The Role of Financial and Entrepreneurial Literacy in Developing Graduate Entrepreneurial Intentions: Larkana and Sukkur, Sindh, Pakistan

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ABSTRACT

Purpose – This research paper aimed to determine the role of financial and entrepreneurial literacy in developing graduate entrepreneurial intentions (GEI) among graduates and undergraduates of Larkana and Sukkur universities / higher education institutes.

Design/Methodology/Approach –The quantitative survey method was used. 409 students filled out a five-point Likert Scale questionnaire and data were analyzed and interpreted data by using the SPSS 26 version (descriptive results and pie charts) and Smart PLS 3.3.5 version (measurement model: factor loadings, reliability and validity and structural models: hypotheses testing, and mediation results).

Findings –The study discovered that financial literacy has negative influence on graduate entrepreneurial intentions (GEI) while entrepreneurial literacy positively influence on GEI. Financial and entrepreneurial literacy positively influences on ATNVC and ATNVC also has positive influence on GEI. Mediation results showed that the mediating variable had no mediation between financial literacy and graduate entrepreneurial intentions. However, the mediating variable has a partial median between entrepreneurial literacy and graduate entrepreneurial intentions to start a business in the future.

Practical Implications – To endorse the financial and entrepreneurial literacy among graduate entrepreneurial intentions as these have significant impact on business succession and it could be enhanced by different university courses, trainings, and workshops etc. to help student to open new business to reduce unemployment and also boost country's economy.

Originality/Value – This study contributed to the literature on financial literacy, entrepreneurial literacy, graduate entrepreneurial intentions, and entrepreneurship education. This study will help the country's economy because it teaches individuals how to manage money both personally and in business, which will ultimately help them be more entrepreneurial and open more business opportunities.

Keywords: Financial & Entrepreneurial Literacy, Graduate Entrepreneurial Intentions, Attitude toward new Venture Creation.

Background

The financial literacy term was used in the US dated 23 August 1787; when the United States was facing too much financial distress among Americans, then John Adams (America's Second President) wrote a letter to Thomas Jefferson that there was a need for financial literacy. "All the puzzlements, confusions, and distresses in America arise not from defects in their constitution or confederation, not from a want of honor or virtue; it is due to ignorance of matters related to coin, credit, and circulation." Meanwhile, financial literacy could be helpful for our country. In 1934, Smith-Lever launched the CES "Cooperative Extension Service" in his country to train individuals and develop their financial skills. In the 1950s, numerous countries faced financial management, budgeting, saving, income, and expenditure issues (FinancialCorps, 2014).

Financial literacy's importance is increasing daily in education and other fields. In the 1970s, Credit Unions knew the importance of financial knowledge to young individuals and formally launched the NYIB "National Youth Involvement Board" to increase the financial literacy rate among the young. In the 2000s, Japan`s finance minister called an urgent meeting and said our country needs to increase financial literacy because of the increase in financial liberalization. In 2003, the UK started a national-level strategy on financial capability. US passed FACTA "Fair and Accurate Credit Transactions Act" in which the financial literacy improvement program was launched. In 2003, OCED, "The Organization of Economic Co-operation and Development" launched a project in which they provide numerous ways to improve financial literacy and education via financial literacy principles. The OECD institute also conducts surveys globally to analyze financial literacy (FinancialCorps, 2014; Janor et al., 2016).

In 2008, The world bank and the Russian Federation announced an international program to support/improve financial literacy and education via the $15 Million Russian Financial Literacy program. In 2011, keeping given world, Pakistani's central Bank, State Bank of Pakistan (SBP) started the financial literacy program to create financial awareness to the general public by the named National Financial Literacy Program, this program is running by SBP, Program targeted about fifty thousand beneficiaries with low-income levels. This program's main objective is to provide financial knowledge to Pakistani youth to strengthen their financial money matters, skills, and understanding all of the issues related to finance (Fatima, April 13, 2019).

Introduction

Financial literacy (FL) is the focused by the finance researchers, policymakers, and financial institutions. Financial literacy refers to an individual having skills and knowledge which assist them in managing money effectively. It also boosts the state or country's economic growth and financial improvements and performance. It is more important for the university undergraduate to know about the concept of finance to manage money (Kumari, 2020). Entrepreneurial literacy (EL) refers to providing the knowledge, skills, and attitude to an individual to detect the existing environment opportunities to grow their business sustainably. Looking at past to manage the sustainability growth for new ventures are low due to failure rate increased (Pérez-Bustamante, 2014). EL functions as an individual assessment for their business development from business inception. EL influences on several aspects of individuals in their lives such as risk aspect (EL reduce the risk aspect of the individual), financial aspect, marketing aspect, production aspect, Human resource management aspect and financial management aspects (Winarno & Wijijayanti, 2018).

Attitude is generally referred to as the direction toward responding to any object favorable or unfavorable way (Lindsay, 2005).Individuals are using the term attitude differently in their lives but according to social psychologists' attitude means "our relatively enduring evaluation of something, where the something is called the attitude object. The attitude object might be a person, a product, or a social group" (Albarracín et al., 2005; Stangor et al., 2014; Wood, 2000).NVC "New Venture Creation" refers to starting anew company/firm. "Start is to assemble ongoing interdependent actions into sensible sequences that generate sensible outcomes" (Weick, 1979). NVC is the same as the new firm definition introduced

by Strategic Planning Institute; NVC is a new business venture initiated as an independent entity. It has a new profit center in the same firm, but it has other businesses established (Gartner, 1985). Therefore, ATNVC's **"**Attitude toward new venture creation" refers to how an entrepreneur responds to the start-up new business either favorably or non-favorable when he has financial and entrepreneurial literacy.

Graduate entrepreneurial intentions (GEI) importance is increasing around the globe due to it is the source of economic development and growth, all higher education institutions are producing a significant number of graduates by completing their higher education, and many countries' government policy is looking for to advertise smart medium enterprises (SMEs) employment as a graduate job opportunity due to heavy competitions in the graduate labor market for securing a job in large firms(Ghulam Nabi, 2009).

In today's world, if country's financial position is strong then it would be called the stable country either wise it is called non stable country (Herawati et al., 2018), financial matters are very much important to understand the financial position of country to take the better decisions for the betterment of the country, and financial literacy is important to understand the financial matters or position of the country (Grohmann, 2018; Grohmann & Menkhoff, 2015; Janor et al., 2016).
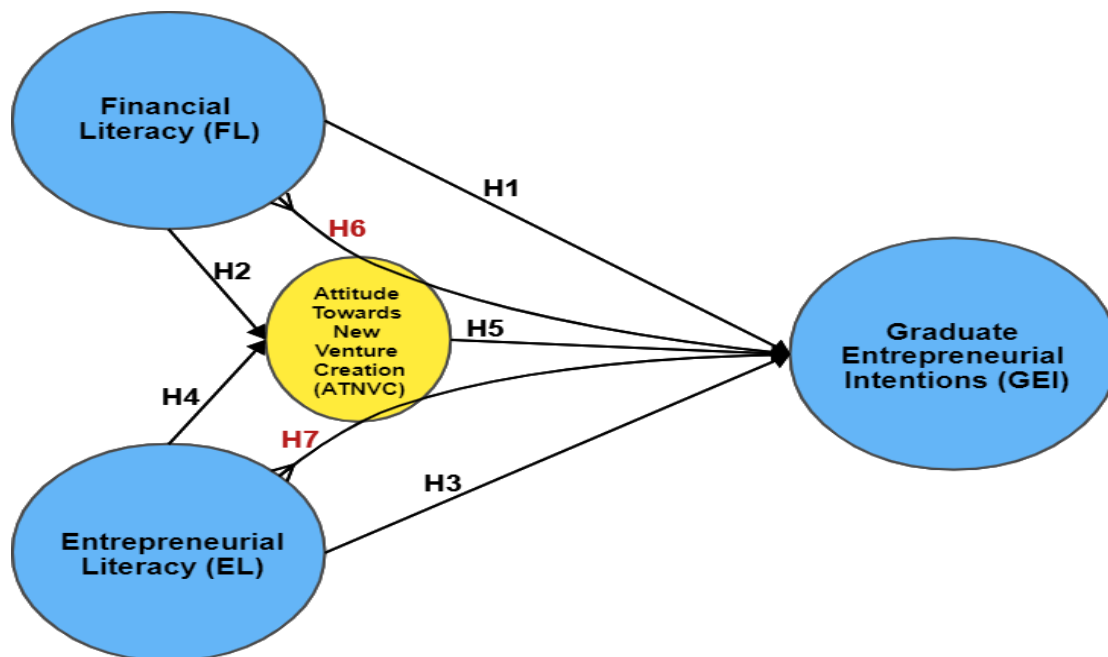
Research Model and hypotheses

Source: (Hasan et al., 2020)

H1: Financial literacy has a positive relationship with graduate entrepreneurial intentions.
H2: Financial literacy has a positive relationship with attitude towards new venture creation.
H3: Entrepreneurial literacy has a positive relationship with graduate entrepreneurial intentions.
H4: Entrepreneurial literacy has a positive relationship with attitude towards new venture creation.
H5: Attitude towards new venture creation has a positive impact on graduate entrepreneurial intentions.
H6: Financial literacy and graduate entrepreneurial intentions have a positive relationship through the mediating variable of attitude towards new venture creation.
H7: Entrepreneurial literacy and graduate entrepreneurial intentions have a positive relationship through the mediating variable of attitude towards new venture creation.

Literature Review

Financial Literacy(FL) term is mostly used by researchers for their research, it verifies that it exists the problem worldwide, it has a deadly influence on individuals as well as on the country's economy (De Beckker et al., 2019; Xiao & Porto, 2017), S&P GLOBAL FINLIT SURVEY also verifies that financial illiteracy problem exists in developed as well as developing countries (Klapper & Lusardi, 2020). (Stolper & Walter, 2017) discovered in their research among graduates of higher level by using three measures in twenty-two countries (upper-income, middle-income, and lower-income) that financial literacy among graduates found 35% competence in upper-income level countries and 13% in middle-income countries, and 4% in other countries. (Klapper et al., 2015) discovered in their research of cross-country that 65% FL rate exists among adults who are living in Australia, Denmark, Germany, Norway, Sweden, United Kingdom, Canada, Finland, Netherlands, and Sweden while FL rate is less than 25% or absolute twenty-five percentage in South Asia.

Organization for Economic Co-operation and Development (OECD) investigated in thirty countries by cross-country FL level with financial knowledge, attitude and behavior and found that FL is low. Whereas France`s scored highest. There are numerous researches internationally that verify that FL exists among adults and in teenagers too(OECD, 2016). In (OECD, 2017) same organization did research among 15-year-oldstudents in PISA "Programme for International Student Assessment" survey and found that twenty-two percent all students were literature overall on average and China's students scored nine percent being illiterate and Brazil's students being fifty-three percentage financially illiterate.

FL is the knowledge that how to manage finance or how to do financial decisions it includes decisions regarding personal finance, savings, loans, insurance, beneficiary details, investments, etc. (Chen & Volpe, 1998), the researcher discovered that FL has a positive influence on entrepreneurial intentions, as higher FL the higher entrepreneurial intentions, in a nutshell, higher FL in graduates encourage to become an entrepreneur (Aldi et al., 2019). FL among accounting undergraduates has a moderate influence on entrepreneurship intentions and it is observed during the study that FL is the reason behind to increase in entrepreneurial intentions among accounting undergraduates and FL has a crucial as well as a vital role in boosting entrepreneurial intentions to become an entrepreneur (Ahmad et al., 2019). In a nutshell, it is forcefully said that FL is a most important factor among young, it should be taken seriously by young to come in front as an entrepreneur to support country`s economy, therefore, young must have good financial knowledge (Cole et al., 2014; Lusardi & Tufano, 2015). Financial knowledge will help young to take correct decisions and prevent the wrong decisions whose consequences would be negative and will remain for years to solve (Ahmad et al., 2019; Garg & Singh, 2018).

Entrepreneurial Literacy (EL) is basic knowledge regarding creating and maintaining a business, and in a broader sense, it includes financial responsibility, ethical manner, ability to pursue, prioritize tasks, set & evaluate goals, and innovative business ideas (Herjavec, 2010). Television series "Shark Tank, Asserts": serial entrepreneur hero and star said that "While the entrepreneurial spirit is most evident (and essential) among those who choose to launch their own business, it also represents a valuable trait in those who prefer to work within an existing corporation"(Rauch & Slack, 2016). Researchers agree and enforce those entrepreneurial skills are the reason behind entrepreneurial mind to move toward entrepreneur as career and most of the students will move toward becoming entrepreneurs rather than employed by large companies after getting an entrepreneur education, indeed, entrepreneurial education has become the most important priorities among a partnership of 21st-century skills. Attitude toward new venture creation (ATNVC) is important for opening a new business (Glenn, 2004)and one of the biggest barriers in entrepreneurship is financial knowledge (Engelschiøn, 2014). Literature concluded that FL is one of the important aspects for creating ATNVC or opening a new business (Xiang & Worthington, 2015). Entrepreneurship education (EE) and training have much importance toward changing ATNVC and EE are essential for opening of new business, if the targeted audience doesn't trust that entrepreneurship education and training could assist in changing ATNVC or help in managing business process then the existence of EE would be wastage (redundant) as a whole (Lee & Wong, 2003). Attitudes are the factors

that assist individuals to respond favorably or unfavorably toward the object and it is concluded that ATNVC has a significant impact on decisions regarding opening a new business (Ajzen & Fishbein, 1977).

Graduate entrepreneurial intentions (GEI) refers to the relationship between start-up business as a career and graduating by getting a university education as the product which will lead toward self-employment (Hannon et al., 2004; Nabi et al., 2006). Furthermore, the researchers emphasize that descriptions of GEI are evolved that trying to start or starting a new business as a feature of entrepreneurship. And talking about the role of higher education is keeping much importance to the graduates for choosing their career-related options, decisions regarding start-up business as their lifetime career (Pittaway & Cope, 2007).

In Indonesia, entrepreneurship programs launched to support the country`s economy by delivering entrepreneurship education to the individuals to increase in entrepreneurs for opening a new business or how to deal with complex business situations to run the business smoothly and it will impact positively on economic development as Indonesia is included in developing countries (Aldi et al., 2019).In Malaysia, financial literacy is generally low among its citizens especially students, youths, and individuals who have low income (Ibrahim et al., 2010; Yakob et al., 2021). In Russia, the researchers identified many dependency issues due to arises from low financial literacy and families culture due to opening a new private business there is a novelty in the country, and individuals living in rural areas have less entrepreneurial intentions and it is decreasing due to living in rural areas (Bednarikova et al., 2020). In the United Kingdom, the financial services authority is "the quasi-judicial body accountable for the regulation of the financial services industry", this body described that FL is the activities and series of processes that boost the individual knowledge, skills, and confidence so that the community will understand finance easily (Arianti, 2018).

Research Methodology

Research Method and Approach

The quantitative research approach was used in this project because it provides an easy way to collect the primary data through a structured survey questionnaire and descriptive research was applied which develops the causal relationship between variables as it concentrated on assessing the effect of one variable on another one (Chawla & Sodhi, 2011), in this exploration independent variables are (Financial literacy and entrepreneurial literacy) and the dependent variable is (graduate entrepreneurial intentions)mediating variable (attitude toward venture creation) to analyze the role of financial literacy and entrepreneurial literacy in developing the graduate entrepreneurial intentions in Larkana and Sukkur cities university graduates.

Determination of Research Sample Size

The sample size is minimum defined by Yamane Taro formula is 344 respondents for this research and the researcher collected responses from four hundred nine (409) respondents of Larkana and Sukkur universities graduates to the role of financial and entrepreneurial literacy in developing graduate entrepreneurial intentions.

Questionnaire Design

The close-ended questionnaire was used in this study, close ended questionnaire was five-point Likert Scale structured questionnaire scale as 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree from universities students of Larkana and Sukkur to know the role of financial and entrepreneurial literacy in developing graduate entrepreneurial intentions, questionnaire details as; Financial Literacy (07 items), Entrepreneurial Literacy (07 items), Attitude toward venture creation (07 items) and Graduate Entrepreneurial Intentions (09 items).

Sampling Technique

The sampling technique for this project is convenience sampling of non-probability sampling technique, where the sample is taken from a group of people who are easy to contact or to reach and also sent them via WhatsApp or email to fill out.

Sample of Population

The study population is undergraduates and graduates of Larkana, and Sukkur cities universities/institutes, below are the details of universities/institutes of Larkana and Sukkur cities which are offering MBA / BBA programs:

Table 1: *Targeted Population*

University or Institute Name	Students Seats
Larkana City	
1. University of Sindh Campus Larkana.	320
2. The Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST) Larkana.	90
Sukkur City	
1. Sukkur IBA University.	1558
2. Begum Nusrat Bhutto Women University.	90
3. Sukkur Institute of Science & Technology (SIS TECH).	400
Total undergraduates and graduates	**2458**

Data Analysis Tools and Techniques

This research is analyzed with help of SPSS (Statistical Package for the Social Sciences) latest 26 version (descriptive analysis and pie charts) and for more accuracy of results and regression analysis, Smart PLS 3.3.5 latest version used (Ringle et al., 2015). Usually, SMART PLS is used for non-normal data (Malik et al., 2021), measurement and structural models were developed in Smart PLS-SEM (Hair et al., 2017), this research has a mediator, and this is not possible in the SPSS to test together, PLS-SEM is a superior choice to assess the mediation models (Malik et al., 2021) and it is free from different assumptions i.e. sample size, independence and normal distribution of data. Reliability and validity of the scales were checked by measurement model (Henseler et al., 2015).

Measurement and Structural Model

Measurement model includes two validity which are convergent and discriminant validity, convergent validity was used to check "whether the degree to which multiple items measure the same ideas" (Ramayah et al., 2018), in this factor loadings, CR, alpha values and AVE were checked (Hair Jr et al., 2014). While discriminant validity is used to examine "whether the degree to which items differentiate among constructs" (Avkiran, 2018; Hair Jr et al., 2014; Ramayah et al., 2018), this discriminant validity, could be checked via Fornel Larcker Criterion, Cross Loadings, and HTMT (Malik et al., 2020). HTMT cut-off level/threshold is less than 1 (Black & Babin, 2019). After convergent and discriminant validity researcher moved toward the structural model to test the research hypotheses with bootstrapping, in bootstrapping beta values, t-statistics, p values, bias confidence intervals lower limit (BCILL), and bias confidence intervals upper limit (BCIUL) were calculated and matched with the standard criteria suggested by (Hair Jr et al., 2014) and the researcher ensured complete compliance with the ethical considerations.

Analysis and Results

The researcher used SPSS version 26.0 for descriptive analysis and Smart Partial Least Squares Structural Equation Modeling (Smart PLS-SEM) version 3.3.5 for further analysis i.e., loadings, Cronbach alpha,

composite reliability and average variance extracted (AVE), discriminant validity, R square, indirect effects, total effects, collinearity statistics (VIF), and hypotheses results.

Table 2: *Profile of the respondents*

Variable	Categories	Frequency	%
Gender	Male	332	81.2%
	Female	77	18.8%
Age	<25	345	84.4%
	25-35	64	15.6%
Qualification	Intermediate	125	30.6%
	Graduate	222	54.3%
	Postgraduate	62	15.2%
City	Larkana	167	40.8%
	Sukkur	242	59.2%
University / Institute	Sindh University Campus Larkana	122	29.8%
	SZABIST Larkana	41	10.0%
	Sukkur IBA University	185	45.3%
	Begum, Nusrat Bhutto women	27	06.6%
	University, Sukkur	34	8.3%
	SISTECH, Sukkur		
Total respondents participated in this research		**409**	

Table no.2 describes the profile of respondents, **Gender:** Male (332 as 81.2%) and female (77 as 18.8%) out of 409 respondents. **Age:** <25 (345 as 84.4%) and 25-35 (64 as 15.6%) out of 409 respondents. **Qualification:** intermediate (125 as 30.6%), graduate (222 as 54.3%) and postgraduate (62 as 15.2%). **City:** Larkana (167 as 40.8%) and Sukkur (242 as 59.2%). **University / Institute:** Sindh University Campus Larkana (122 as 29.8%), SZABIST Larkana (41 as 10.0%), Sukkur IBA University (185 as 45.3%), Begum, Nusrat Bhutto Women University, Sukkur (27 as 06.6%) and SIS TECH, Sukkur (34 as 08.3%).

Pie Charts

GENDER (Figure 01) — AGE (Figure 02) — QUALIFICATION (Figure 03)

CITY (Figure 04) — Larkana 40.83%, Sukkur 59.17%

UNIVERSITY / INSTITUTE (Figure 05) — Sindh University Campus Larkana 29.83%, SZABIST Larkana 10.02%, Sukkur IBA University 45.23%, Begum, Nusrat Bhutto women University, Sukkur 6.60%, SISTECH, Sukkur 8.31%
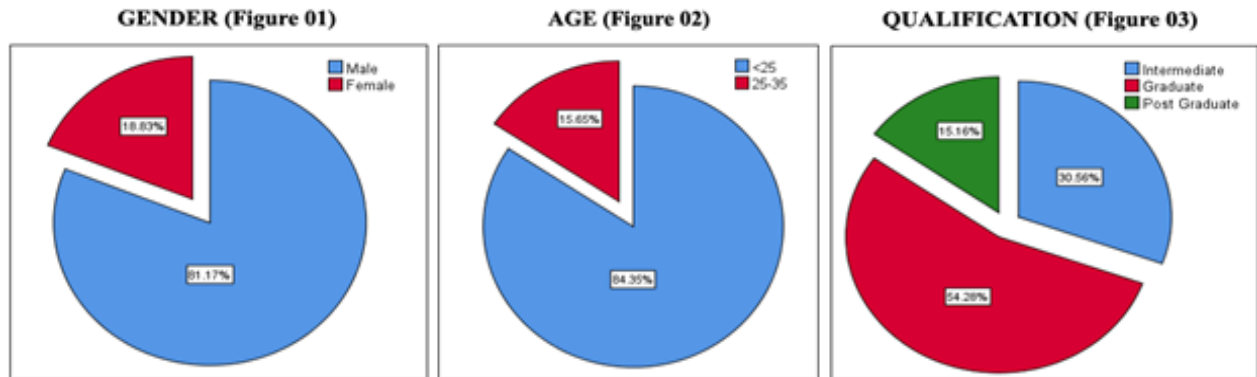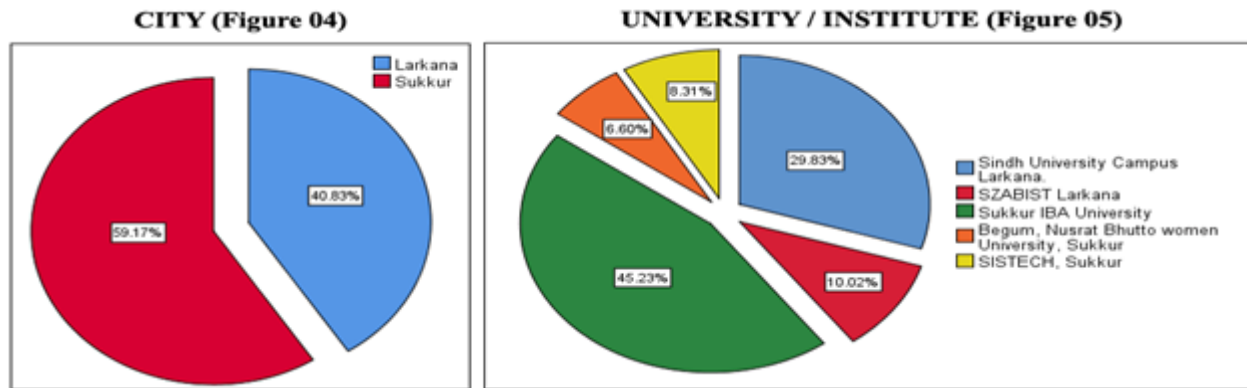
The above five figures are representing the graphical view of respondents' information i.e., gender (figure 01), age (figure 02), qualification (figure 03), city (figure 04), and university/institute (figure 05) wherefrom he/she belongs with percentage out of 100%. Concluding, most respondents are male, their age is less than 25 years, belong from Sukkur city, and most respondents are from Sukkur IBA University.

Further Analysis with Smart PLS-SEM

Smart PLS-3 was used to apply the inferential statistical techniques to see the convergent (factor loadings, CR, alpha values, and AVE) and discriminant validity (Fornel Larcker Criterion, Cross Loadings, HTMT, and collinearity statistics (VIF)) and hypothesis results. After convergent and discriminant validity researcher moved toward the structural model to test the research hypotheses with bootstrapping, in bootstrapping beta values, t-statistics, p values, BCILL, and BCIUL were calculated and matched with the standard criteria suggested by (Hair Jr et al., 2014).First, imported the data into Smart PLS-SEM latest version 3.3.5 and build variables, and pasted indicators then calculated PLS algorithm to look the outer loadings, and the outer loadings value should be minimum or greater than 0.70. Four indicators were removed which values lower than 0.70 i.e., FL07, EL05, ATNVC02, and GEI02 and went for calculate PLS algorithm for further analysis.

Table 3: *Measurement Model*

	Indicators	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Financial Literacy	FL01	0.812	0.867	0.901	0.602
	FL02	0.791			
	FL03	0.820			
	FL04	0.757			
	FL05	0.743			
	FL06	0.727			
Entrepreneurial Literacy	EL01	0.784	0.848	0.888	0.569
	EL02	0.779			
	EL03	0.720			
	EL04	0.788			
	EL06	0.726			
	EL07	0.726			
Attitude toward New Venture Creation	ATNVC01	0.712	0.838	0.882	0.554
	ATNVC03	0.769			
	ATNVC04	0.701			
	ATNVC05	0.765			

	ATNVC06	0.728			
	ATNVC07	0.787			
Graduate	GEI01	0.735	0.887	0.910	0.558
Entrepreneurial	GEI03	0.728			
Intentions	GEI04	0.770			
	GEI05	0.760			
	GEI06	0.759			
	GEI07	0.770			
	GEI08	0.744			
	GEI09	0.710			

Note: FL07, EL05, ATNVC02, and GEI02were removed because of low loadings.

Above table measurement model describes the exogenous, endogenous, and mediator constructs results with first-order factor loadings, Cronbach`s Alpha, Composite Reliability, and Average Variance Extracted (AVE).

Outer loadings, Cronbach`s Alpha, composite reliability values should be minimum or greater than 0.70 and Average Variance Extracted (AVE) value should be greater than 0.50 and all research variables values met with the defined criteria.

Based on the above results of the measurement model, in a nutshell, the research instrument used in this research is valid and reliable for further studies.
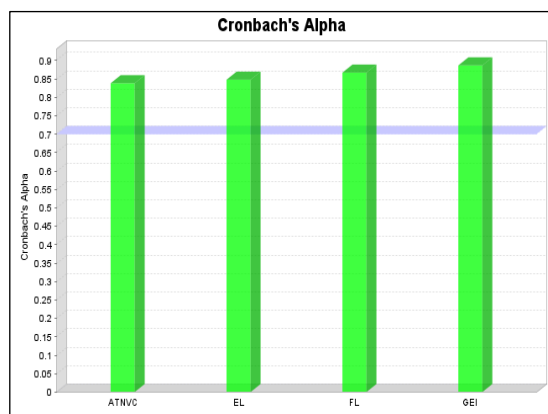
Figure 06: *Cronbach's Alpha*   Figure 07: *Composite Reliability*
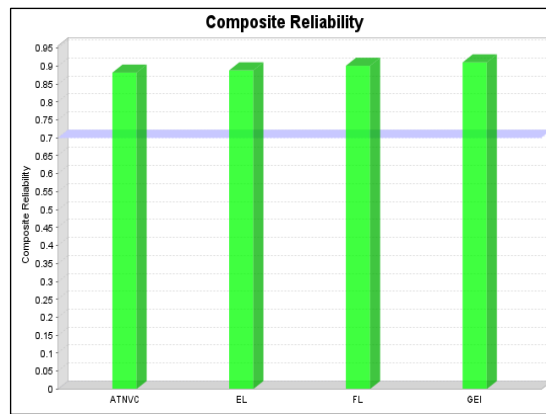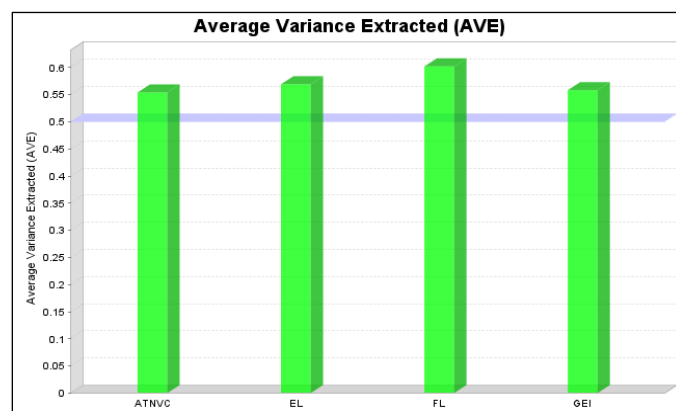

Figure 8: *Average Variance Extracted (AVE)*

Figures 06, 07, and 08 are the graphical representations of Cronbach`s Alpha, composite reliability, and AVE where it is easily seen that all have met with the criteria i.e., Cronbach`s Alpha value is greater than 0.70, composite reliability value is greater than 0.70 and AVE value is greater than 0.50.

After constructing reliability and validity now discriminant validity should be established between constructs. There are three ways (Fornell-Larcker Criterion, Cross Loadings, and HTMT) that can be used by researchers to check the discriminant validity among constructs. If discriminant validity is established, then go for further analysis. Fornell-Larcker Criterion (1981): Square root of AVE value of each construct should be greater than its other constructs highest correlation then it tells that discriminant validity is established, Cross Loadings: the value of each construct should be higher than other correlation values in the same column then it tells that discriminant validity is established, and HTMT: each construct value should be less than the value of 1 in the HTMT table then it tells that discriminant validity is established(Henseler et al., 2015; Malik et al., 2021).

Table 4: *Heterotrait-Monotrait Ratio (HTMT)*

	ATNVC	EL	FL	GEI
ATNVC				
EL	0.915			
FL	0.752	0.838		
GEI	0.888	0.855	0.704	

Above table HTMT also describes that discriminant validity, this is the newest way of assessing the discriminant validity among construct and value should be less than 1 and above table, all values meet with the threshold, so it is said that discriminant validity is established among constructs.

Table 5: *Collinearity Statistics*

Collinearity Statistics (Outer VIF Values)							
	VIF		VIF		VIF		VIF
FL01	2.116	EL01	1.980	ATNVC01	1.553	GEI01	1.730
FL02	2.008	EL02	1.925	ATNVC03	1.843	GEI03	1.770
FL03	2.120	EL03	1.573	ATNVC04	1.589	GEI04	2.050
FL04	1.763	EL04	1.858	ATNVC05	1.794	GEI05	1.943
FL05	1.724	EL06	1.619	ATNVC06	1.657	GEI06	1.861
FL06	1.652	EL07	1.638	ATNVC07	1.878	GEI07	2.032
						GEI08	1.900
						GEI09	1.763

Above table represents the collinearity statistics via outer VIF (variance inflation factor) values, the value of each item should be less than 3 to meet the defined criteria/threshold and the above table, results met with the defined criteria as it can see easily that all the values of each item of the constructs are less than 3. it indicates that there is no multicollinearity issue in this research model.

Table 6: *Path coefficient Analysis*

Total		ATNVC	EL	FL	GEI
Direct	ATNVC				0.466
Effect	EL	0.642			0.318
	FL	0.182			0.090
	GEI				
Indirect			Total Indirect Effects		
Effects		ATNVC	EL	FL	GEI
	ATNVC				
	EL				0.299

	ATNVC	EL	FL	GEI
FL				0.085
GEI				
Specific Indirect Effects				
EL -> ATNVC -> GEI				0.299
FL -> ATNVC -> GEI				0.085

Total Effects	**ATNVC**	**EL**	**FL**	**GEI**
ATNVC				0.466
EL	0.642			0.617
FL	0.182			0.175
GEI				

Above table path coefficients state the direct, indirect, and total effects of this research. Whereas EL has a direct effect on GEI is 0.318, the indirect effect is 0.299 and the total effect is 0.617 (61.7%). and FL has a direct effect on GEI is 0.090, the indirect effect is 0.085 and the total effect is 0.175 (17.5). EL has direct effect on ATNVC is 0.642 (64.2%) while on FL is 0.182 (18.2%). Furthermore, EL has a direct effect on GEI is 0.617 via mediating variable (ATNVC) has minor effect i.e., 0.025 and same case with FL has a direct effect on GEI is 0.175 via mediating variable (ATNVC) is again minor effect reduced i.e., 0.007.

Table 7: *R Square*

	R Square	**R Square Adjusted**
GEI	0.651	0.648
ATNVC	0.612	0.610

The above table described R Square values of this research, R Square shows the model summary of exogenous variables with endogenous and mediating variables. The above table described exogenous variables predicting the graduate entrepreneurial intentions at 65.1% out of 100% and also exogenous variables predicting attitude toward new venture creation at 61.2% out of 100%.

After the algorithm, the researcher ran bootstrapping to test the research hypotheses. Structural model to test the research hypotheses with bootstrapping, in bootstrapping beta values, t-statistics, p values, BCILL, and BCIUL were calculated and matched with the standard criteria suggested by (Hair Jr et al., 2014).

Discussion

The first five hypotheses' results were given in below table that FL (β=0.090, t=1.722, p=>0.05) has positive and insignificant impact on GEI and EL (β=0.318 t= 4.897 p=<0.05) have positive and significant impact on GEI. Moreover, FL (β=0.182, t= 3.476, p=<0.05) and EL (β=0.642, t= 13.432, p=<0.05) have positive and significant impact on ATNVC. ATNVC has positive and significant impact on GEI (β=0.466, t= 8.270, p=<0.05). BCILL and BCIUL values of H1 is negative and positive means there is zero in between the values. BCILL and BCIUL values of H2, H3, H4 and H5 are positive means there is no zero in between the values. Therefore, H1 is not supported, H2, H3, H4, and H5 are supported.

Table 8: *Hypotheses Results*

	Hypotheses path	**Std. Beta.**	**Std. Dev.**	**T Statistics**	**P Values**	**BCILL**	**BCIUL**
H1	**FL -> GEI**	0.090	0.053	1.722	**0.086**	-0.016	0.191
H2	**FL -> ATNVC**	0.182	0.052	3.476	**0.001**	0.086	0.285
H3	**EL -> GEI**	0.318	0.065	4.897	**0.000**	0.192	0.447
H4	**EL -> ATNVC**	0.642	0.048	13.432	**0.000**	0.534	0.724
H5	**ATNVC -> GEI**	0.466	0.056	8.270	**0.000**	0.356	0.573

The six and seventh hypotheses' results were given in below table that ATNVC positively and significantly mediated the relationship between FL and GEI (β=0.085, t= 3.189, p=<0.05, BCILL = 0.037 and BCIUL = 0.143) and ATNVC positively and significantly mediated the relationship between EL and GEI (β=0.299, t= 7.078, p=<0.05, BCILL = 0.218 and BCIUL = 0.385), BCILL and BCIUL values of both are positive means there is no zero in between the values. H6 and H7 are supported.

Mediation results are ATNVC has no mediation between FL and GEI as the value is below 0.20 And ATNVC has partial mediation between EL and GEI as value is between .20 to .80. Therefore, it is concluded that ATNVC has no mediation between FL and GEI and ATNVC has partial mediation between EL and GEI.

Table 9: *Mediation results*

	Hypotheses path	Std. Beta.	Std. Dev.	T Statistics	P Values	BCILL	BCIUL
H6	FL -> ATNVC -> GEI	0.085	0.027	3.189	0.002	0.037	0.143
H7	EL -> ATNVC -> GEI	0.299	0.042	7.078	0.000	0.218	0.385

Conclusion

This study focused on the financial and entrepreneurial literacy roles in developing graduate entrepreneurial intentions (GEI) in higher education institutes in Sindh, Pakistan. These literacy skills are required to succeed in business, the economy, and the community. These skills help individuals to manage their finances and develop their entrepreneurial intentions.

This study has found that there is negative impact of FL on GEI (β=0.090 and p=>0.05) as p -value higher than 0.05 (> 0.05) is not statistically significant and indicates strong evidence for the null hypothesis and that impact is minor. Other studies have found that FL has positive impact on GEI as previous study i.e., (Ahmad et al., 2019; Aldi et al., 2019; Hasan et al., 2020). This study found FL has positive influence on ATNVC as previous study i.e., (Singhry & Bogoro, 2016). This study found EL has positive influence on GEI as previous study i.e., (Hasan et al., 2020). This study found EL has positive influence on ATNVC and ATNVC also has positive influence on GEI.

Mediation results showed that the mediating variable (ATNVC) had no mediation between Financial Literacy (FL) and Graduate Entrepreneurial Intentions (GEI). However, the mediating variable has a partial median between Entrepreneurial Literacy (EL) and Graduate Entrepreneurial Intentions (GEI). In other words, this research discovered that the higher the entrepreneurial literacy among individuals, the greater the chances of developing graduate entrepreneurial intentions, which will ultimately lead toward encouraging the graduates to become entrepreneurs.

Limitations and Further Research

However, despite the results of the study, it has two limitations. First and foremost, this research is limited to higher education institutions in Sindh, specifically Larkana and Sukkur. Second, the research sample consists of 409 replies to the survey question.

Future researchers might consider expanding this study to all higher education institutes at the Sindh level or at the Pakistan level, as well as future researchers could use this model in their own country and compare the results to those from this study.

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