BIG FIVE, NARCISSISM AND ENTREPRENEURIAL INTENTIONS: SERBIAN STUDENTS CASE

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The paper examines the influence of the dimensions of Big Five and Narcissism on dimensions of the Theory of Planned Behavior and Entrepreneurial intentions. The moderating effect of the item Student success (the perception of the students on their success) in studying on these relationships was also examined. The research was carried out in Serbia, and the respondents were students. The sample included 400 respondents. Extroversion, Openness to experience and Narcissism have the strongest positive influence on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension. The influence of Conscientiousness is positive, but somewhat weaker and concentrated on the Subjective norm dimension. Neuroticism has a weak negative influence, while the correlation analysis showed that there is a statistically significant negative influence on the Theory of Planned Behavior dimensions. Agreeableness has no influence, with the exception of one statistically significant and positive correlation with the Subjective norm dimension. In the case of Low Student success, Extroversion and Narcissism has a stronger positive effect on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension than in the case of High Student success. In general, narcissistic persons have a high opinion of themselves, are full of selfconfidence, and are highly motivated to be successful, rich, and admired by other people. They see entrepreneurship as an opportunity to achieve what they think they deserve. Suggestions are made regarding the use of these potentials and the translation of a negative phenomenon, such as narcissism, into something useful for society.

Keywords: Big Five, Narcissism; Theory of Planned Behavior; Entrepreneurial intention; Students; Serbia.

INTRODUCTION

Entrepreneurship is a complex process, consisting of several different stages, where the formation of entrepreneurial intentions is one of the most important (Hisrich et al., 2013). Accordingly, there is a big numebr of authors who agree that the existence of entrepreneurial intentions is very important for making a decision to start one's own business venture, entrepreneurial behavior and, finally, the creation of a company (Fayolle et al., 2006; Koe, 2016; Kolvereid, 1996; Liñán & Chen, 2009). Entrepreneurial intentions are important and deserve attention because they have been proven to confirm entrepreneurial behavior (Koe, 2016; Sahinidis et al., 2019). The importance of the dynamics that connect entrepreneurial intentions and entrepreneurial action are indicated by Delanoë-Gueguen and Fayolle (2018). A study (Matić et al., 2023) done in the countries of Western Balkans show how entrepreneurial barriers influence on enterpreneurial intentions.

Because of all this, it is quite expected that a large part of the research in the field of entrepreneurship relates precisely to entrepreneurial intentions, that is, the study of the factors that influence their Numerous references formation. deal with determining the conditions, influences, reasons, causes, personal characteristics and various effects of the environment, which lead to an individual developing entrepreneurial intentions, and then translating these intentions into entrepreneurial behavior and entrepreneurial action. Thus, the emergence of entrepreneurial intentions and entrepreneurship in general are investigated by different variables. Among others, the effects of the Big Five traits are often examined and, somewhat less often, the effects of narcissism as influences on entrepreneurial intentions.

This paper examines the effects of Big Five personality traits and narcissism on the dimensions of the Theory of Planned Behavior and Entrepreneurial intentions dimension, among students in Serbia. According to (Antoncic et al., 2015) the Big Five personality traits can potentially be used to predict the entrepreneurial startup of the firm and entrepreneurial intentions. The Big Five model defines personality traits classified into five dimensions: extraversion, agreeableness, conscientiousness, neuroticism and openness to experience (Gosling et al., 2003). Previous research undoubtedly confirms the influence of Big Five individual personality traits on entrepreneurial intentions, for example (Israr & Saleem, 2018; Sahin et al., 2019; Schlaegel et al., 2021; Zaremohzzabieh et al., 2019). Antecedents of entrepreneurial intentions are drawn from the Theory of planned behaviour (TPB), that include attitudes towards entrepreneurship, subjective norms and perceived behavioural control (Krueger et al., 2000). There is a number of explorations of the TPB approach in the context of entrepreneurial intentions and University stundents (Krueger et al., 2000; Liñán & Chen, 2009; Liñán et al., 2011). When it comes to narcissism, there are certain differences in previous studies. Thus, the positive effects of narcissism on entrepreneurial activities, and in general the tendency to engage in entrepreneurship are confirmed by a large number of references (Brownell et al., 2021; Kollmann et al., 2019; Leung et al., 2020; Leung et al., 2021;

Tucker et al., 2016), but there are also findings that do not speak affirmatively about the relationship between narcissism and entrepreneurship (Liu et al., 2019; Liu et al., 2021).

Bearing the above in mind, it is useful and significant to examine the observed relationships in conditions in Serbia. The impression is that these influences have not been sufficiently examined so far, when it comes to students in Serbia. In addition, on a broader level, there is a lack of research dealing with the effects of the Big Five and Narcissism on the dimensions of the Theory of Planned Behavior, and this is precisely what is examined in the paper (in addition to the impact on entrepreneurial intentions). Also, one moderator is introduced into the analysis: Student success in studying, which is a novelty in research on the observed issue. Here, the potential motives of narcissistic persons for engaging in entrepreneurship are certainly interesting, and therefore it is worth examining them and possibly using them. In this sense, at the end of the paper, some practical aspects of the research were reviewed, which are mostly based on the use of results related to the influence of Narcissism and moderator Student success in studying.

THEORY AND HYPOTHESES

Big Five and entrepreneurial intentions

There are numerious studies that confirm the correlation between The Big Five individual personality traits and entrepreneurial intentions. Israr and Saleem (2018) have found that at Italian students extraversion, agreeableness, and openness to experience showed positive relationship, while neuroticism showed a negative relationship with entrepreneurial intentions. When it comes to Turkish studentds Sahin et al. (2019) came to the conclusion. that openness to experience, conscientiousness, and the absence of extraversion have influence on entrepreneurial intentions. The random-effects meta-analysis of zero-order correlations in the findings of 31 studies show that high entrepreneurial intention is in association with greater levels of openness, extraversion, and conscientiousness, along with lower levels of neuroticism and agreeableness (Zaremohzzabieh et al., 2019). A study among German, Russian and American students indicate, that emotional stability (the opposite to neuroticism), extraversion, and are relevant determinants openness of entrepreneurial intention in at least one of the mentioned countries. Emotional stability is the most relevant in Germany, extraversion in Russia, openness in the USA when it comes to the relation with entrepreneurial intentions (Schlaegel et al., 2021).

There are also studies that besides The Big five on entrepreneurial intention incule some other factors. For instance, Personality traits from the perpective of gender were associated with entrepreneurial intentions (Laouiti et al., 2022). In the aforementioned study it was found that emotional stability and high openness to experience was the most important things in relation to entrepreneurial intention among the French students both male and female. Laouiti et al. (2022) concluded, that female students who have high entrepreneurial intentions have the following personality traits: lack of extraversion, along with high openness, emotional stability and conscientiousness. According to Bazkiaei et al. (2020) big-five personality traits and also entrepreneurial education cause attitude which in turn affects entrepreneurial intention at Malaysian students. Malaysian students were also included in the research (Bazkiaei et al., 2021), the relation between concerning big-five personality traits, entrepreneurial motivation, perceived behavior control, subjective norm, attitude toward entrepreneurship and educational factors on entrepreneurial intention. Big-five personality traits are key determinants impacting attitude toward entrepreneurship and on influencing entrepreneurial intention (Bazkiaei et al., 2021).

Khan et al. (2021) investigated the connection between the big five personality traits and entrepreneurial intentions with the mediating role of risk aversion of Pakistanian students. The aforemention authors concluded, that conscientiousness has a significant positive influence on entrepreneurial intentions while extroversion, openness to experience neuroticism, and agreeableness are not significantly influenced by entrepreneurial intentions directly. Butz et al. (2018) used a mediational analyses to identify the degree to which grit mediated the effects of the Big Five on entrepreneurial intentons of 500 undergraduate students at a Midwestern university in the United States. They found that openness, conscientiousness, and neuroticism predicted grit. The results have shown that grit fully mediated the positive effect of conscientious on entrepreneurial intent. Also, the negative effect of neuroticism on entrepreneurial intent was fully mediated by grit (Butz et al., 2018). Personality traits, but not entrepreneurial parents, predicts early variety orientation, skill variety, and entrepreneurial intentions among 873 adolescents from Finland (Krieger et al., 2021).

Theory of planned behavior and entrepreneurial intentions

The link between Theory of planned behaviour and entrepreneurial intentions are presented in this part. The results among University students in Colombia show a positive relationship between the TPB and entrepreneurial intentions (Rueda Barrios, et al., 2022). Positive relationships between theory of planned behaviour and entrepreneurial intentions, but no relationships between subjective norms and entrepreneurial intentions were found in a crosssectional survey and self-report data among university students (Hung Kee & Khan, 2021). According to (Bazkiaei et al., 2021) there is a significant predictive effect of subjective norm and perceived behavior control on entrepreneurial intention among Malaysian university students. On the other hand, students in Saudi Arabia find that subjective norms have not much influence on entrepreneurial intentions (Alshebami et al., 2022).

There are also some papers that analize the impact between TPB and social entrepreneurial intentions. A study (Wach et al., 2021) among university students in Namibia and Germany have made an analysis between TPB and social (SEI) and commercial (CEI) entrepreneurial intentions. It was shown that TPB only poorly predicts SEI, especially in Namibia. While a positive effect of perceived behavioural control on CEI was found in both countries (Wach et al., 2021). In contrary, a study in Asia (Chang et al., 2021) with 832 college students prove that all aspects of the Theory of Planned Behavior have a positive and significant impact on social entrepreneurial intention.

Narcissism and entrepreneurial intentions

Brown and Zeigler-Hall (2004) associate narcissism with a person who has a strong sense of self-importance, a person who expects and seeks excessive admiration, considers himself privileged and is arrogant. Narcissists tend to exploit other people and often view other people as inferior. It has been shown that employees with narcissistic traits have lower work performance, especially in situations where they are expected to help colleagues (Judge et al., 2006). Machiavellianism, narcissism and psychopathy form the dark triad or malevolent traits, which include aggressiveness, ruthlessness and selfinterest (Paulhus & Williams, 2002). People who have pronounced values of these traits, accept risk more easily, have a high desire for achievement and greater self-confidence (Wu et al., 2019), are selfish, strive for money and a high status in society (Bouncken et al., 2020). People with higher levels of narcissism are more inclined to take risks (Mathieu & St Jean, 2013), which can also have a positive impact on entrepreneurial intentions. Therefore, the characteristics of the dark triad, including narcissism, carry within them some potential for engaging in entrepreneurship.

The results of some research show that narcissism has a positive effect on entrepreneurial intentions (Leung et al., 2020), as well as that narcissism has a positive effect on the recognition of business opportunities and their better use (Tucker et al., 2016). Similarly, narcissism has a positive effect on both entrepreneurial idea formation and entrepreneurial performance (Brownell et al., 2021). People with pronounced narcissism tend to impress other people, and entrepreneurship can be a good way to do this because it allows high social status. Due to the desire to be liked by others, people with high narcissism values are ready to give up their desire for manipulation and control, and are more ready to adapt and cooperate. Entrepreneurs who show a medium level of narcissism have a higher chance of getting investment for their start-up compared to their counterparts who show low or very high levels of narcissism (Leonelli et al., 2020). Employees with values narcissism show higher high of entrepreneurial intentions (Al-Ghazali & Afsar, 2020). The positive influence of narcissism on entrepreneurship has been confirmed in the work (Leung et al., 2021), especially in early stages of the entrepreneurial process, that is, in the formation of entrepreneurial intention and entrepreneurial orientation. Narcissism contributes to entrepreneurial capability and the belief in one's entrepreneurial capability (Kollmann et al., 2019).

However, in addition to risk taking, narcissism can negatively affect opportunity recognition and learning from mistakes, which are important aspects of entrepreneurship (Liu et al., 2021). This inability to learn from entrepreneurial failure in people with narcissism is also confirmed by Liu et al. (2019). Considering the previous, two hypotheses were set up in this paper:

- H1: There is a statistically significant correlation between the dimensions of Big Five and Narcissism and the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension.
- H2: There is a statistically significant predictive effect of the Big Five and Narcissism on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension.

Also, a research question was st up, which refers to the potential moderating effects of the item Student success in studying. As it is difficult to assume the outcome of the moderator effect test, this part does not pose a hypothesis, but rather a research question:

RQ: Is there a moderating effect of the item Student success in studying on the relations between the dimensions of Big Five and Narcissism and the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension?

METHOD

Survey instruments (measures)

The Ten Item Personality Inventory (TIPI) was used to measure personality type developed by Gosling et al. (2003). The Big Five personality dimensions that were alanyzed are: openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability. In order to determin the respondents Big Five personality traits, the responses are ranked on a seven point Likert scale.

A short version of the Narcissistic Personality inventory (NPI-16) (Ames et al., 2006) was used to measure Narcissism. The same questionnaire was used in the reference (Mathieu & St-Jean, 2013). The questionnaire consists of 16 items, where each item consists of two statements and the participant must choose the value that is closest to the state he considers to be realistic (in his own case). Respondents used a seven-point Likert scale, so that for each item a score of 1 represents the strongest "non-narcissistic" statement, while a score of 7 represents the strongest "narcissistic" statement.

The Theory of Planned Behavior dimensions and entrepreneurial intention dimension were measured using the Entrepreneurial Intention Questionnaire (EIQ) (Liñán & Chen, 2009). The questionnaire has 20 items that make up 4 dimensions. Respondents evaluate using a seven-point Likert scale. The dimensions are: 1. Personal attitude, 2. Subjective norm, 3. Perceived behavioral control, 4. Entrepreneurial intention. The first three dimensions (Theory Planned of Behavior dimensions) refer to personal attitudes, desires, opportunities and abilities for entrepreneurship, they represent motivational factors, antecedents, which influence entrepreneurial behavior (Ajzen, 1991; Liñán, 2004; Liñán & Chen, 2009). The fourth dimension (entrepreneurial intention) precisely measures the degree of existence of firm entrepreneurial intentions.

Student success in studying was measured through the item "I am an excellent and very successful student", where respondents (students) were supposed to express their perception regarding the degree of success they achieve in their studies. At the same time, this perception is expressed according to a seven-point Likert scale: 1 - I do not agree at all, 2 - I mostly disagree, 3 - I slightly disagree, 4 - Neutral attitude, 5 - I slightly agree, 6 - I mostly agree and 7 - I agree completely.

Participants and data collection

The respondents were students, and the research was carried out at seven faculties in Serbia. Students filled out the questionnaires electronically, via the Google platform, but also by directly filling out the questionnaires. Later, all answers were grouped into one database. A total of 400 valid questionnaires were collected.

According to the grades they gave for the item "I am an excellent and very successful student", the students were divided into two groups: Low Student success (students who perceive themselves to have somewhat lower success in their studies) and High Student success (students who perceive themselves to have a high success in studies). Given that the majority of students highly valued success studying (which their in is understandable), the division into these two groups was made by making the first group (Low Student success) students who rated this item with grades 1, 2, 3, 4 and 5, while the second group (High Student success) consists of students who rated this item as 6 and 7. In this way, the sample is evenly divided, so the first group (Low Student success) consists of 203 (50.8%) respondents, and the second group (High Student success) consists of 197 (49.2%) respondents.

RESULTS

Descriptive statistics

Descriptive statistics for the dimensions of Big Five, Narcissism, the Theory of Planned Behavior and Entrepreneurial intention, are shown in Table 1. Cronbach's alpha values range from α =0.703 to α =0.954.

Table 1: Descriptive statistics

Names of dimensions	Abbr.	Ν	Min	Max	Mean	Std. deviation	α
Extroversion	Е	400	1,000	7,000	5,20000	1,417754	0,812
Agreeableness	А	400	1,000	7,000	5,34250	1,155327	0,703
Conscientousness	С	400	2,000	7,000	5,78000	1,121827	0,772
Neuroticism	N	400	1,000	7,000	3,08250	1,304780	0,748
Openness to experience	0	400	1,500	7,000	5,88625	1,060305	0,723
Narcissism	NAR	400	1,000	6,625	3,66313	1,112482	0,895
Personal attitude	PA	400	1,000	7,000	5,23000	1,460834	0,926
Subjective norm	SN	400	1,000	7,000	5,89667	1,255848	0,850
Perceived behavioral control	PBC	400	1,000	7,000	4,59250	1,408116	0,926
Entrepreneurial intention	EI	400	1,000	7,000	4,31208	1,746232	0,954

Correlation analysis

Coefficients of correlation between the dimensions of Big Five and Narcissism and the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension, are given in Table 2. Pearson's correlation was used: *p<0.05; **p<0.01.

Regression analysis

The predictive effect of the Big Five and Narcissism (independent variables) on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension (dependent variables) was examined using Multiple Regression analysis. The results of the regression analysis are given in Table 3 (statistically significant predictive effects are marked with bold font and shaded fields).

Table 2: Correlation analysis

Tuble 2. Correlation analysis					
	PA	SN	PBC	EI	
Ε	,236**	,216**	,364**	,228**	
Α	,061	,141**	,027	-,030	
С	,177**	,243**	,215**	,112*	
Ν	-,110*	-,115*	-,175**	-,094	
0	,273**	,280**	,299**	,202**	
NAR	,114*	,010	,245**	,226**	
*n<0.05· **n<0.01					

*p<0.05; **p<0.01

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			Independent						
Dependent	Е	А	С	Ν	0	NAR	\mathbf{R}^2	F	Sig.
			β						
PA	0,110	- 0,016	0,072	- 0,011	0,195	0,065	0,099	7,233	0,000
SN	0,099	0,035	0,140	- 0,011	0,173	- 0,028	0,110	8,083	0,000
PBC	0,217	- 0,047	0,089	- 0,046	0,161	0,158	0,192	15,548	0,000
EI	0,112	- 0,061	0,033	- 0,012	0,143	0,173	0,100	7,299	0,000

Student success in studying as a moderator

The results of the correlation analysis between the dimensions of Big Five and Narcissism and the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension, for Low and High Student success, are given in Table 4. The examination of the moderating effect of Student success in studying was performed using Hierarchical regression analysis. The results, where the moderating effect was confirmed, are marked with bold font and shaded fields.

Table 4: Moderator effect item Student success in studying

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Student success		PA	SN	PBC	EI	
	Ε	,356**	,203**	,450**	,300**	
Low	Α	-,002	,085	-,038	-,116	
	С	,222**	,220**	,178 [*]	,135	
Student success	Ν	-,183**	-,210***	-,154*	-,099	
	0	,301**	,284**	,231**	,153*	
	NAR	,217**	,059	,311**	,340**	
	Ε	,136	,224**	,280**	,165*	
High Student success	Α	,152*	,204**	,103	,081	
	С	,164*	,266**	,265**	,104	
	Ν	-,030	,001	-,202**	-,091	
	0	,254**	,272**	,363**	,250**	
	NAR	,025	-,049	,176*	,121	
*p<0.05; **p<0.01						

DISCUSSION

Discussion of correlation analysis results

The results of the correlation analysis (Table 2) show that of the Big Five dimensions, the Theory Behavior dimensions of Planned and Entrepreneurial intention dimension are positively influenced by Extroversion, Openness to experience and Conscientiousness, while Neuroticism has a negative influence. It should be noted that the influence of Neuroticism on the Entrepreneurial intentions dimension is negative, but not statistically significant. Agreeableness has no influence, with the exception of one positive connection with the Subjective norm, which is logical: agreeable people are also cooperative, pleasant and have trust in other people (Goldberg, 1990; Robbins & Judge, 2009), so they gain support from your environment for various things, including for potential entrepreneurship.

The result according to which Extroversion, Openness to experience and Conscientiousness have a positive effect, Neuroticism has a negative effect (although not statistically significant), and Agreeableness has no effect on Entrepreneurial intentions, to the greatest extent agrees with numerous previous researches, for example (Antoncic et al., 2015; Brandstätter, 2011; Sahinidis et al., 2020; Zaremohzzabieh et al., 2019; Zhao et al., 2010).

Extroversion and Openness to experience certainly have the strongest influence. Extroverted people are social, communicative, approachable and assertive, while open people are interested in new experiences, curious and creative (Goldberg, 1990; Robbins & Judge, 2009). All of this can contribute to a favorable influence on attitudes towards entrepreneurship, a favorable assessment of one's own abilities to engage in entrepreneurship, and finally, an increased desire to actually start a private business. The influence of Conscientiousness is positive, but somewhat less pronounced. Here we should single out the stronger connection between Conscientiousness and the Subjective norm. The explanation is similar to the case of the Agreeableness and Subjective norm relationship: conscientious people are organized, responsible, reliable, persistent (Goldberg, 1990; Robbins & Judge, 2009), so they easily gain the trust and support of people around them.

Correlation analysis also shows that Narcissism has a positive effect on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension. The exception is the dimension Subjective norm, on which Narcissism has no influence: apparently narcissistic persons have not special support from the environment. However, it is clear that Narcissism can produce positive attitudes towards entrepreneurship, provide selfconfidence to run one's own business, and cause the emergence of entrepreneurial intentions. There is probably a phenomenon where narcissistic persons think that they are more valuable than others, that they are particularly important and that they deserve more than other people, so they come to believe that they have more ability to engage in entrepreneurship. Also, their beliefs are also the sources of the need for achievement and motivation to take risks and, ultimately, to develop entrepreneurial intentions. Why entrepreneurship? Because for narcissistic persons, entrepreneurship represents the possibility of gaining power, reputation, wealth, admiration of others, that is, everything that they believe belongs to them by the nature of things.

Existing research confirms the positive relationship between Narcissism with achievement and selfconfidence (Wu et al., 2019), the positive relationship between Narcissism and the desire for money (Bouncken et al., 2020), the positive relationship between Narcissism and belief in one's entrepreneurial capability (Kollmann et al., 2019), as well as the positive relationship of Narcissism with Entrepreneurial intention (Al-Ghazali & Afsar, 2020; Leung et al., 2020).

Bearing in mind the results of the correlation analysis and the previously presented discussion, it can be stated that hypothesis H1 is confirmed.

Discussion of regression analysis results

The results of the regression analysis (Table 3) show that the Big Five dimensions: Extroversion, Openness to experience and Conscientiousness, as well as the Narcissism dimension, have a statistically significant predictive effect. In this, the dimension Openness to experience has the strongest effect, followed by Extroversion, and Narcissism. The predictive effect of the dimension Consciousness occurs only on the dimension Subjective norm. All these results are completely consistent with the results of the correlation analysis and discussed above.

Due to the effect of a larger number of independent variables, the predictive effect of Agreeableness and Neuroticism is now missing, although it was not excessively expressed in the correlation analysis, except that Neuroticism had statistically significant and negative correlations (but not so strong) with the Theory of Planned Behavior dimensions. Other independent dimensions took over. In fact, the regression analysis highlighted some of the relationships from the correlation analysis.

Of the observed dependent variables, Perceived behavioral control has the strongest predictive effects, and for the other dependent variables, these effects are equal. In any case, the values of the corrected determination indexes R^2 are not large (they range from 0.099 to 0.192), but they are all statistically significant.

Bearing in mind the results of the regression analysis and the previously presented discussion, it can be stated that hypothesis H2 is confirmed.

Discussion of the moderating effects

A statistically significant moderating effect of the item Student success in studying, on the observed

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relations, exists in several cases (Table 4). First, in the case of Low Student success, Extroversion has a stronger positive effect on Personal attitude and Perceived behavioral control than in the case of High Student success. This tendency, although not statistically significant, also occurs in the dimension Entrepreneurial intention. Less successful students seem to think more about entrepreneurial ventures, maybe because they are aware (or fear) that they may not be able to manage in an existing company, either because of weaker knowledge or a lower degree of responsibility towards obligations. For them, the entrepreneurial vocation seems like a better option, especially if they themselves are extroverts, so communication is good for them and they feel comfortable in interpersonal relationships. On the other hand, successful students think more about getting a job in a company, they are confident in their knowledge and work abilities, so they believe that they will fight for their place in any company that they will progress and earn well. If the person is a successful student and an extrovert, this will not change his attitude towards entrepreneurship to such an extent: he, confident in his professional knowledge and capabilities, will still strive to avoid the risks of an entrepreneurial venture. It is also possible that students who are less successful and at the same time extroverted pay more attention to events in the environment, observe people, jobs, market trends, spot opportunities, while those more successful students, whether extroverted or not, have a much greater focus on studies and learning and do not have time for such a critical observation of the environment (in the entrepreneurial sense).

Second, in the case of Low Student success, Narcissism has a stronger positive effect on Entrepreneurial intention than in the case of High Student success. This tendency, although not statistically significant, also occurs in the dimensions Personal attitude (especially) and Perceived behavioral control. Less successful students, who belong to narcissistic persons, find themselves somewhat out of step with reality: they are confident in their abilities and the "natural order in which they are above others", but the results do not show this. In such circumstances, entrepreneurship can act as a real option for "things to fall into place", that is, to gain reputation, power and wealth. On the other hand, if a successful student is also a narcissistic person, he is probably satisfied with his success in studies, in that field he feeds his egoism, realizes his

arrogance in relation to others and does not want to change such an order. Why would he take the risk when he has already achieved (or is on the way to achieving) the desired reputation? Perhaps he will study even more to enhance the effects of his success in studies and he will probably think about employment in an existing company, with full confidence in his success at work.

Third, in the case of Low Student success, Neuroticism has a stronger negative effect on the Subjective norm than in the case of High Student success. A less successful student, who is also emotionally unstable (neurotic, nervous, depressed, insecure), will have a hard time gaining the trust of the environment for engaging in entrepreneurial work. There are rare situations when the support of the closest environment is absent and even turns negative, but it seems that this is possible when someone is simultaneously unsuccessful and neurotic. On the other hand, if a successful student is neurotic at the same time, here the correlation is almost zero: the environment does not support him because of his neuroticism, but he is still successful, so that alleviates the situation.

The moderating effect of the item Student success in studying, in the relations between the dimensions of Big Five and Narcissism and the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension, is statistically significant in several cases, but also close to statistical significance in several other cases. Bearing in mind these results, as well as the previously presented discussion, it can be stated that the moderating effect is expressed on average, and in this way the research question RQ was answered.

CONCLUSION

Taking into account the results of correlation and regression analysis, it can be concluded that Extroversion, Openness to experience and Narcissism have the strongest positive influence on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension. The influence Conscientiousness is also positive, of but somewhat weaker and concentrated on the Subjective norm dimension. Neuroticism has a weak negative influence, while the correlation analysis showed that there is a statistically significant negative influence on the Theory of Planned Behavior dimensions. Agreeableness has no influence, with the exception of one statistically

significant and positive correlation with the Subjective norm dimension. It is interesting to note that neurotic and narcissistic persons do not receive support from the environment, and in the case of Neuroticism, this support can also go in the opposite direction.

The moderating effect of the item Student success in studying, on the observed relationships, exists in several cases. In general, the direction of moderation is such that in the case of Low Student success, Extroversion and Narcissism has a stronger positive effect on the Theory of Planned Behavior dimensions and Entrepreneurial intention dimension, than in the case of High Student success. Successful students are mostly focused on learning and how to use their knowledge in some existing companies, they are confident in their knowledge and do not want to take risks with entrepreneurship. Those less successful students in entrepreneurship see more of their chance (and need), and if they are extroverted and narcissistic persons, then, along with the existing motives, selfconfidence in the ability to start and run an entrepreneurial venture grows, and thus the entrepreneurial intentions of such students grow.

The theoretical contribution of the work is the results of examining the influence of Big Five personality traits and narcissism on the Theory of Planned Behavior dimensions, which has not been done enough so far. Also, the item Student success in studying was not used as a moderator of the observed relationships, so the results in this part shed additional light on the given connections. Finally, the impression is that existing research somewhat neglects the influence of Narcissism on Entrepreneurial intention. It was shown here that Narcissism has a strong and positive effect on the observed dependent dimensions, and especially on Perceived behavioral control and Entrepreneurial intention. This is due to the fact that narcissistic persons have a high opinion of themselves, are full of self-confidence, and are highly motivated to be successful, rich and admired by other people. They see entrepreneurship as an opportunity to achieve what they think they deserve.

The practical contribution of the paper is that it indicates the importance that less successful students and narcissistic persons can have in the development of entrepreneurship in a society. Namely, this discovered potential can certainly be used, so that such persons should be recognized and directed towards entrepreneurship. This, of course, is not easy, but it can become part of the work program of institutions, which at the national level deal with the improvement of Thus, entrepreneurship. through appropriate guidance, education and support, a mostly negative and undesirable phenomenon, such as narcissism, could be turned into something useful for the people with high narcissism, their environment and society as a whole. These results show the conditions in Serbia. Therefore the main research limitation is that the results are specific and apply only to Serbia. However, similar researches can be made in different countries, so that they can be comparable.

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REFERENCES

- Ajzen, I. (1991). Theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T
- Al-Ghazali, B.M., & Afsar, B. (2020). Narcissism and entrepreneurial intentions: the roles of entrepreneurial self-efficacy and environmental complexity. *The Journal of High Technology Management Research*, 32(1), 100395.
- https://doi.org/10.1016/j.hitech.2020.100395 Alshebami, A. S., Seraj, A. H. A., & Alzain, E. (2022). Lecturers' Creativity and Students' Entrepreneurial Intention in Saudi Arabia. Vision (09722629), 1. https://doi.org/10.1177/09722629221099596
- Ames, D.R., Paul Rose, P., & Anderson, C.P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, 40(2006), 440-450. https://doi.org/10.1016/j.jrp.2005.03.002
- Antoncic, B., Bratkovic Kregar, T., Singh, G., & DeNoble, A.F. (2015) The Big Five Personality-Entrepreneurship Relationship. Evidence from Slovenia. *Journal of Small Business Management*, 53(3), 819-841. https://doi.org/10.1111/jsbm.12089
- Bazkiaei, H.A., Heng, L.H., Khan, N.U., Saufi, R.B.A., Kasim, R.S.R., & Foroudi, P. (2020). Do entrepreneurial education and big-five personality traits predict entrepreneurial intention among universities students? *Cogent Business & Management*, 7(1), 1-17. https://doi.org/10.1080/23311975.2020.1801217.

Bazkiaei, H.A., Khan, N.U., Irshad, A.R., & Ahmed, A. (2021). Pathways toward entrepreneurial intention among Malaysian universities' students. *Business Process Management Journal*, 27(4), 1009-1032. https://doi.org/10.1108/BPMJ-01-2021-0021

Bouncken, R., Cesinger, B., & Tiberius, V. (2020). Narcissism, Machiavellianism, and psychopathy of top managers: Can Entrepreneurial Orientation secure performance. *International Journal of Entrepreneurial Venturing*, *12*(3), 273–302. https://doi.org/10.1504/IJEV.2020.107932

Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222-230. https://doi.org/10.1016/j.paid.2010.07.007

Brown, R.P., & Zeigler-Hall, V. (2004). Narcissism and the non-equivalence of self-esteem measures: A matter of dominance. *Journal of Research in Personality*, 38(6), 585-592. https://doi.org/10.1016/j.jrp.2003.11.002

Brownell, K.M., McMullen, J.S., & O'Boyle E. (2021). Fatal attraction: A systematic review and research agenda of the dark triad in entrepreneurship. *Journal* of Business Venturing, 36(3), 106106. https://doi.org/10.1016/i.ibusvent.2021.106106

Butz, N.T., Hanson, S., Schultz, P. L., & Warzynski, M.M. (2018). Beyond the Big Five: does grit influence the entrepreneurial intent of university students in the US? *Journal of Global Entrepreneurship Research*, 8(1), 1-16. https://doi.org/10.1186/s40497-018-0100-z.

Chang, Y.Y., Wannamakok, W., & Kao, C.P. (2021). Entrepreneurship education, academic major, and university students' social entrepreneurial intention: the perspective of Planned Behavior Theory. *Studies in Higher Education*, 1–20. https://doi.org/10.1080/03075079.2021.2021875

Delanoë-Gueguen, S., & Fayolle A. (2018). Crossing the Entrepreneurial Rubicon: A Longitudinal Investigation. *Journal of Small Business Management*, *57*(3), 1044-1065. https://doi.org/10.1111/jsbm.12419

Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes. A new methodology. *Journal of European Industrial Training*, 30(9), 701-720. https://doi.org/10.1108/03090590610715022

Goldberg, L.R. (1990). An Alternative Description of Personality: The Big Five Factor Structure. *Journal of Personality and Social Psychology*, *59*, 1216-1229. https://doi.org/10.4324/9780203822845-4

Gosling, S.D., Rentfrow, P.J., & Swann, W.B.Jr. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37(2003), 504-528. https://doi.org/10.1016/S0092-6566(03)00046-1

Hisrich, R.D., Peters, M.P., & Shepherd, D.A. (2013). Entrepreneurship (9th ed.). New York: McGraw Hill.

Israr, M., & Saleem, M. (2018). Entrepreneurial intentions among university students in Italy. *Journal*

of Global Entrepreneurship Research, 8: 20. https://doi.org/10.1186/s40497-018-0107-5

Judge, T.A., LePine, J.A., & Rich, B.L. (2006). Loving Yourself Abundantly: Relationship of the Narcissistic Personality to Self and Other Perceptions of Workplace Deviance, Leadership, and Task and Contextual Performance. *Journal of Applied Psychology*, 91(4), 762-776. https://doi.org/10.1037/0021-9010.91.4.762

Khan, S.N., Mubushar, M., Khan, I.U., Rehman, H.M., & Khan, S.U. (2021). The influence of personality traits on sustainability-oriented entrepreneurial intentions: the moderating role of servant leadership. *Environment, Development & Sustainability*, 23(9), 13707-13730. https://doi.org/10.1007/s10668-021-01235-0

Koe, W.L. (2016). The relationship between Individual Entrepreneurial Orientation (IEO) and entrepreneurial intention. *Journal of Global Entrepreneurship Research*, 6(1), 2-11. https://doi.org/10.1186/s40497-016-0057-8

Kollmann, T., Stöckmann, C. & Linstaedt, J.W. (2019). Task Conflict, Narcissism and Entrepreneurial Capability in Teams Planning a Business: A Moderated Moderation Approach to Explaining Business Planning Performance. *Journal of Small Business Management*, 57(4), 1399-1423. https://doi.org/10.1111/jsbm.12418

Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice*, 21(1), 47-57. https://doi.org/10.1177/104225879602100104

Krieger, A., Stuetzer, M., Obschonka, M., & Salmela-Aro, K. (2021). The growth of entrepreneurial human capital: origins and development of skill variety. *Small Business Economics*, Oct2021, 1-20. https://doi.org/10.1007/s11187-021-00555-9.

Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5–6), 411–432. https://doi.org/10.1016/ S0883-9026(98)00033-0

Laouiti, R., Haddoud, M.Y., Nakara, W.A., & Onjewu, A.E. (2022). A gender-based approach to the influence of personality traits on entrepreneurial intention. *Journal of Business Research*, *142*, 819-829. https://doi.org/10.1016/j.jbusres.2022.01.018.

Leonelli, S., Pietro, F.D., & Masciarelli, F. (2020). Narcissism, Machiavellianism and Psychopathy: How Do Displayed Entrepreneurs' Personality Dark Traits Influence Crowdfunding Success?. Caputo, A. and Pellegrini, M.M. (Ed.) The Entrepreneurial Behaviour: Unveiling the cognitive and emotional aspect of entrepreneurship (Entrepreneurial Behaviour Series), Emerald Publishing Limited, Bingley, p. 41-65. https://doi.org/10.1108/978-1-78973-507-920201007

Leung, Y.K., Franken, I.H.A., & Thurik, A.R. (2020). Psychiatric symptoms and entrepreneurial intention: The role of the behavioral activation system. *Journal* of Business Venturing Insights, 13, e00153. https://doi.org/10.1016/j.jbvi.2019.e00153

Leung, Y., Franken, I., Thurik, R., Driessen, M., Kamei, K., Torrès, O., & Verheul, I. (2021). Narcissism and entrepreneurship: evidence from six datasets. *Journal* of Business Venturing Insights, 15, e00216. https://doi.org/10.1016/j.jbvi.2020.e00216

Liñán, F. (2004). Intention-based models of entrepreneurship education. *Piccola Impresa, Small Business, 3*(1), 11-35.

Liñán, F., & Chen, Y.W. (2009). Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intention. *Entrepreneurship Theory and Practice*, 33(3), 593-617. https://doi.org/10.1111/j.1540-6520.2009.00318.

Linñán, F., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship & Regional Development*, 23(3–4), 187–215.

https://doi.org/10.1080/08985620903233929

Liu, D., Zhu, T., Huang, X., Wang, M., & Huang, M. (2021). Narcissism and Entrepreneurship: A Systematic Review and an Agenda for Future Research. *Frontiers in Psychology*, 12:657681. https://doi.org/10.3389/fpsyg.2021.657681

Liu, Y., Li, Y., Hao, X., & Zhang, Y. (2019). Narcissism and learning from entrepreneurial failure. *Journal of Business Venturing*, 34(3), 496-512. https://doi.org/10.1016/j.jbusvent.2019.01.003

Matić, M., Leković, B., & Bobera, D. (2023). The influence of barriers on entrepreneurial intentions: Student entrepreneurship in Western Balkan countries . *Anali Ekonomskog Fakulteta U Subotici*, (00). https://doi.org/10.5937/AnEkSub2300016M

Mathieu, C., & St-Jean, É. (2013). Entrepreneurial personality: the role of narcissism. *Personality and Individual Differences*, 55, 527-531. https://doi.org/10.1016/j.paid.2013.04.026

Ng, H. S., Hung Kee, D. M., & Khan, M. J. (2021). Effects of personality, education and opportunities on entrepreneurial intentions. *Education + Training*, 63(7/8), 992–1014. https://doi.org/10.1108/ET-02-2019-0040.

Paulhus, D.L., & Williams, K.M. (2002). The Dark Triad of personality: narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*(6), 556-563. https://doi.org/10.1016/S0092-6566(02)00505-6

Robbins, S.P., & Judge, T.A. (2009). Organizaciono ponašanje, 12th Ed. Zagreb: Mate d.o.o.

Rueda Barrios, G. E., Rodriguez, J. F. R., Plaza, A. V., Vélez Zapata, C. P., & Zuluaga, M. E. G. (2022). Entrepreneurial intentions of university students in Colombia: Exploration based on the theory of planned behavior. *Journal of Education for Business*, 97(3), 176–185.

https://doi.org/10.1080/08832323.2021.1918615https: //doi.org/10.1080/08832323.2021.1918615 Sahin, F., Karadag, H., & Tuncer, B. (2019). Big five personality traits, entrepreneurial self-efficacy and entrepreneurial intention: A configurational approach. *International Journal of Entrepreneurial Behavior & Research*, 25(6), 1188-1211.

https://doi.org/10.1108/IJEBR-07-2018-0466 Sahinidis A.G., Stavroulakis D., Kossieri E., & Varelas S. (2019). Entrepreneurial Intention Determinants Among Female Students. The Influence of Role Models, Parents' Occupation and Perceived Behavioral Control on Forming the Desire to Become a Business Owner. In: Kavoura A., Kefallonitis E., Giovanis A. (Eds.) Strategic Innovative Marketing and Tourism. Springer Proceedings in Business and Economics (pp. 173-178). Cham: Springer.

Sahinidis, A.G., Tsaknis, P.A., Gkika, E., & Stavroulakis,
D. (2020). The Influence of the Big Five Personality Traits and Risk Aversion on Entrepreneurial Intention. In: Kavoura A., Kefallonitis E., Theodoridis P. (Eds.) Strategic Innovative Marketing and Tourism. Springer Proceedings in Business and Economics (pp. 215-224). Cham: Springer.

Schlaegel, C., Engle, R.L., Richter, N.F., & Taureck, P.Ch. (2021). Personal factors, entrepreneurial intention, and entrepreneurial status: A multinational study in three institutional environments. *Journal of International Entrepreneurship*, *19*, 357-398. https://doi.org/10.1007/s10843-021-00287-7

Tucker, R.L., Lowman, G.H., & Marino, L.D. (2016). Dark Triad traits and the entrepreneurial process: a person-entrepreneurship perspective. *Research in Personnel and Human Resources Management*, 34, 245–290. https://doi.org/10.1108/S0742-730120160000034013

Wach, D., Kruse, Ph., Costa, S., & Antonio M. J. (2021). Exploring Social and Commercial Entrepreneurial Intentions from Theory of Planned Behaviour Perspective: A Cross-Country Study among Namibian and German Students. *Journal of Social Entrepreneurship*. Jan2021, p1-22. https://doi.org/10.1080/19420676.2020.1863250.

Wu, W., Wang, H., Zheng, Ch., & Wu, Y.J. (2019).
Effect of Narcissism, Psychopathy, and Machiavellianism on Entrepreneurial Intention - The Mediating of Entrepreneurial Self-Efficacy. *Frontiers in Psychology*, 10:360.

https://doi.org/10.3389/fpsyg.2019.00360 Zaremohzzabieh, Z., Ahrari, S., Krauss, S.E., Samah, A.A:, Meng, L.K., & Ariffin, Z. (2019). Predicting social entrepreneurial intention: A meta-analytic path analysis based on the theory of planned behavior. *Journal of Business Research*, 96(C), 264-276. https://doi.org/10.1016/j.jbusres.2018.11.030

Zhao, H., Seibert, S.E., & Lumpkin, G.T. (2010). The Relationship of Personality to Entrepreneurial Intentions and Performance: A Meta-Analytic Review. *Journal of Management*, *36*(2), 381-404. https://doi.org/10.1177/0149206309335187

VELIKIH 5 CRTA LIČNOSTI, NARCIZAM I PREDUZETNIČKE NAMERE: SLUČAJ STUDENATA U SRBIJI

U radu je ispitan uticaj dimenzija velikih 5 crta ličnosti i narcizma na dimenzije Teorije planskog ponašanja i Preduzetničke namere. Ispitan je i moderatorni efekat ajtema uspešnost studiranja studenata (percepcija samih studenata o svojoj uspešnosti), na ove odnose. Istraživanje je realizovano u Srbiji, a ispitanici su bili studenti. Uzorak je obuhvatio 400 ispitanika. Najsnažniji pozitivan uticaj na dimenzije Teorije planskog ponašanja i Preduzentičke namere imaju Ekstraverzija, Otvorenost i Narcizam. Uticaj Savesnosti je pozitivan, ali nešto slabiji i koncentrisan je na dimenziju Subjektivne norme. Neuroticizam ima slab negativan uticaj, pri čemu je u korelacionoj analizi pokazano da postoji statistički značajan negativan uticaj na dimenzije Teorije planskog ponašanja. Otvorenost nema uticaja, sa izuzetkom jedne statistički značajne i pozitivne korelacije sa dimenzijom Subjektivna norma. U slučaju niskog uspeha studenata, Ekstraverzija i Narcizam snažnije pozitivno deluje na dimenzije Teorije planskog ponašanja i dimenziju preduzetničke namere, nego u slučaju visokog uspeha studenata. Genralno, narcističke osobe imaju visoko mišljenje o sebi, puni su samopouzdanja, veoma su motivisani da budu uspešni, bogati i da im se drugi ljudi dive. Oni upravo u preduzetništvu vide mogućnost da ostvare ono što smatraju da zaslužuju. Dati su predlozi u vezi sa korišćenjem ovih potencijala i prevođenjem negativne pojave, kao što je narcizam u nešto što je korisno za društvo.

Ključne reči: Velikih 5 crta ličnosti; Narcizam; Teorija planskog ponašanja; Preduzetničke namere; Studenti; Srbija.