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RESEARCH PAPER

Business Education and Entrepreneurial Participation in Punjab: Mediating Role of Financial Literacy

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ABSTRACT

Entrepreneurial activity is considered a key to economic prosperity of developing economies like Pakistan. Unfortunately, graduates in Pakistan exhibit lower entrepreneurial potential. This study investigates whether Business Education and Financial Literacy contributes towards Entrepreneurial Participation of graduates in Punjab province of Pakistan or not? Using data from 322 graduates, graduated between 2016-2019, this study found that these graduates exhibit lower levels of Financial Literacy and Entrepreneurial Participation. It was further established that Business Education explained Financial Literacy of the graduates, whereas Financial Literacy mediated the impact of Business Education on Entrepreneurial Participation in Punjab province of Pakistan. The study argues that there is a need to embed more practice into education and enhance financial literacy of graduates to boost entrepreneurial activity in the country.

KEYWORDS Business Education, Entrepreneurial Participation, Financial Literacy

Introduction

Economic activities in modern world have become multifaceted where complex economic decision making is needed to maximize utility (Mitchell & Lusardi, 2015). In the wake of economic crises and related uncertainties, the need for rational decision making has been future aggravated (Lusardi & Mitchell, 2014). Previous literature, on economic well-being of individuals, highlight need of financial literacy and the role it plays to ensure long term financial wellbeing of individuals. Thus, financial literacy could result in various positive economic outcomes.

One of such important economic outcomes is to opt for entrepreneurship. Entrepreneurship not only has value in context of financial wellbeing of individuals, but also in relation to economic development of a country (Neumann, 2021; Stoica et al., 2020). Such positive implications of entrepreneurship are much propagated in context of developing economies (Peprah & Adekoya, 2020; Tunio, 2020). In this context, studying the determinants of entrepreneurship becomes an important consideration in developing economies like Pakistan. Much of the work on determination of entrepreneurial intentions focus on static individual traits like gender, race, family background, experience, education and the like; making it more difficult for the policy makers to use such evidence in promotion of entrepreneurial activities. On the other hand, financial literacy provides a specific avenue that could has more policy relevance. It has been observed that both ordinary people and people having formal business education have lower financial literacy (Ahmad et al., 2012; Grohmann, 2018; Lusardi & Mitchell, 2017), whereby financial literacy enables people to take rational decisions (Ćumurović & Hyll, 2019) and also provokes their entrepreneurial intentions (Ogbolu, 2020; Oseifuah, 2010). In this regard, Hussain et al. (2018) strongly recommend inclusion of financial in school curriculum as it was associated with better financial management and effective decision making in SMEs.

Pakistan is a developing country, where financial literacy of graduates is low (Ahmad et al., 2012; Liaqat et al., 2020). Students in the country also lack entrepreneurial mind set (Alam et al., 2019) as most of the students prefer to opt for a job rather that pursuing entrepreneurial activities (Ullah et al., 2020). Considering the value of entrepreneurship for developing economy of Pakistan, this study tries to establish value of financial literacy and business education in context of boasting economic decision of starting a business venture. Studying financial literacy and business education in relation to Pakistan could be beneficial at both individual as well as macroeconomic levels. At individual level, this study could answer why certain students chose entrepreneurship over other economic choices and how entrepreneurial mind-set of students could be provoked in the country. At macroeconomic levels, this avenue could lead to the identification of viable policy options, useful for provocation of entrepreneurial activities in developing economies like Pakistan.

Literature Review

Contemporary research on financial literacy links it with various positive economic outcomes. It has been argued that financial illiteracy causes the individuals to make suboptimal decisions with have costly implications both for individuals and for economy of a country (Ćumurović & Hyll 2019). Policy relevance of financial literacy has resulted in a reinvigorated interest in this domain of investigation (Altman, 2012), where much of the research has assessed the extent of financial literacy among different social classes (Klapper & Lusardi, 2020; Liaqat et al., 2020; Lusardi & Mitchell, 2011), its measurement (Kimiyaghalam & Safari, 2015; Rieger, 2020) and its implications for individual decision making in the long run (Andarsari & Ningtyas, 2019; Henager & Cude, 2016). Despite economic relevance of entrepreneurship, limited evidence is available on the implications of financial literacy for entrepreneurial outcomes.

Financial literacy, economic outcomes, and entrepreneurial choices

Previous research indicates that financial literacy of people is quite lower, and this trend is consistent for both developed and developing countries (Ahmad et al., 2011; Grohmann, 2018; Lusardi & Mitchell, 2011; Mitchell & Lusardi, 2015), and also for various segments and classes of the society (Ahmad et al., 2011; Anderson et al., 2017; Finke et al., 2016; Liaqat et al., 2020; Lusardi & Mitchell, 2011; Mitchell & Lusardi, 2015). Even in most developed countries like USA, ordinary people do not have sufficient financial knowledge and necessary economic skills to develop and track budgets, utilize banking and financial system, and understand credit and other investment choices (Lusardi & Mitchell, 2014). People have difficulty in processing basic financial calculations and exhibit lower knowledge of basic financial concepts like functioning of stock markets, risk diversification, and asset pricing (Lusardi & Mitchell, 2017). Despite of it being lower among various social classes, it is argued that it leads towards better financial decision making. Individuals with better financial literacy are more likely to make savings, invest in efficient manner, and do retirement planning (Anderson et al., 2017; Lusardi & Mitchell, 2011). Thus, Lusardi and Mitchell (2017) argued that people with more advanced financial knowledge are retirement ready as they tend to plan about their retirement, and spend a better life after retirement. Financial literacy also has impact on the advice seeking behaviour of individuals (Kramer, 2016). Thus, financial literacy has tendency to influence financial behaviour and economic decision making of individuals.

Apart from financial planning and related behaviours, financial literacy also contributes towards financial wellbeing of individuals. Bianchi (2018) documented that more financially literate households earn higher portfolio returns and actively balance their portfolio to adjust risk. Grohmann (2018) also showed that financially literate people are more likely to own assets and fixed deposit account and less likely to own life insurance. Thus, higher financial literacy contributes towards improved financial decisions. Ćumurović and Hyll (2019) documented that financial literacy was associated with better entrepreneurial outcomes, where financial literacy was established as a significant predictor of self-employment. Previously, Oseifuah (2010) also noted that financial literacy has a strong and positive influence on youth entrepreneurial skills in developing country of South Africa. Abubakar (2015) found that financial literacy was instrumental to improve access to finance and entrepreneurship development. Ye and Kulathunga (2019) also noted that financial literacy was not only important for sustainability of small businesses, but also predicted access to financial resources and financial risk taking behaviour of managers. Engström and McKelvie (2017) noted that financial literacy contributes towards performance of entrepreneurial ventures in small economies. Ali et al. (2018) also argued that financial literacy enables entrepreneurs to sustain their performance during difficult times. Lastly, Ogbolu (2020) noted that although impact of financial literacy on entrepreneurship ability of individuals was positive, but insignificant. Thus, a significant impact of financial literacy on decision to undertake entrepreneurship is warranted.

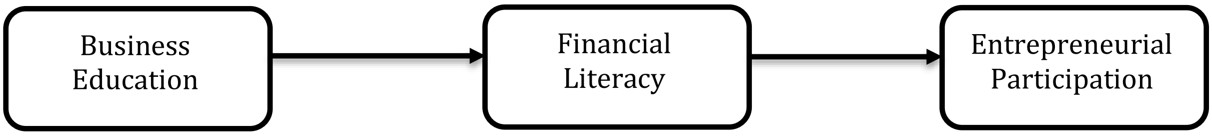
Type of education and financial literacy

More educated people are presumed to be more knowledgeable, whereby business education equips people with basic skills and knowledge to start and undertake a business. Previous evidence on this avenue is ample, where education and type of education was found to have association with financial literacy. Lusardi and Mitchell (2011) found that level of education had a positive relationship with financial literacy of individuals. Ahmad et al. (2012) noted that people with a graduate degree or higher have better financial literacy. Gok and Ozkale (2019) noted the same for university students, yet to complete their degree.

With reference to types of education, Kubak et al., (2018) noted that students who opt for finance and economics as major subject exhibit higher level of financial literacy. Lusardi and Mitchell (2017) noted the same for students with economics major. Kaiser and Menkhoff (2017) provided a border evidence by conducting a meta-analysis of 126 impact assessments and found that financial education had a strong influence on financial literacy and also on the financial behaviour of individuals. However, the study noted a weak influence of financial education on financial literacy in low income economies. Faiza et al. (2020) noted that financial literacy in Pakistan increased with the level of education, but was not related to the type of education. However, students who studied finance course had better financial information literacy. Abad-Segura and González-Zamar (2019) found that finance, economics, and education were the most studied aspects in relation to financial literacy. On the other hand, Kuntze et al. (2019) noted that among business education, financial literacy of students was different across sub disciplines of finance and marketing. However, financial literacy was sensitive to the model of delivery of personal finance course. Considering the importance of education and its type for building financial literacy, Abad-Segura and González-Zamar (2019) argued that limited attention is given to the role of financial education in building competencies of students that could improve their decision making. Thus, there is a need to assess types of educational programs that are appropriate to improve financial literacy (Lusardi & Mitchell, 2014). Thus, we can expect a higher level of financial literacy from business graduates.

Framework

Considering the above discussion, following model has been designed, where business education has a positive impact on financial literacy, which in turn explains entrepreneurial participation of graduates in Punjab, Pakistan. The model also exhibits that financial literacy mediates the impact of business education on entrepreneurial participation.



Considering the model, following hypotheses are tested in this study:

H_{1a}: There is a significant impact of Business Education on Financial Literacy in Punjab, Pakistan.

H_{1b}: Financial Literacy mediates the impact of Business Education on Entrepreneurial Participation in Punjab, Pakistan.

Material and Methods

Data Collection and Sample

Data was collected from the alumni of a large public sector university in Pakistan. Main selection criterion was that the respondent must have completed their graduation studies between 2016 to 2019. Further, students pursuing research degrees were also excluded from the final sample. As a representative of business studies, faculty related to business studies was chosen, whereas science faculty was chosen to represent non-business domain. Teachers and administration of the chosen faculties were requested to provide contact details of their alumni. Initial list generated had a province wide representation. Subsequently, alumni living in rural areas as such people might have lower economic opportunities were excluded from the final sample. People from final list were contacted and were requested to participate in a survey. A total of 387 respondents agreed to participate in the survey. Out of these 322 actually responded the survey, which comprise final sample of the study.

Variables and measurement

Business education was main independent variable of the study, which was measured on a dichotomous scale, where having a business degree was coded as 1, and 0 otherwise. Second variable of the study was financial literacy. Financial literacy represents the ability of an individual to manage money, while more comprehensively it represents the degree to which an individual understands main financial concepts and demonstrates the ability and confidence for the management of personal finances through short term decision making and long run financial planning, by considering changing economic circumstances and other life events (Remund, 2010, p. 284). There has been much contention on the nature and measurement of financial literacy (Li, 2020; Walstad & Rebeck, 2017). Considering the wide spread use, measurement of financial literacy was proceeded as recommended by Lusardi and Mitchell (2017). Under their contextualization, financial literacy could be categorized into two levels i.e. basic and sophisticated. Basic measurement of financial literacy involves asking individuals to answer five questions related to compound interest, inflation, and time value of money. On the other hand, sophisticated measurement scheme involves answering eight questions related to risk/ return, stocks/bonds, stock market/ mutual fund, and diversification. This study uses both of these classifications of financial literacy. A marking scheme was used to calculate financial literacy scores of individuals. Right answer had a score of 1, and wrong 0. Thus, an individual could score maximum of score 5 in basic financial literacy, and 8 in sophisticated financial literacy; if all questions are rightly answered. Lastly, actual involvement of the respondents in entrepreneurial activity was gauged by asking them if they were engaged in any entrepreneurial activity after their graduation? This measurement scheme is consistent with Li and Qian (2020). Other demographical variables like age, gender, and family business exposure were also included in the survey instrument.

Analysis procedure

Considering the dichotomous nature of my dependent variable i.e. entrepreneurial participation, I used logistic regression to estimate the results as my dependent variable was dichotomous. This procedure is consistent with Li and Qian (2020). In order to check the mediation, I used the process as outlined in Hayes (2012) through PROCESS by Hayes. Lastly, I estimated the results separately with basic and sophisticated measure of financial literacy to draw extended implications for both measures of financial literacy.

Results and Discussion

Table 1 provides demographical and variable description. Out of total 322 respondents, 244 (75.78%) were male, 108 (33.54%) represented the families with business exposure, and 92 (28.57%) had participated in entrepreneurial activity themselves. Average age of the respondents was 25.14 years (standard deviation = 1.3).

Considering financial literacy, respondents yielded a lower financial literacy score. For basic financial literacy, respondents scored an average of 2.57 (standard deviation = 1.24) out of a maximum possible score of 5; while for sophisticated financial literacy, average respondent scored only 3.21 (standard deviation = 1.74) out of a maximum possible score of 8. A lower score of financial literacy is consistent with the available evidence on the extent of financial literacy in Pakistan (Ahmed et al., 2011; Liaqat et al., 2020).

Table 1
Demographics and descriptive statistics

Variable	Statistics	Value
Male	Count	244
	Percentage	75.78%
Family Business Exposure	Count	108
	Percentage	33.54%
Entrepreneurial Participation	Count	92
	Percentage	28.57%
Age	Mean	25.14
	Std. Dev	1.30
Basic Financial Literacy Score	Mean	2.57
	Std. Dev	1.24
Sophisticated Financial Literacy Score	Mean	3.21
	Std. Dev	1.74

Table 2 provides results of independent t-test for differences in financial literacy scores with regard to gender, education type, and entrepreneurial participation. Considering gender, males scored higher in both aspects of financial literacy. Further, there was more variation the financial literacy scores of males. The mean difference was also significant ($p<.01$) implying that male had higher level of financial literacy in my sample. For education type as well, business graduates scored higher on both aspects of financial literacy, despite a lower score from both groups. The difference was also more prominent for sophisticated financial literacy. The mean difference for this category was also significant. Lastly, there was a clear evidence that graduates having participated in entrepreneurial activity had higher level of financial literacy. The mean differences were also significant (t-stat = 19.12 for basic, and t-stat = 15.17 for sophisticated). Thus, I found that males, business graduates, and students participated in entrepreneurial activity were more financially literate.

Table 2
Differences in financial literacy score

Variable	Categories	Basic Financial Literacy		Sophisticated Financial Literacy	
		Mean	Std. Dev	Mean	Std. Dev
Gender	Male	2.85	1.28	3.57	1.81
	Female	1.71	0.46	2.12	0.84
	T-Stat	11.77**		9.69**	
Education Type	Business	2.88	1.27	3.75	1.99
	Non-Business	2.17	1.07	2.50	0.96
	T-Stat	5.42**		7.44**	
Entrepreneurial Participation	Yes	4.00	0.71	5.00	1.23
	No	2.00	0.90	2.50	1.36
	T-Stat	19.12**		15.27**	

Subsequently, table 3 provides correlation matrix between main variables of study. Two aspects of financial literacy were used in this study: basic financial literacy and sophisticated financial literacy. Both of these variables had a strong and positive correlation ($r = .872$, $p<.01$). Education type also had a positive and significant relationship with both aspects of financial literacy ($r = .283$, $p<.01$, for basic; and $r = .356$, $p<.01$, for sophisticated). Lastly, both aspects of financial literacy also have positive and significant correlation with entrepreneurial participation ($r = .730$, $p<.01$, for basic; and $r = .649$, $p<.01$, for sophisticated). Business education also had positive and significant relationship ($r = .228$, $p<.01$) with entrepreneurial participation.

Table 3
Correlation matrix

Variables	1	2	3	4
1. Basic Financial Literacy	1			
2. Sophisticated Financial Literacy	.872**			
3. Business Education	.283**	.356**		
4. Entrepreneurial Participation	.730**	.649**	.228**	1

Table 4 provides estimation results assessing the impact of business education on financial literacy and mediating role of financial literacy between business education and entrepreneurial participation. Model I estimates the impact of business education on basic financial literacy. The estimated model was good fit ($F = 27.93$, $p<.01$) and had R-square of 8.03%. Estimation indicated that Business Education had a positive impact on Basic Financial Literacy (Coefficient = 0.708), which was also significant ($p<.01$). Subsequently, model III estimated the impact of business education on sophisticated financial literacy. The estimated model was also good fit ($F = 46.33$, $p<.01$) and yielded R-square of 12.65%. The impact of business education on sophisticated aspect of financial literacy was also positive (Coefficient = 1.25) and significant ($p<.01$). Considering this evidence, H_{1a} of the study is accepted stating a positive impact of business education on financial literacy.

Model II and IV estimate mediating role of both aspects of financial literacy on entrepreneurial participation in Punjab, Pakistan. Model II uses basic financial literacy, whereby direct impact of Business Education after its inclusion in model becomes insignificant, while impact of basic financial literacy on entrepreneurial participation remains significant (Coefficient = 2.163, $p<.01$), implying indication of a full mediation. The indirect impact of Business Education on Entrepreneurial Participation remains positive and significant (Effect size = 1,532, p<.01). Thus, it is established that basic financial literacy mediated the impact of Business Education on Entrepreneurial Participation. Model IV seeks to test mediating role of sophisticated financial literacy for the impact of Business Education on Entrepreneurial Participation. Direct impact of Business Education on Entrepreneurial Participation became insignificant after inclusion of the measure of financial literacy. On the other hand, Sophisticated Aspect of Financial Literacy yielded a positive and significant (Coefficient = 1.158, p<.01) impact on Entrepreneurial Participation. The direct effect of Business Education on Entrepreneurial Participation was insignificant, while the indirect effect was positive and significant (Effect size = 1.448, p<.01). Thus, Sophisticated Financial Literacy also mediated the impact of Business Education on Entrepreneurial Participation. Therefore, this study accepts H_{1b} as well, stating the meditating role of Financial Literacy on Entrepreneurial Participation.

Table 4
Estimation results

	Basic Financial Literacy (I)	Entrepreneurial Participation (II)	Sophisticated Financial Literacy (III)	Entrepreneurial Participation (IV)
Constant	2.17**	-7.76**	2.5**	-4.88**
	[.101]	[.838]	[.138]	[.497]
Business Education	0.708**	0.429	1.25**	-0.412
	[.134]	[.399]	[.184]	[.376]
Basic Financial Literacy		2.163**		
		[.2361]		
Sophisticated Financial Literacy				1.158**
				[.1394]
R-Square/ Cox & Snell	0.0803	.47.71	0.1265	0.37
F-Stat / LL	27.93**	208.78**	46.33**	148.76**
Direct Effect		0.429		-0.412
		[0.399]		[.376]
Indirect Effect		1.532**		1.448**
		[.2783]		[.2198]

Overall, this study found that financial literacy of graduates in Punjab province of Pakistan is low, whereby significant difference on financial literacy scores of different groups of respondents also existed, where male respondents, having family business exposure, and entrepreneurial participation had higher financial literacy. This study also concluded that Business Education positively contributes towards Financial Literacy and Financial Literacy mediates the impact of Business Education on Entrepreneurial Participation. Findings of this study are largely consistent with the previous studies.

Conclusion

Financial literacy has been highlighted as a significant predictor of various positive economic behaviours around the globe, whereby in Pakistan even business graduates exhibit lower level of financial literacy. This study provides evidence as to how Business

Education could boost Entrepreneurial Participation of graduates in Punjab province of Pakistan. Using sample of business and non-business graduates passed out at least in 2019, This study found that Business Education has a positive impact on Financial Literacy of graduates. Further, this study also documents that Financial Literacy mediates the impact of Business Education on Entrepreneurial Participation in Punjab Province of Pakistan. The study also documents that Financial Literacy of all graduates was lower. The study documented that Financial Literacy could be the key to sustain Entrepreneurial Participation in the country. Considering this findings, educational institutes in Pakistan must introduce courses on personal financial management to increase Financial Literacy of its graduates. The lower level of financial literacy from business graduates presents an alarming situation. Teachers teaching business courses, particularly relating to financial management, must adopt a more open and practical orientation to equip students with basic knowledge and understanding of practical financial management. Government agencies like SMEDA and Skill Development Councils could introduce short courses on personal financial management to improve financial literacy of graduates, and promote their entrepreneurial participation. I invite other scholars to investigate implications of financial literacy for entrepreneurship further. A viable avenue in this regard could be assessment of impact of financial literacy and business education on entrepreneurial success and financial wellbeing of individuals in Pakistan.

References

Abad-Segura, E., & González-Zamar, M. D. (2019). Effects of financial education and financial literacy on creative entrepreneurship: A worldwide research. *Education Sciences*, *9*(3), 238.

Abubakar, H. A. (2015). Entrepreneurship development and financial literacy in Africa. *World Journal of Entrepreneurship, Management and Sustainable Development*, 11(4), 281-294.

Ahmad, Z., Khan, M. S., Javaid, M. U., & Ijaz, A. T. (2012). Assessment of Investment Knowledge and Investment Preferences of Commerce Students in Lahore. European *Journal of Economics, Finance and Administrative Sciences, 45,* 51-60.

Alam, M. Z., Kousar, S., & Rehman, C. A. (2019). Role of entrepreneurial motivation on entrepreneurial intentions and behaviour: theory of planned behaviour extension on engineering students in Pakistan. *Journal of Global Entrepreneurship Research*, *9*(1), 1-20.

Ali, H., Omar, E. N., Nasir, H. A., & Osman, M. R. (2018). Financial literacy of entrepreneurs in the small and medium enterprises. In *Proceedings of the 2nd Advances in Business Research International Conference* (pp. 31-38). Springer, Singapore.

Allgood, S., & Walstad, W. B. (2016). The effects of perceived and actual financial literacy on financial behaviors. *Economic Inquiry*, *54*(1), 675-697.

Altman, M. (2012). Implications of behavioural economics for financial literacy and public policy. *The Journal of Socio-Economics*, *41*(5), 677-690.

Andarsari, P. R., & Ningtyas, M. N. (2019). The role of financial literacy on financial behavior. *Journal of accounting and business education*, *4*(1), 24-33.

Bianchi, M. (2018). Financial literacy and portfolio dynamics. *The Journal of Finance*, *73*(2), 831-859.

Ćumurović, A., & Hyll, W. (2019). Financial Literacy and Self-Employment. *Journal of Consumer Affairs*, *53*(2), 455-487.

Engström, P., & McKelvie, A. (2017). Financial literacy, role models, and micro-enterprise performance in the informal economy. *International Small Business Journal*, *35*(7), 855-875.

Finke, M. S., Howe, J. S., & Huston, S. J. (2016). Old age and the decline in financial literacy. *Management Science*, *63*(1), 213-230.

Gok, I. Y., & Ozkale, A. (2019). Testing the Influence of College Education on the Financial Literacy Level of University Students in Turkey. *e-Journal of Business Education and Scholarship of Teaching*, *13*(1), 46-58.

Grohmann, A. (2018). Financial literacy and financial behavior: Evidence from the emerging Asian middle class. *Pacific-Basin Finance Journal*, *48*, 129-143.

Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, mod-eration, and conditionalprocess modeling* [White paper]. Retrieved from http://www.afhayes.com/public/process2012.pdf

Henager, R., & Cude, B. J. (2016). Financial Literacy and Long-and Short-Term Financial Behavior in Different Age Groups. *Journal of Financial Counseling and Planning*, *27*(1), 3-19.

Hussain, J., Salia, S., & Karim, A. (2018). Is knowledge that powerful? Financial literacy and access to finance: An analysis of enterprises in the UK. *Journal of Small Business and Enterprise Development*, 25(6), 985-1003.

Kaiser, T., & Menkhoff, L. (2017). Does financial education impact financial literacy and financial behavior, and if so, when?. *The World Bank Economic Review*, 31(3), 611-630.

Kimiyaghalam, F., & Safari, M. (2015). Review papers on definition of financial literacy and its measurement. *SEGi Review*, *8*, 81-94.

Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, *49*(3), 589-614.

Kramer, M. M. (2016). Financial literacy, confidence and financial advice seeking. *Journal of Economic Behavior & Organization*, *131*, 198-217.

Kubak, M., Tkáčová, A., Androniceanu, A., Tvaronavičienė, M., & Huculova, E. (2018). Financial literacy of students in chosen universities: research platform for regulatory processes of educational system in Slovakia, *Economics and Management*, *21*(1), 175-190.

Kuntze, R., Wu, C. K., Wooldridge, B. R., & Whang, Y. O. (2019). Improving financial literacy in college of business students: modernizing delivery tools. *International Journal of Bank Marketing*, 37(4), 976-990.

Li, R., & Qian, Y. (2019). Entrepreneurial participation and performance: the role of financial literacy. *Management Decision*, 58(3), 583-599.

Li, X. (2020). When financial literacy meets textual analysis: A conceptual review. *Journal of Behavioral and Experimental Finance,* 28, 100402.

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of Pension Economics & Finance*, *10*(4), 497-508.

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, *52*(1), 5-44.

Lusardi, A., & Mitchell, O. S. (2017). How ordinary consumers make complex economic decisions: Financial literacy and retirement readiness. *Quarterly Journal of Finance*, *7*(03), 1750008.

Mishkin, F. (2008). The importance of economic education and financial literacy. *Speech before the Federal Reserve Board at the Third National Summit on Economic and Financial Literacy, Washington, DC*.

Mitchell, O. S., & Lusardi, A. (2015). Financial literacy and economic outcomes: Evidence and policy implications. *The journal of retirement*, *3*(1), 107-114.

Neumann, T. (2021). The impact of entrepreneurship on economic, social and environmental welfare and its determinants: a systematic review. *Management Review Quarterly*, 71(3), 553-584.

Ogbolu, A. N. (2020). The nexus between financial literacy and entrepreneurship ability among university students in emerging markets. *Journal of Physics: Conference Series,* 1446 (1), 012073.

Oseifuah, E. K. (2010). Financial literacy and youth entrepreneurship in South Africa. *African Journal of Economic and Management Studies*, 1(2), 164-182.

Peprah, A. A., & Adekoya, A. F. (2020). Entrepreneurship and economic growth in developing countries: Evidence from Africa. *Business Strategy & Development*, *3*(3), 388-394.

Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of consumer affairs*, *44*(2), 276-295.

Rieger, M. O. (2020). How to Measure Financial Literacy?. *Journal of Risk and Financial Management*, *13*(12), 324.

Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. *Sustainability*, *12*(3), 1186.

Tunio, M. N. (2020). Academic entrepreneurship in developing countries: contextualizing recent debate. *Research Handbook on Entrepreneurship in Emerging Economies*. Edward Elgar Publishing.

Ullah, N., Zafar, J. M., Sarwat, S., & Bhuttah, T. M. (2020). Preferences about job and business: a challenge for entrepreneurship culture in Pakistan. *International Journal of Management (IJM)*, *11*(11). 1622-1629.

Walstad, W. B., & Rebeck, K. (2017). The test of financial literacy: Development and measurement characteristics. *The Journal of Economic Education*, *48*(2), 113-122.

Wu, A. D., & Zumbo, B. D. (2008). Understanding and using mediators and moderators. *Social Indicators Research*, *87*(3), 367-392.

Ye, J., & Kulathunga, K. (2019). How does financial literacy promote sustainability in SMEs? A developing country perspective. *Sustainability*, *11*(10), 2990.