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METRIC CHARACTERISTICS OF THE ENTREPRENEURIAL PROPENSITY SCALE (SKP-6)

ABSTRACT: The aim of this paper is to construct and verify the psychometric characteristics of a psychological instrument that operationalizes the propensity towards entrepreneurship, i.e., entrepreneurial orientation. The main subject of measurement is activism potential, as a basic component of entrepreneurial orientation. The development of the instrument lasted three years. The instrument is designed to be one-dimensional. This paper presents an exploratory and confirmatory factor analysis which was performed on a sample of 400 high school senior students of both genders. The results confirmed the authors' initial assumption that the SKP-6 scale is one-dimensional.

KEY WORDS: test, entrepreneurship, activism orientation, exploratory and confirmatory factor analysis

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1. Introduction

This paper presents a claim that entrepreneurship as a concept has a basis in the field of both economics and psychology. The economic approach focuses on identifying the importance and role of entrepreneurship in social development through acquiring material benefits. The psychological aspects of entrepreneurship may be examined at the community level, when they involve the development of social consciousness or entrepreneurial culture, as a set of certain values and attitudes. The psychological approach may also apply to the individual potential and preferences towards entrepreneurship.

Although the material component of entrepreneurship is important both for starting one's own business and for its self-sustainability, an increasing number of authors point out that money is not a sufficient motivating factor for entrepreneurship. Njegomir (2023) gives a broader overview of different approaches and conclusions of individual authors about the characteristics of entrepreneurs. Thus, for example, he lists and analyzes the lists of characteristics by Parker (2018) and Penezić (2003), which indicate both socioeconomic circumstances, such as financial incentives and social capital, and individual characteristics, such as vision and commitment, self-confidence, innovation, optimism and the like. In the review the author places a special emphasis on the list of characteristics of successful entrepreneurs published by the Harvard Business School (HBS, 2020). It includes curiosity, structured experimentation, adaptability, determination, self-confidence, teamwork, risk tolerance, willingness to fail, persistence, innovation and long-term focus. The above list was the inspiration for the authors to search for sociopsychological constructs that would include most of the above characteristics and that would be the subject of operationalization for a measuring instrument of entrepreneurial potential.

We adopted the psychological approach to entrepreneurship (Ahmet et al., 2010; Altinaz et al., 2012; Bojanović, Čizmić, & Petrović, 1995; Cuervo, 2005; Jakopec, Miljković Krečar, & Sušanj, 2013), focusing on the *entrepreneurial intentions* construct. In our previous research (Franceško, Nedeljković, & Njegomir, 2022) we chose to introduce the term entrepreneurial orientation. The term refers to the extent to which

young people think about themselves and their professional role in terms of entrepreneurship as a potential orientation rather than a relatively firm occupation characteristic of current entrepreneurs. By using the term orientation, we tried to unify the psychological dimensions of intention, self-efficacy, and desirability of entrepreneurship. We view entrepreneurship as a potential value, i.e., as a particular value system that develops through formal and informal education through the process of socialization. The ultimate outcome of that process is the tendency to be one's own boss in achieving the standard of living and commitment to realizing one's own ideas. Furthermore, the business and market are recognized as the social context in which the individual strives to realize these important and complex motivations.

Based on the analysis of the characteristics of (successful) entrepreneurs, we identified three key complex, basic, cognitive and social needs that define the psychological space of motivational orientation towards entrepreneurship. Our hypothesis includes achievement motive, power motive, and self-actualization. The achievement motive (Franceško et al., 2022; Franceško et al., 2023) is defined an orientation towards setting goals, a tendency towards competition, perseverance in achieving exceptional success in an area important to the individual, and a tendency towards planning, i.e., designing specific actions to achieve the desired outcome. The power motive involves a person's tendency to influence the outcomes of social situations involving other people and events. Self-actualization refers to a propensity toward self-realization and a sense of fulfillment, accomplishment, personal satisfaction, and self-efficacy. These motives are accompanied by a proactive attitude towards life, called activism orientation. Their common feature is that they belong to social motivation, which means that they predominantly arise during socialization.

Besides proactive orientation, successful entrepreneurs share some instrumental behaviors which serve to operationalize the abovementioned motivational potentials. These behaviors have an instrumental value and are a prerequisite for a person with an activism orientation to approach the feeling of self-actualization. Some of these behaviors are found in components of the achievement motive, such as persistence and the tendency towards planning, which further includes other constructs, such as time perspective.

The main research questions are thus: does the individual have the capacity to realize an entrepreneurial orientation and in what way? Answering the first question involves identifying the potential for a proactive attitude towards life and work. The second question opens a personal and social dilemma whether young people try to realize their activism potential through constructive or destructive actions, such as entrepreneurship, on the one hand, and on the other, violent acts, competition, and the belief that the ends justify the means.

The aim of the research is the construction of an instrument for measuring the activism potential of young people, as a basic component for the development of entrepreneurial orientation.

2. Method

2.1. Sample

The sample consisted of 400 high school seniors, aged 18 and 19, 233 of which were female and 167 males.

2.2. Instrument Development and Procedure

The test that operationalized the entrepreneurial orientation (SKP) was constructed in 2021 as a one-dimensional scale (Nedeljković, Franceško, & Njegomir, 2021). The first version of the test had 10 items. The results of the pilot study, conducted in 2021 and 2022, showed that four items had poor metric characteristics, so they were dropped from the test. Subsequently, an extensive survey using a six-item SKP-6 scale was conducted during the second half of 2022, in 2023 and the first half of 2024. The items are in the form of statements with a five-point Likert scale, ranging from Strongly Disagree to Strongly Agree. In the Results section, a detailed analysis of the metric characteristics of the SKP-6 test will be presented.

3. Results

3.1. Descriptive Statistics

Table 1. Basic Descriptive Indicators of the SKP-6 Scale

	Min.	Max.	Mean	SD
skp1 – I am passionate about achieving my goals.	1	5	3.27	.780
skp2 – I have a great desire for achievement.	1	5	3.50	.719
skp3 – I am self-confident.	1	5	3.19	.801
skp4 – I am goal-oriented.	1	5	3.20	.767
skp5 – I am persistent and do not give up easily.	1	5	3.31	.768
skp6 – I am ready to take initiative.	1	5	3.31	.838

Table 1. shows that the arithmetic means are around theoretic average of 3.

3.2. Reliability

The scale has an excellent reliability – 0.85, expressed by Cronbach's alpha (Fajgelj, 2014). The average item-total correlation is 0.64 and the individual item-total correlations of the items are in a very acceptable range (from 0.54 to 0.74) (Nunnally & Bernstein, 1994). The results at this level of analysis confirm the initial assumption about the one-dimensionality of the scale of propensity towards entrepreneurship (SKP-6).

3.3. Exploratory Factor Analysis

Data sample adequacy value (KMO = 0.87) and Bartlett's test of sphericity $\chi^2 (15) = 934.217$; $p < 0.01$ show that conducting a factor analysis on the intercorrelations data is sensible. The assumption of one-dimensionality of the scale was verified by the principal component method. The obtained results show that the scale explains 57.77% of the variance of the initial solution (Table 2).

Table 2. Variance in latent metric space of the SKP-6 scale

	Initial solution			Extraction sums of squared loads		
	Characteristic root value	% variance	Cumulative %	Characteristic root value	% variance	Cumulative %
1	3.466	57.771	57.771	3.466	57.771	57.771
2	.718	11.966	69.738			
3	.576	9.607	79.345			
4	.540	9.004	88.349			
5	.360	6.006	94.355			
6	.339	5.645	100.000			

Table 3 shows factor saturations, i.e., items correlations with the main object of measurement, propensity towards entrepreneurship. The highest saturation is 0.837 (item 4) and the lowest is 0.708 (item 6).

Table 3. Factor saturations

items	saturations
skp1 – I am passionate about achieving my goals.	.806
skp2 – I have a great desire for achievement.	.773
skp3 – I am self-confident.	.665
skp4 – I am goal-oriented.	.837
skp5 – I am persistent and do not give up easily.	.758
skp6 – I am ready to take initiative.	.708

3.4. Confirmatory Factor Analysis

Using confirmatory factor analysis (CFA) we additionally checked the construct validity of the scale using EQS 6.1 for Windows (Bentler, 2006). CFA was performed on the covariance matrix using the robust maximum likelihood method (Sattora & Bentler, 1994). Model fit was assessed using the following indicators: the Sattora – Bentler chi square ($SB\chi^2$), the Sattora – Bentler chi square and degrees of freedom ($SB\chi^2/df$) ratio, standardized root mean squared residual (SRMR), root mean squared error of approximation (RMSEA; Steiger, 2016), the Bentler – Bonett normed fit index (NFI; Bentler & Bonett, 1980) and the compar-

ative fit index (CFI; Bentler, 1989). The following values are considered indicators of good model fit: $SB\chi^2/df$ less than 3, SRMR and RMSEA of .05 or less, and NFI and CFI above the value of .95 (Kline, 2005).

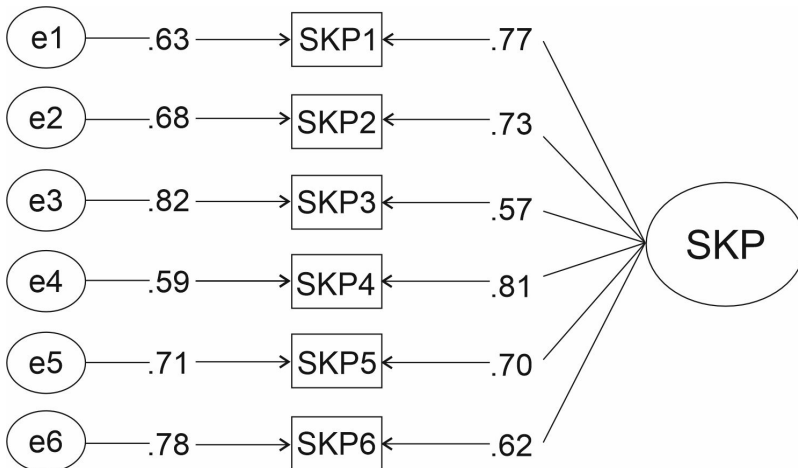
Table 4. Indicators of good model fit in CFA

model	$SB\chi^2$	ss	$SB\chi^2/ss$	RMSEA (90% CI)	SRMR	GFI	CFI	NFI
1	40.236	9	4.47	0.093 (.065 – .123)	0.021	0.97	0.96	0.96

Note: 1. = original 6-item test model; $SB\chi^2$ = Satorra – Bentler correlation χ^2 statistics; RMSEA = root mean squared error of approximation; SRMR = standardized root mean squared residual; GFI = global fit index; CFI = comparative fit index; NFI = normed fit index.

The results in Table 4 show that the hypothesized model is good and fits the data. The only noticeable deviation in the $SB\chi^2/df$ indicator is that it does not fit into the recommended values.

Figure 1. SKP-6 one-factor model structure



Note: skp1 – I am passionate about achieving my goals; skp2 – I have a great desire for achievement; skp3 – I am self-confident; skp4 – I am goal-oriented; skp5 – I am persistent and do not give up easily; skp6 – I am ready to take initiative.

Figure 1 shows that each individual item of the entire scale is highly saturated with the general factor, ranging from .57 to .81.

4. Conclusion

The result of the present research is a six-item measure that assesses the orientation towards setting goals, taking initiative or realizing goals, the degree of commitment to achieving one's goals accompanied by the sense of self-confidence. This commitment and self-confidence come to the fore especially in problematic situations, when one demonstrates the willingness to overcome obstacles and to persevere in achieving one's goals. The common feature of these responses is activism orientation. Therefore, we can say that the object of measurement of this one-factor instrument is activism orientation, defined also as activism potential or activism motivational charge.

It is important to note that in self-reporting instruments, the obtained results cannot be interpreted as the existence and degree of activism potential in the individual. They rather reflect propensity, desire, or effort. Whether and to what extent the activism charge is present in an individual can be determined based on a combination of data obtained through self-assessment and monitoring, i.e., by observing responses as defined in this instrument. The degree of agreement between these two sources of data yields an objective measure of activism potential in an individual.

To determine the entrepreneurial orientation of young people, it is necessary to determine their attitudes about entrepreneurship, and to measure the degree of activism potential. In other words, it is important to look at whether and to what degree they think that they can and want to realize their ideas and their activism charge via entrepreneurial means.

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