THE IMPACT OF EDUCATION AND ENTREPRENEURIAL SKILLS ON THE FINANCIAL PERFORMANCE OF AGRICULTURAL ENTREPRENEURS

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ABSTRACT

In today's business environment, the agricultural sector faces numerous challenges, including climate change, market fluctuations, and the need for innovation. Education and entrepreneurial skills are key factors for improving the business performance of agricultural entrepreneurs. The aim of this research is to examine the impact of education and entrepreneurial skills on the financial success of agricultural entrepreneurs. The study was conducted on a sample of 567 entrepreneurs from the agribusiness sector, using three key variables: entrepreneurial education, entrepreneurial skills, and financial performance. The results showed that both education and skills have a statistically significant and positive impact on the financial performance of entrepreneurs, with the influence of skills being more pronounced. Strategic decision-making, resource management, and the ability to make quick decisions in complex situations proved to be especially important competencies.

Introduction

Agriculture represents one of the most important sectors in the economies of developing countries. Agriculture as a complementary activity represents a particular

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potential for the growth of the surrounding rural areas and the improvement of the living standard of the domicile population. (Milićević et al., 2022). The role of small and medium-sized entrepreneurs in agribusiness is becoming increasingly significant, both due to their flexibility and their ability to respond more quickly to changes in the market and technological environment. However, many of them face challenges in the areas of management, financial planning, and innovation. According to the OECD (2020), education and entrepreneurial skills are key determinants of business success in agriculture.

Vujičić et al. (2019), analyzing the level of awareness about healthy eating and the consumption of organic products among the student population in Serbia, concluded that education plays a crucial role in shaping consumer behavior and can potentially stimulate entrepreneurship in the organic agriculture sector.

Many authors (Agrawal, 2016; Zakić, Bugarčić, Milovanović, 2017; Pavić, 2019; Milanović, 2020; Šormaz, 2021; Vemić, Hrechyshkina, Samakhavets, 2022; Puška, Štilić, 2022; Stojković Hadži Kastratović, Stanković, 2022; Šćepanović, Stevanović, Šćepanović, 2023) emphasize the importance of technological advancement, innovation, and education across all areas of business activity.Krmpot, Krmpot, and Janković (2025) note that, at the global level, technological progress has reached an exceptionally high level with further improvement potential, and that continuous training is essential even though the workforce has reached the highest level of education ever recorded.Cindrić, Anđelković, and Chiro (2024) state that lifelong learning is evolving into lifelong education, and that the skills required by employees are shifting toward the development of both professional and soft skills, along with their enhancement and transformation. Numerous studies have shown a strong correlation between the level of education and the ability of entrepreneurs to manage their businesses and risks (Becker, 1993; Van der Sluis et al., 2008). In the agricultural sector, both formal and informal education enable entrepreneurs to acquire knowledge about new technologies, market trends, and regulatory frameworks. According to FAO (2021), farmers with higher education levels are more likely to adopt innovations and successfully diversify their production. According to Milanović, Nikitović, and Vujičić (2020), the sustainable success of agricultural holdings largely depends on the development of knowledge, product quality, financial management, and the application of innovations, which underscores the key role of education and entrepreneurial skills in modern agriculture.In addition to education, entrepreneurial skills such as leadership, decision-making, team and financial management are crucial for the success of agricultural businesses (Man et al., 2002). In the dynamic environment of agribusiness, the ability to recognize opportunities, solve problems, and adapt to the market directly influences the competitiveness and financial performance of enterprises.

.Literature review

The theoretical foundation of this research is based on the human capital theory (Becker, 1964) and the resource-based view of the firm (Barney, 1991).

Education and skills are regarded as intangible resources that contribute to competitive advantage and financial success. Education and entrepreneurial skills represent key components of human capital and are the subject of numerous studies in the fields of economics, management, and rural development. Understanding the impact of education on economic outcomes is grounded in the concept of human capital developed by Becker (1964), who argued that investment in individuals' education and training leads to increased productivity and economic growth. This theory emphasizes that educated individuals possess more knowledge, skills, and the ability to make better business decisions, manage risks, and implement innovations, all of which directly contribute to their financial performance.Numerous studies have confirmed that education has a positive impact on entrepreneurial performance. Van der Sluis, Van Praag, and Vijverberg (2008) concluded that there is a statistically significant, albeit moderate, positive effect of education on entrepreneurial success. Similarly, Davidsson and Honig (2003) emphasize the importance of formal education during the early stages of a business venture, while informal education and prior experience play a greater role in later phases of the business. In rural and agricultural environments, education can play an even more important role as it contributes to the modernization of production, better application of agronomic measures, and more efficient use of resources (OECD, 2020). Simonović (2016), analyzing the role of public advisory services in Serbian agriculture, emphasizes the importance of education and professional training of farmers for improving production and financial success.The specificity of the agricultural sector lies in the complexity of managing production cycles, the dependence on external factors such as weather conditions and market fluctuations, and the need for multifunctional knowledge. According to a study conducted by the FAO (2017), there is a clear link between the education of farmers and their ability to diversify production, adopt innovative technologies, and gain better market access. Likewise, farmers with higher education levels are more likely to use information and communication technologies and access funding and subsidies.

In addition to education, entrepreneurial skills are gaining increasing attention in the literature. These include competencies such as leadership, strategic decision-making, communication, negotiation, innovation, and team management. Man, Lau, and Chan (2002) developed a model of entrepreneurial competencies that highlights the importance of skill-based functional attributes for the competitiveness of small and medium-sized enterprises. These competencies not only support better business decision-making but also enable entrepreneurs to recognize opportunities, manage resources more efficiently, and adapt to market changes.In the agricultural sector, skills are particularly important due to the need to combine technical knowledge with managerial and business abilities. Research conducted by Mishra, El-Osta, and Shaik (2010) in the United States showed that farmers with more advanced business skills are more likely to achieve positive financial outcomes, regardless of farm size. Similarly, Njoku and Odii (1991) in their study emphasize that financial literacy and planning ability are key factors for the profitability of small agricultural holdings. Research conducted by EIP-

AGRI (2016) highlights the importance of training farmers in business management, innovation, and digital tools as a prerequisite for the sustainable development of rural areas. Planning is a key factor in the development of innovation in small and medium-sized enterprises, as it allows for efficient resource use and timely decision-making that fosters innovative activities (Vujičić, Ravić & Nikolić, 2021).A combination of formal education and practical skills has proven to be the most effective model for achieving financial stability among entrepreneurs. This is confirmed by research conducted by Martin, McNally, and Kay (2013), which found that training programs combining theoretical knowledge and practical skills have a significant positive effect on revenue growth and the long-term survival of businesses. Additionally, Kreft and Sobel (2005) in their study emphasize that regions with a higher number of highly educated entrepreneurs experience faster economic growth and greater resilience to crises, further highlighting the importance of human capital.From a policy perspective, the European Union and FAO promote the development of entrepreneurial education in rural areas as part of a strategy to increase competitiveness and employment. According to a European Commission report (2016), the introduction of specialized educational programs within rural development, along with support for incubators and training centers, significantly contributes to strengthening the capacities of the local population to start and sustain successful agribusinesses. In Serbia, similar initiatives have been recognized through IPARD program measures, but their effectiveness depends on the integration of education and mentorship into local development strategies.

It should also be noted that psychological aspects, such as self-confidence, motivation, and risk readiness, can influence business success. Zhao, Seibert, and Lumpkin (2010) point out that entrepreneurs with high levels of self-confidence and intrinsic motivation are more successful in applying acquired knowledge and skills. In rural environments, where support systems are often limited, the internal resources of individuals become even more important.

Materials and methods

In order to examine the impact of education and entrepreneurial skills on the financial performance of entrepreneurs, an empirical study was conducted on a sample of 567 respondents in the Republic of Serbia, during the period from September 10, 2024, to March 15, 2025.The research was conducted using a structured questionnaire. A five-point Likert scale was used to measure respondents' attitudes across all variables.

In today's business environment, particularly in the agricultural sector, education and the development of entrepreneurial skills have become key factors of competitiveness and financial sustainability. The main problem addressed in this research lies in analyzing the impact that formal education and acquired entrepreneurial skills have on the financial performance of agricultural entrepreneurs.

The following research objectives were set:

- To determine whether entrepreneurial education has no impact or has an impact on entrepreneurial finances.
- To determine whether entrepreneurial skills have no impact or have an impact on entrepreneurial finances.

The ultimate research objective is:

- To determine whether entrepreneurial education and skills, together or separately, have an impact on entrepreneurial finances.

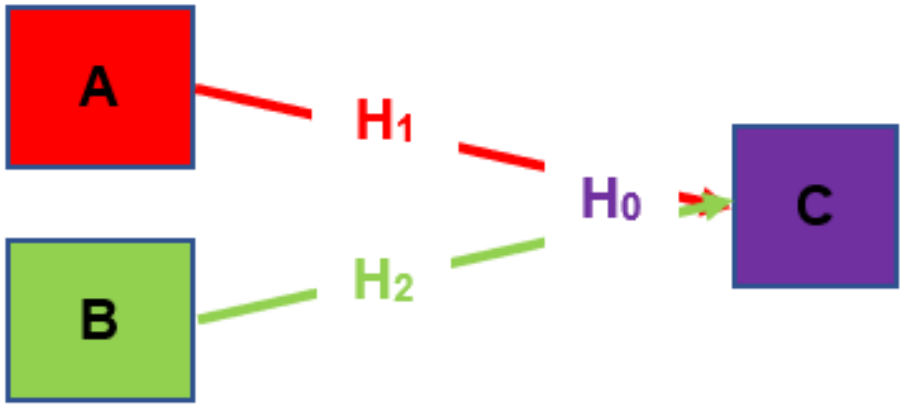
The auxiliary hypotheses of the research are as follows:

- H01: Entrepreneurial education does not influence entrepreneurial finances.
- H11: Entrepreneurial education influences entrepreneurial finances.
- H02: Entrepreneurial skills do not influence entrepreneurial finances.
- H21: Entrepreneurial skills influence entrepreneurial finances.

The main hypotheses of the research are:

- H0: Entrepreneurial education and skills do not influence entrepreneurial finances.
- H1: Entrepreneurial education and skills influence entrepreneurial finances.

Figure 1. Theoretical research model



Source: Authors

Variable A – Entrepreneur's education
Variable B – Entrepreneur's skills
Variable C – Entrepreneur's finances

According to the descriptive data in Table 1, the following conclusions can be drawn:

- The sample is almost evenly divided by gender, with a slightly higher proportion of male respondents. The gender structure is relatively balanced: males – 296 (52.21%) and females – 271 (47.79%).

Table 1. Descriptive statistics

Respondent's gender	**N**	**% of Total**
male	296	52,21
female	271	47,79
Respondent's age	**N**	**% of Total**
(18-35)	91	16,05
(36-55)	329	58,03
(>55)	147	25,93
Respondent's education	**N**	**% of Total**
primary / secondary school	371	65,43
college/ faculty	196	34,57
Total	567	100,00%

Source: Authors

The largest number of respondents falls within the age group of 36–55 years, which accounts for more than half of the sample. This indicates that the majority are individuals in their mature working age, which may influence their attitudes, habits, and priorities: ages 18–35: 91 (16.05%), 36–55: 329 (58.03%), and over 55: 147 (25.93%).

The majority of the sample consists of respondents with a lower level of formal education (primary or secondary school). Therefore, the research results reflect the views of the general population rather than academically educated individuals: primary/secondary school: 371 (65.43%), college/faculty: 196 (34.57%).

The structure of the sample suggests that the research covered a broad population, with an emphasis on middle-aged and less formally educated individuals.

Results

The number of statements defined for each variable in the proposed research model is six. A five-point Likert scale of attitudes was applied to each statement for all variables. The number of respondents in the study was 567. Based on these data, the significance of factor loadings for each defined variable is 0.35. In *Table 2*, the values of Cronbach's alpha coefficient are provided for all statements of each variable and for each sub-variable. The conclusions are as follows:

- All sub-variables (A1–A6) have α values between 0.82 and 0.86, indicating high internal consistency. The total α for Entrepreneur's Education (A) is 0.9306, which is considered excellent consistency. The scale for this variable is highly reliable.
- Sub-variables (B1–B6) range between 0.86 and 0.91, also demonstrating good stability and interrelation. The total α for Entrepreneurial Skills (B) is 0.8727,

which qualifies as good internal consistency. This variable has a high degree of reliability, although slightly lower than that of Entrepreneur's Education (A).

- Sub-variables (C1–C6) range from 0.82 to 0.90, all within a strong reliability range. The total α for Entrepreneur's Finances (C) is 0.8495, which also falls under the category of good consistency. This variable is also reliable, though not as highly as Entrepreneur's Education (A).

All three variables—Entrepreneur's Education (A), Entrepreneurial Skills (B), and Entrepreneur's Finances (C)—have high Cronbach's alpha values, indicating that the instruments used to measure these variables are highly reliable.

Table 2. Sizes of Cronbach's alpha coefficient

Variable	**Sub variable**	**Cronbach`s (α)**	**Internal consistency**
A - Entrepreneur's education	A1 - Entrepreneurship education is key to achieving business success	0.8379	
	A2 - Entrepreneurs with higher education better manage the finances of their companies	0.8634	
	A3 - Education of entrepreneurs has a positive effect on making strategic decisions in entrepreneurship	0.8201	
	A4 - Education of entrepreneurs contributes to their ability to adapt to market changes	0.8237	
	A5 - A higher level of education of entrepreneurs increases their competitiveness on the market	0.8245	
	A6 - The education of entrepreneurs has a significant impact on the ability to implement new business strategies	0.8275	
Total variable A - Entrepreneur's education		0.9306	excellent
B - Entrepreneurial skills	B1 - An entrepreneur's team management skills directly affect the company's financial results	0.8826	
	B2 - Developed entrepreneurial skills enable entrepreneurs to better manage resources	0.8693	
	B3 - Entrepreneur's problem-solving skills improve business performance	0.8696	
	B4 - Entrepreneurs with better communication skills make business contacts and cooperation more easily	0.9129	
	B5 - Developed skills of entrepreneurs in strategic planning contribute to better business organization	0.8908	
	B6 - Skills in making quick and efficient decisions improve the financial stability of entrepreneurs	0.8747	
Total variable B - Entrepreneurial skills		0.8727	good

Variable	Sub variable	Cronbach`s (α)	Internal consistency
C - Entrepreneur's finances	C1 - The state of the entrepreneur's finances depends on their ability to properly manage costs	0.8470	
	C2 - Good financial management of entrepreneurs allows them greater stability and profitability	0.8342	
	C3 - Entrepreneurs with better financial planning have better chances for long-term business sustainability	0.9010	
	C4 - The financial stability of an entrepreneur is crucial for the growth and development of the company	0.8572	
	C5 - Entrepreneurs with better financial strategies attract investments more easily	0.8314	
	C6 - Entrepreneurs' highly developed financial skills contribute to their ability to effectively manage business risks	0.8247	
Total variable C- Entrepreneur's finances		0.8495	good

Source: Authors

Descriptive statistics of respondents for all proposed statements are presented in Table 3.

Table 3. Descriptive statistics for all claims

Claim	Mean	Std Dev	Std Err	Variance
A_1	4.2874779541	0.8302 380491	0.0348667207	0.6892952182
A_2	4.2169312169	0.8779970986	0.0368724123	0.7708789052
A_3	4.0705467372	0.9239435095	0.0388019802	0.8536716087
A_4	4.2698412698	0.8834103986	0.0370997495	0.7804139324
A_5	4.1746031746	0.8814081707	0.0370156639	0.7768803635
A_6	4.2151675485	0.9582721117	0.0402436460	0.9182854401
B_1	4.4038800705	0.8495597112	0.0356781543	0.7217517029
B_2	4.4162257496	0.8082729517	0.0339442734	0.6533051645
B_3	4.4126984127	0.8078989146	0.0339285653	0.6527006562
B_4	3.8342151675	1.0752731806	0.0451572290	1.1562124130
B_5	2.5449735450	0.7115940085	0.0298841394	0.5063660329
B_6	4.3209876543	0.9394948712	0.0394550760	0.8826506129
C_1	4.2804232804	0.8861046473	0.0372128973	0.7851814460
C_2	4.2151675485	1.0120733705	0.0425030865	1.0242925072
C_3	3.7178130511	1.2057357681	0.0506361427	1.4537987424
C_4	4.1481481481	1.0343530058	0.0434387432	1.0698861406

Claim	Mean	Std Dev	Std Err	Variance
C_5	4.3209876543	0.8912414882	0.0374286244	0.7943113903
C_6	4.2045855379	0.9494912880	0.0398748860	0.9015337060

Source: Authors

The following conclusions can be drawn:

— For the variable Entrepreneur's Education (A): Average scores (Mean): All range between 4.07 and 4.29, indicating that participants generally rated the statements within this variable highly.Highest mean: A1 (4.29).Lowest mean: A3 (4.07).Variances and standard deviations are moderate, which means that responses are not widely dispersed.Statements in group A were rated highly and consistently—with lower variability.The results are consistent with the excellent Cronbach's alpha coefficient (0.9306).

— For the variable Entrepreneurial Skills (B):Average scores: Most are above 4.3, indicating that participants generally rated the statements positively—except for statement B5, which stands out significantly with an average score of 2.54.B5 – Outlier: The low score and smaller standard deviation suggest that participants agree the statement is either negative or not applicable.B4 has a slightly lower score (3.83), but it is not as drastic as B5.Overall, the scores are high, but statement B5 represents an exception that requires further analysis—it may refer to a problematic issue or be interpreted differently.

— For the variable Entrepreneur's Finances (C):Average scores range from 3.72 to 4.32, indicating moderate to high agreement with the statements.The lowest average score: C3 (3.72) – also has the highest standard deviation (1.21), showing considerable disagreement among respondents.The highest average score: C5 (4.32).Although the statements were generally rated well, C3 reflects differing opinions among respondents, which may suggest the topic is particularly specific or the statement was ambiguously worded.

The variable Entrepreneur's Education (A) shows a high level of agreement with the statements and low variability—indicating a reliable and consistent variable.The variable Entrepreneurial Skills (B) reflects a generally positive perception, but statement B5 significantly deviates, representing a potential point for further interpretation or revision. The variable Entrepreneur's Finances (C) demonstrates moderate to high agreement, but statement C3 shows high variance, possibly due to different understandings of the statement or divided opinions.

Table 4 presents the summary descriptive statistics for all statements of the variables. The analysis of the aggregate descriptive indicators suggests that respondents generally rated all three groups of statements positively(Entrepreneur's Education**,** Entrepreneurial Skills**,** and Entrepreneur's Finances**)**.The variable Entrepreneur's

Education (A) recorded the highest average score and the lowest variability among responses, indicating a high level of agreement and consistency in attitudes. The variable Entrepreneurial Skills (B**)** has the lowest average value, partly due to one particularly low-rated statement (B5), while the group Entrepreneur's Finances (C) shows solid agreement but somewhat greater dispersion in opinions.These results support the previous findings from the Cronbach's alpha analysis and contribute to the validation of the instrument's reliability.

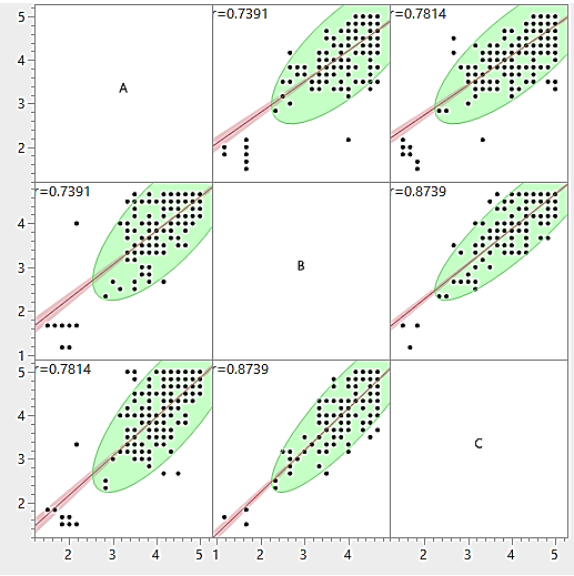
Table 4. Descriptive statistics for variables

Claim	Mean	Std Dev	Std Err	Variance
A	4.2057613169	0.6825192107	0.0286631126	0.4658324730
B	3.9888300999	0.7139261041	0.0299820782	0.5096904821
C	4.1478542034	0.7823878467	0.0328572011	0.6121307427

Source: Authors

Figure 2 shows the Pearson correlation values. All correlations are high and positive (all > 0.7), indicating that the variables are strongly related to each other. The strongest correlation is between **Entrepreneurial Skills** and **Entrepreneur's Finances** (0.874), suggesting that responses to the statements in these variables are very similar or that they measure similar constructs. The variables **Entrepreneur's Education** and **Entrepreneurial Skills** are somewhat less strongly correlated (0.739), but still exhibit a strong relationship.

Figure 2. Correlation of the formed model



Source: Authors

Multivariate analysis confirms that the statements for all three variables are highly correlated, with the strongest relationship observed between the variables entrepreneurial skills and entrepreneur's finances. The overall Cronbach's alpha (0.9218) indicates excellent reliability of the questionnaire as a whole. Although all three variables contribute to internal consistency, the exclusion of the variable entrepreneur's education results in a slight increase in overall reliability, suggesting that the statements from the entrepreneur's education variable may be somewhat less correlated with the rest of the scale. Nevertheless, all alpha values remain high, confirming that this is a highly reliable instrument. These results are further supported by descriptive statistics, which show stable and positive responses with relatively small deviations.

Correlation and regression analysis of variables A and C

The regression model that includes the variable entrepreneur's education (table 5) successfully explains 61.06% of the variance in the dependent variable entrepreneur's finances, which can be considered a very satisfactory result. The adjusted coefficient of determination (0.6099) further confirms the model's stability, while the low RMSE (0.49) indicates a high degree of accuracy in predicting the dependent variable entrepreneur's finances.

Table 5. Model evaluation for variables A and C

RSquare	0.610565
RSquare Adj	0.609875
Root Mean Square Error	0.488679
Mean of Response	4.147854
Observations (or Sum Wgts)	567

Source: Authors

The results of the ANOVA test (table 6) confirm that the model is statistically significant ($P<0.0001$), which means that the predictor variable Entrepreneur's education explains a significant amount of variance in the dependent variable Entrepreneur's finances. The high F Ratio (885.8184) suggests that the model is very effective in explaining the variance, while the low p-value (<0.0001) indicates that these results are unlikely to be due to chance. The statistical significance is reported as [$F(1,565)=885.8184$, $p<0.0001$].

Table 6. ANOVA for variables A and C

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	211.53989	211.540	885.8184
Error	565	134.92611	0.239	**Prob > F**
C. Total	566	346.46600		<.0001

Source: Authors

The regression results (table 7) indicate that the variable Entrepreneur's education (A) has a statistically significant impact on the dependent variable. The coefficient of 0.8957 means

that an increase of one unit in Entrepreneur's education leads to an increase of approximately 0.90 units in the dependent variable Entrepreneur's finances (C). The high standardized Beta (0.7814) shows that variable A is a key component of the model, while VIF=1 confirms that there are no multicollinearity issues among the predictors. The results further support the validity and reliability of the model. Based on this data, the auxiliary alternative hypothesis **H11: Entrepreneur's education affects Entrepreneur's finances can be confirmed**.

Table 7. Contribution coefficients for variables A and C

Term	Estimate	Std Error	t Ratio	Prob>|t|	Std Beta	VIF
Intercept	0.380663	0.128227	2.97	0.0031	0	.
A	0.8957216	0.030095	29.76	<.0001	0.781386	1

Source: Authors

Based on the data from the previous table, a regression equation can be formed (formulas 1 and 2), as follows:

$y = 0.380663 + 0.8957216 \cdot x_1$ (1)

or

$C = 0.380663 + 0.8957216 \cdot A$ (2)

In the appendix (figure 3), the regression equation diagram is presented for the variables Entrepreneur's education (A) and Entrepreneur's finances (C).

Correlation and Regression Analysis of Variables B and C

The model with the independent variable Entrepreneurial skills (B) (table 8) explains 76.36% of the variance in the dependent variable Entrepreneur's finances (C), which is a very high result. An RMSE of 0.38 indicates that the model's predictions are highly accurate, and the adjusted R^2 confirms that the model is not overfitted. Overall, this model provides a good balance between explaining variance and prediction precision of the dependent variable Entrepreneur's finances (C).

Table 8. Evaluating the model for variables B and C

RSquare	0.76363
RSquare Adj	0.763212
Root Mean Square Error	0.380717
Mean of Response	4.147854
Observations (or Sum Wgts)	567

Source: Authors

The results of the ANOVA test (Table 9) confirm that the model with the variables Entrepreneurial skills (B) *and* Entrepreneur's finances (C) is statistically significant ($P<0.0001$), indicating that the variable Entrepreneurial skills explains a significant portion of the variance in the dependent variable Entrepreneur's finances. The high F-ratio (1825.322) suggests that the model is highly effective in explaining the variance, while the p-value of less than 0.0001 confirms that these results are not due to chance. The statistical significance is reported as [$F(1,565)=1825.322$, $p<0.0001$].

Table 9. ANOVA for variables B and C

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	264.57189	264.572	1825.322
Error	565	81.89411	0.145	**Prob > F**
C. Total	566	346.46600		<.0001

Source: Authors

The variable Entrepreneurial skills (B) is statistically significant (Table 10) with a coefficient of 0.9577, which means that an increase of one unit in the variable Entrepreneurial skills (B) leads to an increase of 0.9577 units in the dependent variable Entrepreneur's finances (C). The standardized Beta coefficient of 0.8739 indicates that the variable Entrepreneurial skills (B) has a very strong positive impact on the dependent variable Entrepreneur's finances (C), while VIF=1 confirms that there is no multicollinearity with other predictors. Based on these data, the auxiliary alternative hypothesis **H21: Entrepreneurial skills (B) affects Entrepreneur's finances (C) can be confirmed.**

Table 10. Contribution coefficients for variables B and C

Term	Estimate	Std Error	t Ratio	Prob>|t|	Std Beta	VIF
Intercept	0.3279198	0.090828	3.61	0.0003	0	.
B	0.9576578	0.022415	42.72	<.0001	0.873859	1

Source: Authors

Based on the data from the previous table, the regression equation can be formed as follows (formulas 3 and 4):

$y = 0.3279198 + 0.9576578 \cdot x_2$ (3)
or
$C = 0.3279198 + 0.9576578 \cdot B$ (4)

In the appendix, Figure 4 presents the regression equation diagram for the variables Entrepreneurial skills (B) and Entrepreneur's finances (C).

Multiple correlation and regression analysis for the variable Entrepreneur's finances (C)

The model with the independent variables Entrepreneur's education (A) and Entrepreneurial skills (B) (Table 11) explains 80.41% of the variance in the dependent variable Entrepreneur's finances (C), which is a very high result. The RMSE of 0.35 indicates that the model's predictions are very precise, and the adjusted R^2 confirms that the model is not overfitted. The results suggest that the model with the independent variables Entrepreneur's education (A) and Entrepreneurial skills (B) provides excellent predictions and has strong predictive power for the dependent variable Entrepreneur's finances (C).

Table 11. Evaluating the model

Rsquare	0.804117
RSquare Adj	0.803422
Root Mean Square Error	0.346888
Mean of Response	4.147854
Observations (or Sum Wgts)	567

Source: Authors

The results of the ANOVA test (Table 12) confirm that the model with the variables Entrepreneur's education (A), Entrepreneurial skills (B), and Entrepreneur's finances (C) is statistically significant (P<0.0001), with a high F Ratio of 1157.635, indicating that the model explains the variance in the dependent variable Entrepreneur's finances (C) very well. The model with the independent variables Entrepreneur's education (A) and Entrepreneurial skills (B), and the dependent variable Entrepreneur's finances (C), is much better at explaining the variance compared to the error, which means that these variables have a significant influence on the dependent variable Entrepreneur's finances (C). The statistical significance rating is provided in Table 12 and is [F(2,564)= 1157.635, p<0.0001].

Table 12. ANOVA

Source	**DF**	**Sum of Squares**	**Mean Square**	**F Ratio**
Model	2	278.59921	139.300	1157.635
Error	564	67.86679	0.120	**Prob > F**
C. Total	566	346.46600		<.0001

Source: Authors

In the model with the independent variables Entrepreneur's education (A) and Entrepreneurial skills (B) (Table 13), both have a statistically significant impact on the dependent variable Entrepreneur's finances. However, the independent variable Entrepreneurial skills (B) (β = 0.6531) has twice the standardized impact compared to the independent variable Entrepreneur's education (A) (β = 0.2987), indicating that Entrepreneurial skills (B) is the dominant predictor. There are no significant issues with multicollinearity (VIF ≈ 2.2). The model clearly shows that both independent variables, Entrepreneur's education (A) and Entrepreneurial skills (B), are relevant, but the influence of Entrepreneurial skills (B) is significantly stronger. Based on this data, the main alternative hypothesis **H1: Entrepreneur's education (A) and Entrepreneurial skills (B) influence Entrepreneur's finances (C) can be confirmed**

Table 13. Contribution coefficients

Term	**Estimate**	**Std Error**	**t Ratio**	**Prob>|t|**	**Std Beta**	**VIF**
Intercept	-0.147146	0.093728	-1.57	0.1170	0	.
A	0.3424079	0.031714	10.80	<.0001	0.298701	2.2037321
B	0.7157272	0.030318	23.61	<.0001	0.653098	2.2037321

Source: Authors

Based on the data from the previous table, a multiple regression equation can be formulated (formulas 5 and 6), as follows:

$$y = -0.147146 + 0.3424079 \cdot x_1 + 0.7157272 \cdot x_2 \quad (5)$$

or

$$C = -0.147146 + 0.3424079 \cdot A + 0.7157272 \cdot B \quad (6)$$

In the appendix, Figure 5 presents the diagram of the multiple regression equation for the variable C.

Discussions

Based on the provided tables, which represent the results of three linear regression models, a detailed discussion of the findings can be conducted. Each table shows the impact of the independent variables Entrepreneur's education (A) and Entrepreneurial skills (B) on the dependent variable Entrepreneur's finances (C), as follows:

— The variable Entrepreneur's education (A) has a strong and statistically significant positive effect on the dependent variable ($p<0.0001$). A high t-ratio and a high standardized coefficient indicate that Entrepreneur's education (A) is one of the key predictors. A VIF of 1 shows that there is no multicollinearity.

— The variable Entrepreneurial skills (B) has an even stronger and statistically significant positive effect on the dependent variable than A (compared to the first model). The values of both the coefficient and the standardized beta are higher, indicating that Entrepreneurial skills (B) may be a more important predictor. A VIF of 1 also rules out multicollinearity.

— When both variables, Entrepreneur's education (A) and Entrepreneurial skills (B), are included in the same model, both remain statistically significant, but the influence of Entrepreneur's education (A) decreases in terms of both the coefficient value and the standardized beta. This suggests that B has a dominant effect in this model. The VIF slightly increases (2.2), but remains within acceptable limits (<5), indicating moderate but not problematic collinearity.

Both variables, Entrepreneur's education (A) and Entrepreneurial skills (B), have a positive and statistically significant impact on the dependent variable. Entrepreneurial skills (B) has a stronger influence than Entrepreneur's education (A), both in individual models and in the combined model. In the joint model, the effect of Entrepreneur's education (A) diminishes, which may suggest that Entrepreneur's education (A) and Entrepreneurial skills (B) share some variance, though not to a degree that would cause problems in the model. The intercept in the joint model is not statistically significant ($p=0.117$), which is not uncommon in models with multiple predictors.

Conclusions

Based on the first obtained regression equation, it can be concluded that the education of entrepreneurs has a strong and positive impact on their financial position. In other words, the more educated the entrepreneurs are, the more successful they tend to be in managing the finances of their businesses. This confirms the importance of investing in education and professional development of entrepreneurs as a strategy to improve their business performance and financial health.

Based on the second obtained regression equation, it can be concluded that entrepreneurial skills are a key factor for improving the financial condition of entrepreneurs. Although education can also play an important role (as shown in the previous equation related to education), entrepreneurial skills have an even stronger and more direct influence on their finances. This means that the development and enhancement of these skills should be a priority for every entrepreneur seeking to improve business performance.

Based on the third obtained regression equation, it can be concluded that the education of entrepreneurs has a positive but smaller impact on their finances. Each additional level of education increases the financial performance of entrepreneurs by 0.3424 units, indicating that education contributes to financial success, but not as significantly as skills. Entrepreneurial skills have a substantially stronger influence on finances—each improvement in skills increases finances by 0.7157 units. Therefore, developing and enhancing entrepreneurial skills (e.g., business management, strategic decision-making, team leadership) has a strong impact on financial success. Together, education and skills can significantly improve the financial status of entrepreneurs, but skills have a greater influence. This suggests that entrepreneurs with well-developed managerial and business skills, combined with education, have better chances of achieving improved financial outcomes. Entrepreneurs should focus their efforts on further developing their skills, as this has the greatest impact on their business success.

Conflict of interests

The authors declare no conflict of interest.

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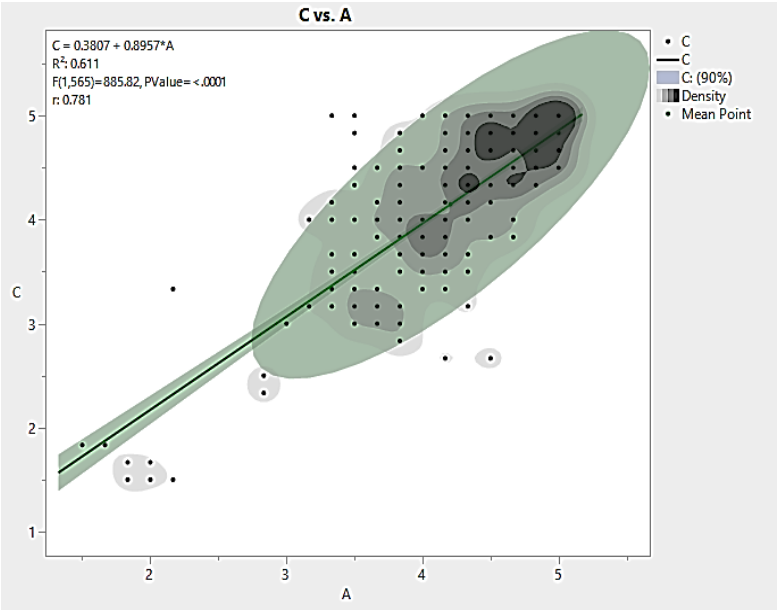
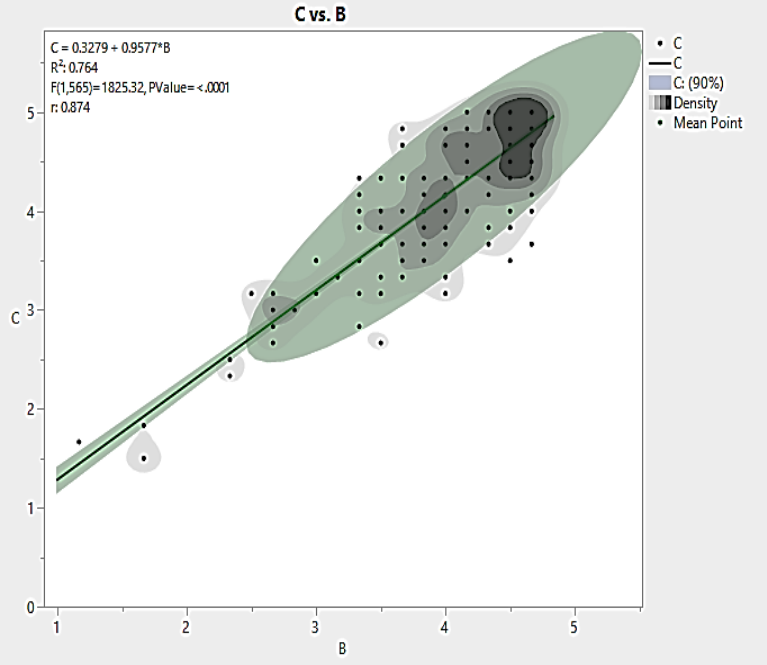
APPENDIX

Figure 3. Diagrams of regression equations AC



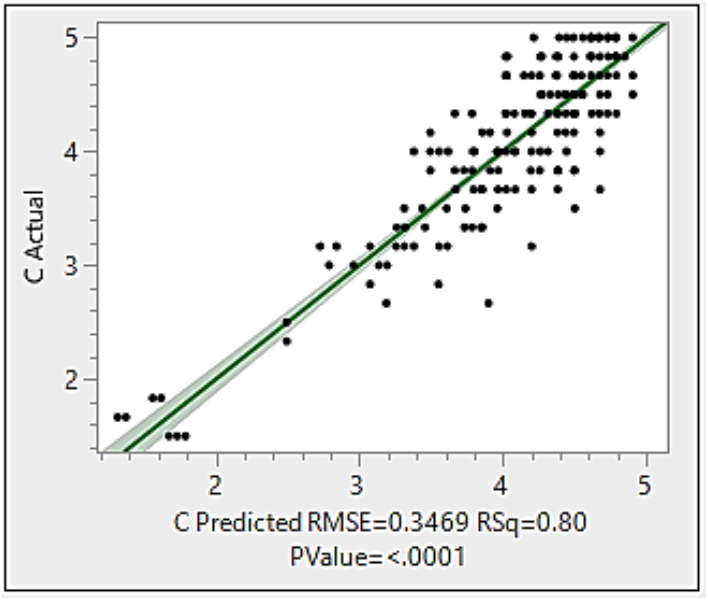
Source: Authors

Figure 4. Diagrams of regression equations BC



Source: Authors

Figure 5. Multiple regression equation plot for variables AB & C



Source: Authors