICK Training Department [11].

ICK will both create new jobs through the businesses that supports and train young people for jobs in the broader marketplace. ICK will be a hub for connecting new ideas and technology with human and financial resources to create or expand commercially viable companies that can successfully fill the needs in the market, generating sales, trade, local productive capacity and skilled employment [11].

BONEVET (Albanian word for DO IT YOURSELF) is a non-profit and non-formal educational institution established in 2014 by the private Foundation UNE E DU KOSOVEN based in

Prishtina [12]. BONEVET is a children-friendly environment designed to stimulate children's curiosity, imagination and creativity. Children are encouraged to actively play, make their own games, work together with other children, program robots, make prototypes with 3D-printers and CNC's, solve riddles and puzzles, design and make puppet theatre's, understand the importance of values, develop their communication skills, read books and learn languages, see Fig. 5.



Figure 5: The completed project of the children at the BONEVET educational institution [12].

Only during the year 2017 more than 500 children have attended various classes and in excess of 50 makers, girls and boys, have gained technical and soft-skills in various hands-on projects.

BONEVET has made an important positive impact within the community of Gjakova, and it continues to give hope to the community that was left to itself after the conflict, because many educated and skilled people left home to look for jobs elsewhere [12]. Following the example of Gjakova a second Maker-Kids/Make-Space BONEVET was founded in Prishtina in 2017. In year 2018 more than 700 children are expected to attend various classes in robotics, science, mathematics, electronics, mechanics (CNC and 3D-printing), chess, arts and languages [12].

14.5 Conclusions

The future of Kosovo should be related to the young generation that means to supply them with professional competence, in order to cope with the competitiveness locally, regionally and internationally in order to change the society. The law on innovation and entrepreneurship should be the goal of the government to have the national strategy on innovation, to have the digital coalition, to deploy the funds that have been created for innovation. The set-up of several centers for innovation and entrepreneurship will play the role to share the knowledge among the young generation through training to acquire appropriate skills in business requirements in this regard.

14.6 References

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