Mapping Stakeholders Perceptions on Innovation Skills, through the Borich Needs Assessment Model: Empirical Evidence from a Developing Country

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Abstract: The digital transformation of the economy and the current innovation-oriented labor market requires an important stock of social skills that generate innovators with technical skills. This paper aims to analyze the public and private sector's innovation awareness and civil society and provide a needs assessment analysis concerning innovation skills in Albania. Based on the Borich Need Assessment Model, 44 skills were analyzed according to creativity, collaboration, critical thinking, communication, and self-directed scales through the discrepancy of desired and actual competencies. The needs are assessed using, Mean Weighted Discrepancy Scores (MWDS). The results show that innovation remains an abstract, not clearly defined concept, related to novel and creative thinking. The most important skills linked to innovation, according to respondents, relates to networking. The top five skills linked to innovation are interpersonal management, active listening, cooperation skills, motivation, and trust.

Keywords: innovation; skills; competencies; Borich Need Assessment Model; Mean Weighted Discrepancy Scores; Albania; developing country

1   Introduction

Innovation is becoming an increasingly discriminatory factor between success and failure, both in economic terms and social and institutional perspectives. Innovation is a major factor influencing strategic planning in the current economic scenario. If an established organization is unable to innovate, it faces decline and extinction [1]. For this reason, almost 90% of businesses in Germany, the best-performing economy, believe that innovation is a priority for them [2]. Drawing upon Schumpeter's definition [3], innovation refers to new approaches related to:

(i)   Products

(ii)   Processes

(iii) Services

which lead to wealth creation and improvement to the quality of life. While in a more process-focused and broader perspective, the concept of innovation encompasses designing and creating new activities and ideas that aim to provide the opportunity to face current and future challenges [4]. In this framework, developed economies have already established an innovation-driven economy, helping them behave competitively globally. At the same time, innovation is fundamental for developing countries, which must perform the classic catch-up process to compete in an increasingly competitive global market. Hence, the growth of these economies greatly depends on the level of innovation progress and its influence on enhancing sustainable development. Like other developing countries, Albania is characterized by an efficiency-driven economy [5] while 'the Albanian start-up ecosystem is nascent and ranks among the lowest entrepreneurial ecosystems in Europe [6].

There is an academic discussion regarding the transformation faced by education in post-industrial times, which varies according to economic, political, technological, and ethical perspectives [7]. Indeed, the transition from 'Fordist' to 'post-Fordist' structures requires an important stock of social skills[1] that, in turn, will result in a flexible, multi-skilled workforce operating in a decentralized, participative environment [8]. In the same vein, [9], in a longitudinal study from 1960-2000 that analyzed the most universally required competencies in a modern economy, argue the relevance of social-based skills and the capability of working in an evolving environment using creativity, communication, collaboration, and problem-solving skills. In response, current educational systems must transform their objectives, curricula, pedagogies, and assessments to help all students to attain the sophisticated outcomes requisite for a prosperous, attractive lifestyle based on practical contributions in terms of work and citizenship [10].

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[1]   The term 'skills' is used to refer broadly to what a person knows, understands, and can do.

Additionally, it is suggested that education programs adopt new tools to increase society's capability to engage in continuous self-renewal in response to actual pressure for change [11].

Focusing on innovation skills requires understanding stakeholder perceptions around their needs for such skills. The stakeholders involved in this process remain the key actors in promoting innovation; therefore, it is vital to understand their perceptions on innovation, what is considered fundamental in their understanding to boost innovation, and the pitfalls in terms of what needs to be addressed.

To explore these reasons, three main research questions (RQ) are formulated in this paper:

RQ1: Is innovation defined from the 'hard perspective' or 'soft perspective'?

RQ2: Is there any difference between perceived actual competence and perceived level of importance of the considered skill-set?

RQ3: Do the private and public sector, and NGOs (non-governmental organizations) prioritize specific skills?

Therefore, this paper aims are twofold: First, to analyze the innovation awareness of the public and the private sector, and the civil society and the second aim is to provide a needs assessment snapshot concerning innovation skills in Albania (including all the three sectors) aimed to identify the current innovation skills and the need for intervention to improve them.

For this purpose, the paper is organized into four sections. The theoretical section draws upon the literature to identify the key skills of innovation. The second section provides the methodological framework for the study based on the Borich needs assessment model. The results are discussed in the third section, and an interpretation of the collected feedback is provided. The final section offers recommendations on improving innovation skills in the current Albanian landscape.

2   Theoretical Framework

The digital transformation of the economy is reshaping how people work and do business since current approaches of operation by companies or start-ups influence the skills demanded, with a prevalence of innovation and entrepreneurship. Most sectors are undergoing a rapid technological change in the digital revolution, and digital skills are needed regardless of the job profile. The skills required by employers are changing, with soft skills harmonizing with those more technical in what is considered a T-shaped education. In this respect, the vertical component refers to the technical capacities (or hard skills), while the

horizontal element refers to transversal capacities (or soft skills). The concept posits that in the current innovation-oriented labor market, we do not need simply engineers, for example, but innovators with technical skills. This is the reason why soft skills are increasingly integrated into technical education [12] [13]. The work in [7] has identified an inventory of soft skills related to innovation employed by organizations such as Greenpeace, the World Bank, the OECD, Google, Apple, and Samsung. The skills taxonomy developed based on the studies of [7] and [14] allowed us to create a comprehensive but straightforward classification of soft skills, which are fundamental for developing innovation capacities. These can be categorized as follows: creativity skills, collaboration skills, critical thinking skills, communication skills, self-directed skills.

The five soft skills' scales, presented in Table 1, are applied in our research as an 'analysis unit' to assess fostering of innovation processes within the organization in every sector (in the public and the private sectors, and at NGOs).

Table 1

Description of the skills

Descriptions of the skills	
Creativity skills	Creative visioning, Creativity, Ability to generate new ideas and solutions, Ability to do things differently, Alertness to new opportunities, openness to new experiences, curiosity, proactiveness, ability to cope with no routine tasks and uncertainties, Moderate resistance to change, Risk-taking abilities.
Collaboration skills	Cooperation skills, Team work skills, High sensitivity to external environment, Interpersonal management, Interpersonal Influence, Ability to motivate others, Leadership able to support others, Ability to build trust, Ability to mobilize the capacities of others, negotiating skills, Active Listening, Brokering (information exchange)
Critical thinking skills	Problem-solving skills, Ability to rapidly acquire new knowledge, Exchange and combine knowledge, Analytical thinking, Ability to combine and interpret, Willingness to question your own and others' ideas.
Communication on other social skills	Communication, Courtesy, Flexibility, Integrity, Interpersonal Skills, Positive Attitude, Professionalism
Self-directed skills	Motivation and engagement, Ambition, taking initiatives, Goal orientation and generation, Self-esteem, Self-efficacy and control, Ability to focus on tasks, Ability to perform well under pressure

Source: Adapted from Dede (2010) and Cobo (2013)

2.1   Creativity Skills and Innovation

In this paper, the concepts of creativity and innovation are considered independent to analyze the context in which innovation skills develop. Creativity and innovation have been emphasized as essential skills for the 21st Century since

these skills can promote human potential [15] [16]. Creativity remains key among the innovative skills that generate value as it enables professionals to discover new ideas and opportunities that contribute to innovation. A subsequent study by [14] analyzed individual innovation competencies in different studies and concluded that personal features such as creative thinking, social skills, and networking are necessary to the collaborative innovation process. These skills are crucial at both personal and organizational levels to enable the 'blooming' of innovation potential for staff and organizations alike.

2.2   Collaboration Skills and Innovation

Scholars have identified a relationship between the networking behavior of an organization and its capacity to innovate [17]. The study mentioned above shows that the principal benefits of networking are: risk sharing, obtaining access to new markets and technologies; speeding products to market; complementary pooling skills; and acting as a critical vehicle for obtaining access to external knowledge [17]. Social skills such as networking have a double impact: a) at the intra-organization level, they facilitate networking and teamwork between employees; b) at the external level, they assist inter-organizational interaction and cooperation among various stakeholders. Both levels positively impact innovation thanks to exchanging new ideas and information sharing.

2.3   Critical Thinking and Innovation

In contemporary debates about the nature of higher education, one concept that looms particularly large is that of critical thinking [18]. Similarly, governments and employers argue that all education sectors must prepare individuals who can think well and for themselves, a common term bound up with what is called 'critical thinking' [19]. Published research suggests that teaching approaches in tertiary education focus on subject matter content rather than developing critical thinking [19]. Moreover, the lack of clarity about the nature of critical thinking leads to confusion about this concept and the required skills for innovation and critical thinking maybe the opposite sides of the same coin. This idea has recently received a new impetus because secondary and tertiary education graduates frequently find themselves in workplaces exposed to large-scale technological and social change. From this perspective, education and training programs should innovate and design curricula to help students develop the dispositions or attitudes associated with critical thinking.

Combined with communication skills, these skills must be institutionalized as a deep value in any organization.

2.4   Communication Skills

Effective communication is particularly appreciated in teamwork and introducing and encouraging innovation to catch on (for both customers and investors) of the various social skills. For this reason, there is a positive relationship between communication skills and innovation. Communication allows employees to share their ideas, build self-confidence, and be motivated, inspired, and creative at work [20] [21] [22]. Moreover, it can also enhance the networking skills directly related to innovation capability [23] [24]. Communication skills remain crucial to introducing innovative ideas in a particular way to potential investors and customers since an understandable language can make the difference between a successful innovation deployed in the market and an innovative idea.

2.5   Self-directed Skills and Innovation

An increasingly competitive environment pushes companies to think ahead and adapt solutions as competitive and future-oriented as possible. Self-directed skills contribute to renewal, whereby it helps to redesign processes and novel technologies that enable them to face future challenges [25]. Based on the concept of 'your pain my gain', private companies constantly remain vigilant to potential customers' challenges and problems, which, thanks to innovative solutions, will transform into future business opportunities. Everyday challenges in the public sector are less related to future orientation than the non-routine problems of the private sector, which usually demand more creative thinking and solution-oriented approaches [26]. However, even the public sector conducts constant efforts on identifying innovative approaches, focused principally, but not only on research and services to the public, which aim to improve the citizens' quality of life.

3   Materials and Method

3.1   Research Instrument

There is a broad discussion on the most appropriate method of data collection concerning skills that foster innovation within an organization because limited information is available on the direct impact of skills on innovation. For this purpose, an open question was applied first to explore the definition of innovation. In addition, the existing (actual skills) and required competencies were investigated by the *Borich Needs Assessment Model.* Several researchers [27-29] have applied the *Borich Needs Assessment Model* to identify training needs for different curriculum development and follow-up purposes. According to this

model, a training need is described as a discrepancy or gap between 'what is, the present state of a particular skill concerning the group and situation of interest, and 'what should be', or the desired state [27]. The author has conceptualized needs as a discrepancy analysis that identify two polar positions: the actual ability, or what is, and the importance, or what should be. This paper employs the Borich model to identify training needs. Following this model, a weighted discrepancy score is calculated for each competency by multiplying the disparity score by the mean of importance rating. A mean weighted discrepancy score for each skill is calculated by taking the sum of the weighted discrepancy scores and dividing by the number of observations.

The research focused on the *actual competencies* and *the required level of competencies* concerning the above explained five sets of skills. The actual level and the relevance of competencies were conducted applying five-point-Likert scales. A discrepancy score for each respondent on each skill is calculated by taking as follows [29]:

$$Borich's\ Needs = \frac{\sum (RCL - PCL) \times \overline{RCL}}{N} \tag{1}$$

$\overline{RCL}$ (Average Required Competency Level): Average score of importance for each competency

RCL   (Required Competency Level): Each individual's importance score

PCL   (Present Competency Level): Each individual's performance score

N: Total number of cases

3.2 Sampling

This primary research applied an online survey that was carried out between December 2019 and February 2020 to a volunteer sample of students in public institutions, the private sector, and NGOs employees. Judgmental or purposive sampling was applied for this paper. The sample was screened in two steps. Firstly, according to data accuracy, and missing data, as a result from 600 questionnaires 542 were valid. Secondly, the sample was further screened, only those respondents were included into the assessment model who have defined the innovation process. Thus, from 542 valid questionnaires, a sample of 449 (83%) was built.

The application of the purposive sampling technique is appropriate in the case of developing countries because we can gather the information that would not have been possible using probability sampling techniques, which require more formal access to lists of populations involved in all of the sectors considered in this study. Table 2 presents the demographic variables.

The questionnaire was organized into two sections; the first was dedicated to the demographic characteristics of respondents such as age, education, sector, number of employees, and work experience. In the second section, the respondents defined the innovation according to their best knowledge and consecutively have rated their level of competence according to 44 indicators of innovation skills, grouped into five pillars:

1) Creativity skills

2) Collaboration skills

3) Critical thinking skills

4) Communication skills

5) Self-directed skills

As mentioned above, of 542 respondents, 449 defined innovation. Thus, only these have been included in the needs assessment analysis. The respondents scored according to their perception of their actual competencies on the skills around innovation and the degree of importance these skills exercise in their daily work. Cronbach's alpha values showed a high degree of internal consistency (Cronbach's Alpha=0.9).

Table 2
The demographic distribution of the sample

Variables	Description	Sample %		Mo	Me	Mean	Sd.
Age category	18-30	78	(1)	1	1	1.2	0.5
	31-40	17	(2)				
	Over 50	5	(3)				
Education level	up to 12 years	3.7	(1)	3	3	2.6	0.6
	Bachelor diploma	34	(2)				
	Master's Degree	58	(3)				
	PhD	4.3	(4)				
Work experience	Less than 1 year	31	(1)	2	2	2.1	1.1
	1-3 years	41	(2)				
	3-5 years	14	(3)				
	5-7 years	6.3	(4)				
	More than seven years	7.7	(5)				
Sector	Private sector	71.2	(1)	1	1	1.7	1.0
	Public sector	23	(3)				
	Non-governmental organizations (NGOs)	7.3	(4)				
Number of employees in the organization	1 to 9	15.5	(1)	3	3	2.6	0.9
	10 to 49	25.5	(2)				
	50 to 249	38.5	(3)				
	250 and more	20.5	(4)				

Source: Authors' construction, N=449

4   Discussion of the Results

4.1   Qualitative Results

One of the objectives of this paper is to understand and explore the nature of innovation according to the respondents. The research approached this topic from a qualitative perspective. About 82% (449 respondents) of respondents defined innovation according to their best knowledge. Through content analysis, about 61% (331 respondents) considered innovation as a novelty, new ideas, and the implementation of new concepts. About 19% (103 respondents), of respondents considered innovation to be the creation of new products, technology, and services to meet consumer needs (in line with the definition of innovation). A total of 12% (65 respondents), regarded innovation as an improvement process, while, 7% (38 people), defined it as a process of technological change. This result shows an inclination to consider innovation more from a soft perspective. For most respondents, innovation remains an abstract, not clearly defined concept related to novelty and creative thinking. However, the relation of innovation to address customers' needs, to relate to processes or products, or more directly focused on technology improvement, remains more distant. Such discrepancy demonstrates a limited presence of a structured innovation process in most organizations involved in the questionnaire. Respondents have a vague general understanding of innovation as a concept but not as a structuralized process, which must be finalized in an improved product, service, process or technology. This clearly shows the need to implement training and learning focused on making innovation happen as a process finalized in improving the quality of life for customers (private companies) or citizens (public organizations and NGOs).

Moving from the overall perspective of innovation to reveal the awareness and perceptions of skills linked to innovation from Albania's employees' perspective, this paper employs the five soft skills' categories presented above. The following sections present the results, giving insights into the respondents' perceptions of the relation between the five soft-skills categories and innovation.

4.2   Creativity Skills

Regarding the perceptions of creativity skills, the results show that all such skills scored below approximately four, and there is no important discrepancy between the perceived score and the required score in the following skills: *openness to new experiences*, *curiosity and proactiveness* (Table 3). Hence, it seems that the perception of these skills possessed the required level.

Table 3
Perceived and required competence of creativity skills

Skills	Mean Perceived (actual) Competence	Mean Required Competence	Mean discrepancy score	Mean weighted discrepancy score
Creative visioning	3.6	3.7	0.14***	0.5
Creativity	3.5	4.1	0.5***	2.1
Ability to generate new ideas and solutions	3.6	4.1	0.5***	2.1
Ability to do things differently	3.5	4	0.5***	2
Alertness to new opportunities	3.7	3.8	0,16***	0,4
Openness to new experiences	3.8	3.8	No difference	0.07
Curiosity	3.9	3.9	No difference	0.26
Proactiveness	3.7	3.7	No difference	0.2
Ability to cope with no routine tasks and uncertainties	3.4	3.6	0.16***	0.59
Moderate resistance to change	3.5	3.7	0.18***	0.6
Risk-taking abilities	3.5	3.6	0.11***	0.4
Total Mean	**3.6**	**3.7**		

Note: P=probability; *** = P<0.001

Source: Authors' construction, N=449

Concerning the demographics, the study shows that respondents with work experience ranging from five to seven years showed a significant score on *creativity* with the highest score, *(F(value)=3.173; p(value)=0.01)*; and *ability to do things differently* (*F(value)=2.728; p(value)=0.02*), which demonstrates that younger generations are more inclined to consider creativity as a critical aspect of innovation.

Regarding *moderate resistance to change* (*F(value)=2.774; p(value)=0,04*), this is statistically different within the considered sectors: the public sector shows a higher resistance to change, which is in line with results from other studies [26].

According to [26], there is a difference between the public and private sectors when considering the change. Change in the private sector is an instrument to increase competitiveness. In contrast, the public sector is more resistant. There is no immediate pressure from a competitive operating environment, combined with

the costs associated with adopting change in terms of time and new competencies make the public sector more resistant to change. Regardless of the discrepancy between public and private sector willingness to change, curiosity remains a common denominator, as it is highly rated in both the public and private spheres. Considering curiosity as a pre-condition to innovation, we can argue that there is hope for developing innovation skills in the future. The results also show that generating new ideas and solutions is highly scored in the private sector.

4.3   Collaborative Skills

The analysis of this set of skills shows a higher discrepancy between the currently perceived competencies and the assigned importance, or what it should be, compared to the other set of skills (Table 4). This implicitly shows that the respondents have highly evaluated those skills. The highest discrepancies are cooperation skills, interpersonal management, active listening, motivating others, and generating trust. This interesting result shows that cooperation is considered a must in fostering innovation in Albania, but it is still not sufficient. The ability to collaborate and work in a team show statistically different mean importance scores. Respondents over 40 years old assigned high scores to these skills (*respectively mean=4 and 4.5 Ability to cooperate* ($F(value)=3.209$; $p(value)=0.04$) and those related to *teamwork* ($F(value)=3.598$; $p(value)=0.02$).) Different scoring is given regarding the actual competence on the following skills within organizations according to the number of employees: in organizations that have ten to 49 employees scored highly 1) the *ability to work in a team* ($F(value)=6.829$; $p(value)=0.000$), 2) *high sensitivity to the external environment* ($F(value)=5.451$; $p(value)=0.001$), 3) *the ability to manage interpersonal relationships* ($F(value)=3.061$; $p(value)=0.02$), *motivate others* ($F(value)=3.744$; $p(value)=0.011$), *yield trust to others* ($F(value)=4.226$; $p(value)=0.006$), *the ability to negotiate* ($F(value)=3.662$; $p(value)=0.01$), and *active listening* ($F(value)=10.757$; $p(value)=0.000$). While the employee in the public sector scored the *active listening* skill as very important ($F(value)=5.252$; $p(value)=0.001$), those in the NGO sector assigned their high score to the ability to mobilize the capacity of others. These results show that cooperation as a necessity in small organizations is based either on a more efficient process or inter-personal collaboration. Respondents' feedback shows that in Albanian mid and large-sized organizations, collaboration is not an institutionalized and structuralized process, and it has predominantly been left to the individuals will. However, the lack of cooperation and related dimensions can hinder operational and management processes and lead to insufficient performance [30].

Collaboration skills are highly scored, confirming the current need for cooperation due to limited organizational strategies and trust in the partners' network. The limited institutionalization of collaboration is not only an intra-organization issue.

Table 4

Of collaboration skills

Skills	Mean Actual	Mean Needed	Mean discrepancy score	Mean weighted discrepancy score
Cooperation skills	3	4.1	1.1***	4.7
Teamwork skills	3.4	4.2	0.8***	3.2
High sensitivity to the external environment	3.1	4	0.9***	3.2
Interpersonal management	2.6	4.1	1.5***	5.8
Interpersonal influence	3.4	4	0.6***	2
Ability to motivate others	3	4.1	1.1***	4.6
Leadership, able to support others	3.9	4.2	0.3***	0.9
Ability to build trust	3.2	4.1	0.9***	3.9
Ability to mobilize the capacities of others	3.3	4	0.7***	2.9
Negotiating skills	3.2	4.1	0.9***	2.9
Active listening	3	4.2	1.2***	4.9
Brokering (information exchange)	3.5	4.1	0.6***	2.3
Total Mean	**3.2**	**4.1**		

Note: Note: P=probability; *** = P<0.001

Source: Authors' construction, N=449

In Albania, cooperation between partners in the triple helix–government, industry, and academia – also remains weak [31]. The main reasons for such weak cooperation at the network (intra-partner) level relate to the limited trust of the public sector in public administration and the characterization of the latter by politicization and bureaucratic decision-making processes. This is further confirmed by the results, which also show that stakeholders in Albania consider the ability to generate trust and collaborative skills to be very important in undertaking their activities and yielding better results. The *ability to cooperate,* combined with *teamwork skills*, are highly scored by respondents over 40 years old, which is explained by the benefits they have reaped through teamwork during their long working experience.

4.4   Critical Thinking Skills and Innovation

The T-test paired comparison between actual competencies on these skills and the required proficiency show significant differences in all considered critical thinking

skill-sets (Table 5). The most considerable discrepancy is observed in *exchanging knowledge with others* and the *willingness to question their ideas* and those of others. The first is explained by the less cooperative behavior of Albanian employees in both public and private sectors due to a lack of mutual trust and a counter-reaction to forced cooperation during the communist regime [31]. Furthermore, it shows limited efforts made by organizations to promote and set an operational framework for exchanging knowledge. A still fragmented application of the rule of law, especially on copyrights and industrial cooperation, forces companies to keep cards close to their chest as the best way to preserve the comparative advantages achieved. For that reason, institutes and organizations (primarily private) avoid collaborating unless it is under the auspices of an internationally-funded project that requires them to do so [32].

Consequently, initiatives at the institutional level have a limited chance of upscaling outside the organization. The most significant discrepancy is observed in *exchanging knowledge with others* and questioning *their ideas*. These might reflect cultural-related characteristics, especially concerning the power distance dimension[2]. Albania is a hierarchical society with a high-power distance culture, and consequently, a lower level of communication and knowledge exchange prevail within the organization [33].

Table 5
of critical thinking

Skills	Mean	Mean	Mean	Mean
Problem-solving skills	3.6	4.1	0.5***	1.8
Ability to rapidly acquire new knowledge	3.8	4.1	0.3***	1.4
Exchange and combine knowledge	3.3	4.1	0.8***	3.1
Analytical thinking	3.6	4	0.4***	1.8
Ability to combine and interpret	3.6	4	0.4***	2
Willingness to question your own ideas and those of others	3.4	4	0.6***	1.9
Total Mean	**3.6**	**4.1**		

Note: P=probability; *** = $P<0.001$
Source: Authors' construction, N=449

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[2]   Hofstede 2011, https://www.hofstede-insights.com/product/compare-countries/

4.5   Communication Skills and Innovation

The paired t-test shows that the discrepancy between existing skills and required skills is significant in all considered skills of this set (Table 6). Employees with less than one year of experience gave a higher score to *communication skills* (*F(value)=4.368; p(value)=0.002*). This is justified by their need to know more about the organization, while more experienced employees prefer not to share much and keep the acquired advantage to new colleagues. Organizations with more than 249 employees offered high scores on the importance of *flexibility* within the organization (*F(value)=3.489; p(value)=0.01*). The result demonstrates a rather rigid structuring of mid-large scale organizations in Albania, which limits communication among different departments or sectors of the same organization. An interesting finding is that employees of NGOs highly rated skills such as *communication* (*F(value)=2.773; p(value)=0.05*) and *flexibility (F(value)=4.391; p(value)=0.005*) as very important compared to the public and private sectors. Various topics can explain this and issues NGOs are involved in Albania, while companies and public organizations prefer to focus on their areas of acquired competence and little room for flexibility.

Table 6
of communication skills

Skills	Mean Actual	Mean Needed	Mean discrepancy score	Mean weighted discrepancy score
Communication	4	4.1	0.1**	0.5
Courtesy	4	4.3	0.3***	1
Flexibility	3.8	4.2	0.4***	1.2
Integrity	3.8	4.2	0.4***	1.3
Interpersonal skills	3.7	4	0.3***	-1.3
Positive attitude	3.9	4	0.1***	0.60
Professionalism	4	4.2	0.2***	0.7
Total Mean	**3.9**	**4.1**		

Note: P=probability; ** = P<0.01; *** = P<0.001

Source: Authors' construction, N=449

4.6   Self-directed Skills and Innovation

The results regarding self-directed skills are presented in Table 7. When actual competencies are considered, ambition and the ability to focus on tasks are ranked highest. Respondents also evaluated *goal orientation* and the *ability to focus on tasks* as the most important skills. A paired t-test comparison between the actual degree of competence and the needed degree shows a significant difference

between what actual skills are scored and how they should score. Such results identify another area of innovation skills, where a specific intervention in terms of training and professional learning is expected.

Table 7
of self-directed skills

Skills	Mean Actual	Mean Needed	Mean discrepancy score	Mean weighted discrepancy score
Motivation and engagement	3.8	4.1	-.364***	1.4
Ambition	3.9	4.1	-.181***	0.7
Taking initiatives	3.6	4	-.453***	1.8
Goal orientation and generation	3.8	4.2	-.366***	1.5
Self-esteem	3.7	4.1	-.384***	1.5
Self-efficacy and control	3.7	4	-.313***	1.2
Ability to focus on tasks	3.9	4.2	-.269***	1.1
Ability to perform well under pressure	3.6	3.9	-.313***	1.2
Total Mean	**3.7**	**4.1**		

Note: P=probability; *** = P<0.001
Source: Authors' construction, N=449

Regarding the effect of demographics and the importance of self-directed skills, the analysis of variance shows that the ability to take the initiative and focus on tasks scored highly among the group aged between 18 and 30 years old. About the effect of education on these skills, a significant effect is observed in motivation and engagement. Respondents holding a Bachelor's degree assigned higher importance to this skill, while those with a Master's degree ranked self-esteem as of higher importance in improving daily activities. This result refers to the fact that having a Master's degree offers more opportunities in terms of job positions, which in turn enhances self-esteem. This result is in line with Tóth-Téglás et al. [34]. Sector activity shows a significant effect on the ability to *perform well under pressure* (*mean=4.2 change (F(value)=3.065; p(value)=0.02)*) and the *ability to focus on tasks*. These two skills are highly scored in the civil society sector (*mean=4.5; F(value)=2.847; p(value)=0.03)*). Employees of this sector consider that these two skills are very important and substantially impact achieving their goals. This can be explained because the NGO sector is more dynamic, and employees have to cope with and perform under pressure.

Perceptions of *self-directed skills* show that respondents highly scored the *ability to focus on tasks*. Focusing on a task cannot inherently promote innovation in the administrative units since these units usually deal with daily routine activities [35]; [36]. Furthermore, the *ability to focus on tasks* is highly scored among 18 and 30. In this context, the result is unusual because younger employees are less

focused on daily tasks, and innovation is defined as bringing new energy and ideas into the organization, especially when job autonomy is high [37]. Young people bring fresh air and focus on their tasks. They can see what works and what does not; the perspectives of those who have been with the organization for a long time are generally contaminated, so it falls to the newer cohort to spur innovation.

The *ability to rapidly acquire new knowledge*, *analytical thinking*, and *interpret and combine new knowledge* are highly scored in the private sphere compared to the public sector. According to [38] and [39], the public sector's barriers to innovation mainly relate to the limited competition and financial stimulus, unqualified employees, resistance to change, etcetera. However, creating an appropriate climate for innovation development in the private sector is necessary for its survival [40].

Conclusions

The results of this study provide an overview of the most important skills needed for innovation, for three business sectors: Public, Private and NGOs. No variances attributed to the different skill-sets are observed among the sectors, showing that those skills carry the same weight for all sectors. The most important skills linked to innovation, according to Albanian respondents, are related to networking and creativity, respectively, in first and second place. These findings are important not only in providing a snapshot of the current situation in the public, non-public and private sector but, above all, for understanding the necessary steps required to avoid any pitfalls.

The Borich Needs Assessment model is usually used to identify and prioritize the hard skills needed relating to different training purposes [27-29], and the result of this study shows that it can be used to prioritize the skills required for innovation in developing countries, such as Albania. However, we must consider some limitations of the Borich needs assessment in prioritizing the set of considered skills. Inaccurate actual and importance scores, can be produced, due to a lack of experience and employees' self-assessment level of skills, within different sectors.

The results constitute an important framework from two perspectives: education on innovation; and further research. In terms of education, these results call for implementing a short- and medium-term strategy to promote innovation. From the short-term perspective, it is fundamental to use these results to craft professional training for current staff as a part of life-long learning which will provide a comprehensive framework on the key components of innovation and how to develop them organizationally (obviously tailored to the characteristics of the organization). These should include a focus training on those needs that are already considered necessary, and explaining why the other needs not yet considered by respondents also play a fundamental role in innovation. However, this training cannot substitute a more structuralized introduction, to innovation in the curricula of universities. Innovation is driven by T-shaped experts who are technically equipped and possess the soft skills necessary to trigger and enhance

innovation. Conducted through a comprehensive methodology, this approach calls for a revision of the university curricula. For that, academic staff can also draw upon the results of studies like this one, which evidence the skill needs to promote innovation across the Albanian landscape and identify the pitfalls stakeholders perceive to develop such capabilities. However, stakeholders have to consider that innovation is highly affected by the cultural and institutional environment and the perceptions of stakeholders.

Concerning further research, this paper may constitute a pioneering step towards assessing the innovation needs in all three sectors, in developing countries, such as, Albania. We wish to explore further improvements in the approach and methodology described this current work. Our results can be employed in the future to understand how the perceptions, needs or understandings of innovation have changed. This could be vital, if the research objective is to assess whether policies undertaken by public institutions or individual steps undertaken by private companies, have produced the expected results in the promotion of innovation.

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