
Entrepreneurship motivation in Pakistani context from the perspective of university students: testing ethnic, minority and entrepreneurship theory

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Abstract: Objective of this research is to explore factors that contribute towards entrepreneurial motivation in university students of Pakistan testing ethnic, minority and entrepreneurship theory. Data of 533 respondents from HEC recognised universities in Pakistan has been collected and analysed for the purpose of our research. The results suggest that there exist 'psychological' and 'economic' and factors from family profile that influence the entrepreneurial motivation of university students in Punjab province of Pakistan confirming ethnic, minority and entrepreneurship theory. Over and above, there also that exists a group of psychological factors that partially mediate in our model. The theory needs to be tested in different industries and economic settings for further validations. The research has huge practical implication as it identifies 'psychological' and 'economic' factors that need to be focused to increase entrepreneurship culture in Pakistan. If focused, it will go a long way in dealing with the problems of unemployment by setting up new business enterprises.

Keywords: entrepreneurship; entrepreneurial motivation; mediation model; psychological factors; economic factors; ethnic; minority and entrepreneurship theory.

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1 Introduction

Entrepreneurship is a dynamic activity in any society that plays a vital role for the economy (Neck and Greene, 2011). It develops economic cycle in such a way that almost all developing countries benefit from it (Mohar et al., 2007; Bos-Nehles et al., 2017). The higher education institutions being part of economic cycle are now focusing more on developing entrepreneurial skills that is also causing urge in their students to become entrepreneurs (Edmondson and McManus, 2007; Torres Velásquez et al., 2018; Carvalho et al., 2019). It is so because entrepreneurship opens the minds of the students to become creative and successful (Thompson, 2009; Czuchry and Czuchry, 2009; Beliaeva et al., 2017).

In a country like Pakistan, entrepreneurship can yield substantial results. This is because of numerous reasons that need to be explored from the perspective of the government and the private sector. As economy is a diversified subject; therefore, dealing with it requires everyone to focus on entrepreneurship along with other factors.

The primary objective of this study is to deep dive into the perception of Pakistani students about their entrepreneurship motivations. Analysing the behavioural attributes helps focusing on the perception of an individual about a specific person (Cope, 2015; Núñez et al., 2018; Henao-García et al., 2020). This builds a need to initiate such a research which can help clarify mixed information about conflicting outcomes in real scenarios (Colette, 2015; Beliaeva et al., 2017). This will be achieved by analysing how various factors impact forthcoming graduates about their ambitions to decide about setting up their businesses or joining a company.

People of Pakistan are more inclined to entrepreneurship (Bux et al., 2016; Raza et al., 2018a). This leads them to develop businesses which are mostly small and medium scale enterprises (SMEs). SMEs constitute nearly 90% of the firms operating in Pakistani private sector employing about 80% of the masses not working in agricultural sector and also contributing 40% in national GDP. Haque (2007) regards small sector development as the evidence of entrepreneurial skills in the people of Pakistan. SMEs are mostly started by the individuals themselves or with the help from their families and friends (Bux et al., 2016).

The decision to start an enterprise is based on a number of factors. These range from evaluating opportunities existing in the markets to examining self-abilities and potential (Chu et al., 2011). Apart from this, there also exist factors that change from country to country and society to society (Bux et al., 2016). These factors include cultural, social, political and economic (Chu et al., 2011; Amentie and Negash, 2014; Stieg et al., 2017) that are actually market environment that allure new and existing businesses to initiate and expand.

This research study is actually based on a number of reasons. Firstly, despite a number of initiatives taken by regulatory authorities to support businesses viz., establishing export processing zones, small and medium enterprises development authorities, specialised banks for SMEs, micro finance institutions, subsidised financing

schemes to support exporters, incentives for locally manufactured machinery, etc., Pakistan is lagging behind in startups of new businesses with nearly half of the performance compared with similar economies (Bux et al., 2016). A reason for such underperformance indicated by Bari et al. (2005) is below potential performance. Ullah et al. (2011) points that in Pakistan about 95% of the SME's fail in early stages of their initiation. Secondly, young graduates are scared to take business risks and rather opt for a stable job. Thirdly, every country has specific economic, social, political and cultural scenario and Pakistan is not an exception. Fourthly, the multi-facet literature examining entrepreneurship in Pakistan is almost negligible. This is because most of such research in developed countries is due to research support from higher institutions.

Keeping in view the need of entrepreneurship research this study has the objective to explore the factors which effect entrepreneurial motivations in university students in Pakistan using ethnic, minority and entrepreneurship theory of Dana et al. (2019).

This main objective shall be explored with the help of exploring the following sub objectives:

- To examine psychological factors that affects the entrepreneurial motivations of university students in Pakistan.
- To examine economic factors those affect the entrepreneurial motivations of university students in Pakistan.
- To examine family profile of a student that has any affect on his entrepreneurial motivations.

2 Review of literature

In order to achieve the objectives, review of literature has been conducted in two perspectives, i.e., in general followed by specific relating issues to entrepreneurial motivations of students in Pakistan.

2.1 Theories of entrepreneurship

The concept of entrepreneurship is based on variety of theories. The social learning theory (Bandura, 1977) states that the belief of a person depends on his capability to perform given acts. The Social cognitive theory which describes that human behaviour is the product of interpersonal and intrapersonal behaviour of individual in various environments (Bandura, 1986). Bandura (1997) further narrates that self-efficacy is stemmed into social cognitive theory. Theory of planned behaviour (TPB) which states that behavioural intent is the pivotal factor in planned behaviour (Katz and Gartner, 1988; Ajzen, 1991). The cognitive or cognitive approach theory which examines development of actions and competencies of the individuals (Krueger et al., 2000). Institutional theory that provides explanation about institutions creating boundaries for human interactions therefore it can better explain human behaviour (North, 1990; Garud et al., 2007; De Clercq et al., 2013; Aftab et al., 2017). Ethnic, minority and entrepreneurship theory which states the relationship between family, community and ethnicity (Dana et al., 2019). However, based on objectives of this research no focus on any one single theory

has been made rather the model has been based on the TPB, and ethnic, minority and entrepreneurship theory.

Keeping in view the objective of our research we base our research on the theoretical foundations of Ethnic, minority and entrepreneurship theory of Dana et al. (2019). However, to support our hypotheses and scope of work we shall also utilise the social cognitive theory of Bandura (1986). This is because our objective is to examine how entrepreneurship motivations of the Pakistani students are effected from family profile and from the environment where they function.

Doing so will add to novelty of research in such a way that ethnic, minority and entrepreneurship theory of Dana et al. (2019) requires to be requires to be examined and tested in various geographical locations, sectors and industries.

2.1.1 General review of literature on entrepreneurial motivations:

Basu and Virick (2008) find positive impact of education and prior experience on entrepreneurial motivations of students. Their findings highlight that education and prior experience does have a positive and significant impact on entrepreneurial behaviour. Obembe et al. (2014) find student point of view about entrepreneurial skills focusing on capital, university education, survival and familiarity. Hassan et al. (2018) and Núñez et al. (2018) identify teaching mechanisms focusing proactive components, critical thinking and basic reasoning in students. They recommend a new mechanism of entrepreneurial creative card (EC-Card) approach for class room learning to inculcate entrepreneurial inclination amongst students. Mat et al. (2015) explore factors that contribute in entrepreneurial innovation skills which are locus of control, sense of achievement and subjective norms. Kadir et al. (2012) find positive correlations between learning help and entrepreneurial desires. Van Gelderen et al. (2008) use TPB to examine entrepreneurial motivations and find entrepreneurial sharpness and its significance of money related matters to be the most important ones.

Schlaegel and Koeing (2014) and Zucchella et al. (2019) argue that raising expectations of entrepreneurs also raise inclination of masses to initiate a business enterprise. Bae et al. (2014) examine effect of enterprise education on entrepreneurial expectations and find blended outcomes. They additionally dissect mediators, for example, the qualities of business enterprise training, understudies' disparities, and social qualities. Muhammad et al. (2015) find strong linkages between entrepreneurial goals and advancements of businesses which is important for financial development and raising of economies. They observe scholastic exchanges and approach activities becoming indispensable part of entrepreneurial improvement in general public.

Rasli et al. (2013) demonstrate that work understanding, vicarious experience, general disposition and picture of enterprise as important determinants of entrepreneurial conviction and entrepreneurial aims. Their examination suggests that conviction is the most grounded variable that has coordinated impact on entrepreneurial aim. Adekiya and Ibrahim (2016) analyse the impact of business preparing program and social introduction on the expectation of understudies to take part in entrepreneurial practices. The outcome shows that apparent suitability, viability and entrepreneurial preparing, except for apparent consistence have a positive and critical impact on entrepreneurial expectation. Farhangmehr et al. (2016) uncovered that business enterprise skills are an indicator of business inspiration; however, learning base is not. Furthermore, enterprise training does

not enhance the inspiration of college understudies to wind up business visionaries (Tsukanova, 2019; Bagheri and Akbari, 2019).

Wang and Wong (2004) find that dreams of many students lose momentum due to lack of preparation by the academic institutions. Internal factors like willingness to take risks need for independence and locus of control are studied by Franke and Lüthje (2004). They also investigate some external factors like market, education, training, network, society and inspiration that are likely to affect student intention to be an entrepreneur. This is supported by Noor-Hasnah (2014) who analyse factors influencing the behaviour towards entrepreneurship in the higher education students in UniKL, Malaysian Spanish Institute. Multiple regression analysis shows that all the independent variables except the desirability to self-employment and government role have the significant relationship with the attitude towards entrepreneurship.

Lüthje and Franke (2003) review 512 understudies at the MIT School of Engineering extensively. They identify that characteristics strongly affect the state of mind towards independent work. The entrepreneurial mentality is firmly connected with the aim to begin another wander. The studies consequently demonstrate a circuitous impact on goals. Besides, the entrepreneurial expectation is straight forwardly influenced by seen obstructions and bolster factors in the business related setting (Poti et al., 2012; Crespo and Aurélio, 2020). The discoveries have vital ramifications for strategy producers inside and outside colleges.

Franke and Lüthje (2004) acknowledge that the instructive arrangement of colleges needs to give a scholarly situation that may fill in as an impetus for high-innovation new companies. Up to this point, cultivating advancements and new item improvement through business has not been viewed as an essential assignment of colleges (Kalhor et al., 2019). Be that as it may, point of view have changed in this regard, and there have been various endeavours to upgrade the part of college graduates as originators of creative organisations.

Stieg et al. (2017) and Kumari et al. (2018) state that the environment, social networking and culture create a close relationship between attitudes, competencies, knowledge base and behaviour towards entrepreneurship. Lüthje (2004) examines that university plays a major role to create an impact on students who want to become an entrepreneur. Therefore, an individual with the positive actions towards the creation of revenues may be more positive to become a self-employed (Solesvik, 2013; Garba et al., 2014; Beliaeva et al., 2017). In this context, the entrepreneurship also creates a link between motivation with entrepreneurial attitudes, motivation with entrepreneurial competencies, and motivation with knowledge base. There are many factors that influence behaviour that indicate how hard a person is willingness to try to do a business. Yurtkoru et al. (2014) explore the effect of relevant factors on entrepreneurial goal of college understudies using TPB. They indicate, individual disposition and control anticipation as the entrepreneurial expectation.

- H1 Intention of the student to become his own boss positively effects entrepreneurial motivation of the university students.
- H2 Intention of the student for participation in decision process positively effects entrepreneurial motivation of the university students.
- H3 Intention of the student about securing family future positively effects entrepreneurial motivation of the university students.

- H4 Intention of the student power to make decision positively effects entrepreneurial motivation of the university students.
- H5 Intention of the student about personal success positively effects entrepreneurial motivation of the university students.
- H6 Intention of the student about increasing personal income positively effects entrepreneurial motivation of the university students.
- H7 Intention of the student about personal economic wealth positively effects entrepreneurial motivation of the university students.
- H8 Intention of the student about comfortable life positively effects entrepreneurial motivation of the university students.
- H9 Intention of the student about personal fulfilment positively effects entrepreneurial motivation of the university students.
- H10 Intention of the student about personalised profit making opportunities positively effects entrepreneurial motivation of the university students.

2.1.2 Family structures in Pakistan

Pakistan is a resident place of different communities (Shahid et al., 2017). Communities which are a product of culture (Brah, 1992) meaning thereby a group with a difference on the basis of cultural practices (Young, 1997). Some researchers identify that pursuit of academic success in Pakistanis is not for individual advancement but rather for moral standing and well-being of the family (Seaman et al., 2016). Having said that gaining education is also a mean of gaining social prestige (Dwyer et al., 2006). It has also been observed that students develop social links that they expect to use professionally during their education (Fukuzawa and LeTendre, 2000). Further, international studies that compared education in Asians and Europeans also show that education in Pakistan is a mean of getting occupational attainment more importantly than the job (Ballard, 1982; Ainsworth-Darnell and Downey, 1998; Connor et al., 2004; Crozier et al., 2004; Mughal et al., 2018). However, whatever may be intention of getting education, a non-educated generation will always develop resentment and disillusion against education system (Bourdieu, 1979).

A family is a dense social network (Bassani, 2003; Setuza, 2017), where next generation receives values for success in societies (Fletcher, 1966). However, Pakistani families have received little importance when it comes to analysing their value inheritance structures particularly about entrepreneurial motivations and educational attainment (Seaman et al., 2016; Abbas et al., 2019). Dwyer et al. (2006) identify five rules of structure in a Pakistani family which are patrilocal residential, patrilineal descent, patriarchal authority, extended and joint families and respect focusing. Pakistani family generally lives as a consanguineal group (Ballard, 1982) living under one roof under the supremacy of father and household role of the mother (Bassani, 2003). This close cohesion between families is one of the reasons that the influence from families on future motivations of children requires a study which is still a topic of huge debate (Seaman et al., 2016). Further, it has almost become an established fact that there exists positive relationship between aspirations of parents and academic achievement of their children (Berdie, 1959; Finlayson, 1971; Fotheringham and Creal, 1980; Cherian, 1992;

Brooks-Gunn et al., 1993; Coleman and Salt, 1996; Seginer and Vermulst, 2002), most importantly from mothers (Eccles, 1983; Eccles et al., 1982; Stevenson and Newman, 1986; Hill and Duncan, 1987; Raza et al., 2018b). It is therefore also important to analyse the aspirations of children from the perspectives of fathers, mothers and senior members of the family separately.

2.2 Family influence

2.2.1 Influence of parents on education of children

Parent's influence is the most influential of all in education attainment of a person (Eccles, 1983; Stevenson and Newman, 1986; Marjoribanks, 1992; Soomro and Honglin, 2018). However, such an influence has various dimension (Smith, 1970) that includes provision of economic resources (Smith, 1970), a role model (Welsh et al., 2003) and moral support for encouragement and enforcement of learning behaviour (Seaman et al., 2016; Raza et al., 2018a). Influence from mother has significance at earlier levels of education whereas influence from father is important for higher level of education (Hauser, 1971; Hill and Duncan, 1987). This influence comes from defining and modelling aspect (Bennett and Gist, 1964; Eccles et al., 1982; Kelly, 1952, 1989). Modelling behaviour means influence of actions of the parents (Bandura et al., 2001) whereas defining behaviour is the influence of words and expectations of the parents (Seaman et al., 2016). In this regard, Coleman and Salt (1996) report that defining behaviour has more profound effects whereas the effect of modelling behaviour varies with gender and education level of the student. Having analysed difference in impact of modelling and defining behaviour, Socialisation theory states that working status of the parents has no relevance in transmission of defining model and defining behaviour (Duncan et al., 1972; Eccles et al., 1982).

- H12 Family education has association with entrepreneurial motivations of university students.
- H14 Father education has association with entrepreneurial motivations of university students.
- H16 Mother education has association with entrepreneurial motivations of university students.
- H20 Business graduates in family have association with entrepreneurial motivations of university student.

2.2.2 Influence of the parents on entrepreneurial motivations

Roe (1956) first identified influence of family on entrepreneurial motivations of children (Roe, 1956) that was followed by Kohn (1969, 1977). However, no research so far has found evidence that aspiring entrepreneurs should have entrepreneur parents (Stephenson, 1957). Yet, there exists evidence that entrepreneur parents mostly have children aspiring to be entrepreneurs (Stephenson, 1957; Matthews and Moser, 1995; Wilkinson, 2004; Barba-Sánchez and Atienza-Sahuquillo, 2018). There also exists strong literature in support of the argument that occupational outcomes are affected by family influences (Collin and Young, 1986; Cherry and Gear, 1987; Arnold et al., 1988; Siann and Knox,

1992). The evidence of family support in Muslim families is even higher (Stopes-Roe and Cochrane, 1984; Brah and Minhas, 1985; Jodl et al., 2001) with almost negligible effect of gender of the child or the parent (Siann and Khalid, 1984; Verma and Ashworth, 1986; Ali et al., 2019). However, such influence is more evident in case of SMEs (Matthews and Moser, 1995).

Entrepreneurship research in Pakistan shows that there are trends to follow only a certain types of businesses such as petrol pumps, shopping malls and super markets (Fuller and Loogma, 2009; Seaman et al., 2016; Khalid, 2017). Seaman et al. (2016) explain how nexus of family business and community affects the process which influences family networks in succession of businesses. This process is in fact a relation with two extremes of culture and economy, where cultural aspect is a subjective phenomenon and economic aspect takes the key position (Seaman et al., 2016). In this regard education also plays a major role. An education that can provide the urge in young graduates to be entrepreneur (Seaman et al., 2016).

To analyse the dimensions of entrepreneurial motivations its relationship with institutional embeddedness and entrepreneurial behaviour is very important (Welter and Smallbone 2011). In order to achieve the objectives, a research focusing relationship between human behaviour, entrepreneurial behaviour and institutional theory is the need of time (Seaman et al., 2016). This shall be achieved by further analysing socio-structural and educational factors that affect entrepreneurial motivations of the student.

- H13 Family occupation has association with entrepreneurial motivations of university students.
- H15 Father occupation has association with entrepreneurial motivations of university students.
- H17 Mother occupation has association with entrepreneurial motivations of university students.
- H18 Having a business person in family has association with entrepreneurial motivations of university students
- H19 Family business history has association with entrepreneurial motivations of university students.
- H21 Work motivation from family has association with entrepreneurial motivations of university student.

2.2.3 Institutional theory perspective of entrepreneurial motivations

Institutional theory explains that institutions create boundaries for human interactions therefore it can better explain human behaviour (North, 1990; Garud et al., 2007; De Clercq et al., 2013; Aftab et al., 2017). Norman (1990) is of the opinion that there are two types of institutions, formal and informal. Formal institutions, which also means regulative institutions (Scott, 2001) include tangible systems such as promulgated by the state, e.g., constitutional laws. Informal institutions on the other hand means norms of culture, behaviour and conventions created in the society, which can further be divided into normative and cognitive categories (Scott, 2001). Since these formal and informal institutions also have large impact on behaviour of the people living in specific societies therefore their impact on entrepreneurial intentions is also important (Shane and

Venkataraman, 2000; Bruton et al., 2010; Seaman et al., 2016). Having reviewed literature on entrepreneurship two distinct variables that stem representing entrepreneurial motivations under institutional theory are educational and socio-structural which develop the psychology of the students (Indarti et al., 2010; Bruton et al., 2010; Hussain et al., 2014; Seaman et al., 2016; Samo and Huda, 2019).

2.2.4 Personality and entrepreneurial motivations

Humans as an entrepreneur always urge for higher achievements (Indarti et al., 2010). Researches focusing entrepreneurial motivations in Pakistan have also found significant positive relationship between senses of achievement, which include belief in making right decisions, and entrepreneurial motivations (Hussain et al., 2014; Saeed et al., 2014; Aftab et al., 2017). It also follows that achievements in academics may have impact on entrepreneurial motivations (Bux et al., 2016). Along with achievement however, family business (Ahmed et al., 2010) and years spent on study (Mushtaq et al., 2011) are also found to have positive relationship with entrepreneurial motivations.

2.2.5 Education and entrepreneurial motivations

Keat et al. (2011) contend that learning entrepreneurship motivates entrepreneurship. Similar are the findings in Pakistan (Saeed et al., 2014, 2015). There also exist certain course methods that are beneficial in this regard for instance case studies which help in understanding how businesses are developed in difficult times by successful businessmen, and how collective decisions are made (Solomon et al., 2002; Shepherd, 2004; Engle et al., 2010), assignments that enhance creativity self-belief, workshops, projects (Fayolle et al., 2006; Gatchalian, 2010; Pruthi and Wright, 2019), guest speakers (Jones and Iredale, 2010; Shepherd, 2004), and study visits (Klatt, 1988). Educational context also has another perspective, i.e., the academic faculty. Krueger and Brazeal (1994) and Gatchalian (2010) regard professional and business owing faculty also an important factor for inculcating entrepreneurial motivations in students.

2.2.6 Entrepreneurial motivation in socio-structural context

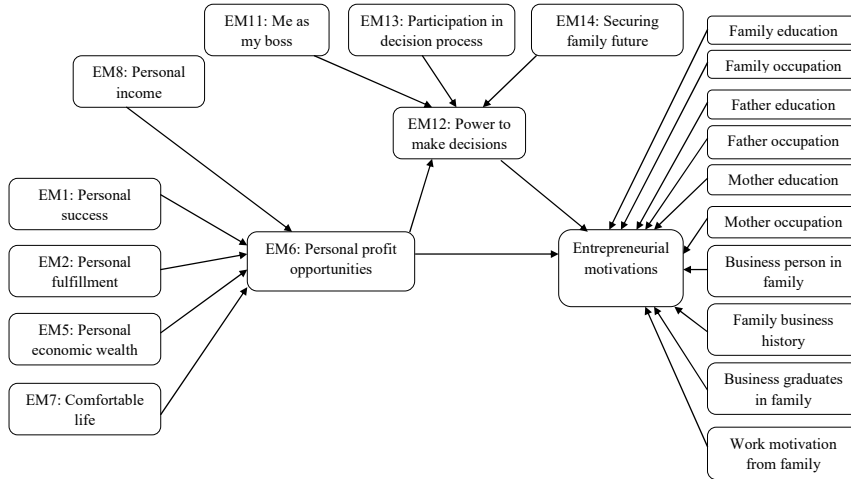
Social norms also play their role in determining entrepreneurial motivations in various societies (Krueger et al., 2000; Li, 2007; Linan and Chen, 2009; Engle et al., 2011; Anjum et al., 2018). Examining the role of social context on entrepreneurial motivations in Pakistan, Aslam et al. (2012) find that students exhibit more motivation for becoming entrepreneurs after their families show their consent to becomes responsible for their families. The researchers have also found that entrepreneurship has positive relationship with income and wealth level (Parker and Robson, 2004; Tanveer et al., 2013). Although some researches indicate inverse relationship in this regard as well for instance (Griffiths et al., 2009; Linan et al., 2013) while a few find no significant relationship (Engle et al., 2011). In the case of Pakistan, however, poor economic environment has been considered as one of the primary reasons for start of individual ventures (Tanveer et al., 2013; Naeji and Siadat, 2019).

Having analysed the literature it can be argued that entrepreneurial motivation is a dynamic phenomenon that changes from culture to culture depending on many other factors as well as was also observed by Welter and Smallbone (2011). Accounting for

more than one culture in one study definitely involves more complex dimensions. Therefore, for the purpose of this research, we focus our research on the students pursuing their studies in the province of Punjab on the side of Pakistan. This province is important because more than 50% of GDP and population of Pakistan relate to this province.

The review of literature leads to the following conceptual framework for the research.

Figure 1 Mediation model of entrepreneurial motivations



The hypotheses to test various relations as established in conceptual framework are hereunder:

Besides we also evaluate the following mediation for the purpose of this research:

H11 Power to make decisions of the student fully mediates the relationship between independent variables and entrepreneurial motivation amongst university students of Pakistan.

We further make the following hypotheses analyses in order to establish the influence of family profile on entrepreneurial motivations.

3 Methodology

Keeping in view the nature of research problem and objectives quantitative approach has been used (Ting et al., 2020). After pre-testing and re-designing, final survey was conduct from University Students of Pakistan using closed-ended questionnaires. Out of 700 questionnaires distributed 533 responded. The response rate is therefore 76.14%. Respondents were selected on the basis of convenience sampling method, a type of non-random sampling technique. KMO and Bartlett's test, communalities and total variance explained has been computed using principal component analysis with varimax rotation technique to check sampling adequacy. In order to check internal consistency of data Cronbach's alpha has been used. Correlations have been used to check relationship between data and finally Crammer's V has been applied test to analyses association

amongst variables, however to test the mediation we have applied regression. Crammer's V is a test to analyses intercorrelation between two variables of discrete nature having the order of 2×2 and above (Bergsma, 2013). The chi-square is mostly suitable when the order of variables is 2×2 . However, when the order of variables is more than 2×2 Crammer's test is recommended (Liebetrau, 1983). Also, chi-square has a limitation that it suffers from increase in number of cells (Bartlett, 1937). The order of variables in columns or rows do not matter. The results of Cramer's V test ranges from '0' no association to '1' complete association (Bergsma, 2013).

The Cramer's V test is computed using the following procedures:

$$\chi^2 = \sum_{i,j} \frac{\left(n_{i,j} - \frac{n_i \cdot n_j}{n} \right)^2}{\frac{n_i \cdot n_j}{n}}$$
$$\text{Cramer's } V = \sqrt{\frac{\chi^2 / n}{\min(k-1, r-1)}}$$

where

- n_i total number of observation of variable i
- n_j total number of observations of variable j
- $n_{i,j}$ total number of observations of variable i, j
- χ^2 Chi-square
- k number of columns
- r number of rows.

Table 1 explains descriptive statistics of the participants of our study. The table shows 59% of our respondents were females, 71% were below 25years of age and 65% of our respondents were undergraduates. 61% of our respondents declared that at least one member of their family except her/him-selves have up to college level education and 39% responded that at least one person from their family has up to university level education. 36% of the respondents responded that their fathers have up to university level education, and 34% of the respondents that their mothers have up to university level education. 10% and 28% of the respondents respectively responded that their fathers and mothers are illiterate. 38% respondents responded that at least one person from their family is doing business. 47% of the respondents responded that their fathers are doing business, 18% of the respondents responded that their mothers are doing business and 56% of the respondents responded that one of their family member is doing business. 60% of the respondents responded that one of their family member has more than 20 years of business experience. 23% of the respondents responded that they have some sort of working experience. 37% of the respondents responded that there is at least one business graduate in their family. 44% of the respondents responded to have work motivation from their families during studies. Lastly, 27% of the respondents responded to have intention to establish businesses during their studies and 46% of the respondents responded to have intention to establish businesses after their studies.

Table 1 Descriptive statistics

Gender	41% Male		59% Female	
Age group	Below 25 71%		Above 25 29%	
Level of education	Under Grad 65%		Post Grad 35%	
Family education	U Matric 33%	College 28%	Bachelors 23%	Masters 16%
Family occupation	Business 38%		Emp 62%	
Father education	10% Illi	Sc18%	College 36%	Bachelor 9% Master 27%
Father occupation	Business 47%		Emp 53%	
Mother education	28% Illi	Sc 23%	College 15%	20% Bachelors Masters 14%
Mother occupation	54% Housewife	28% Emp	18% Business	
Business persons in family	Business 56%		Emp 44%	
Family business history	1–10Y 18%	11–20Y 22%	21 to 30Y 27%	Above 30Y 33%
Personal occupational history	Business 15%	Emp 8%	No Exp 77%	
Personal experience	1Y 11%	Over 1Y 12%	No Exp 77%	
Business graduates in family	37% Yes		63% No	
Work motivation from family	44% Yes		56% No	
Personal motivation for business during studies	27% Yes		73% No	
Personal motivation for business after studies	46% Yes		54% No	

Note: Family means parents and siblings.

Table 2 KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling Adequacy:	0.817
Bartlett's test of approx. chi-square	6,127.327
Sphericity sig	0.000

Table 3 Communalities

<i>Entrepreneurial motivation</i>	<i>Initial</i>	<i>Extraction</i>
Enables me to prove that I can be successful: EM1	0.541	0.623
Enables my personal fulfilment: EM2	0.742	0.767
Allows me to face challenges: EM3	0.577	0.626
Is exciting: EM4	0.636	0.661
Allows me to acquire economic wealth: EM5	0.821	0.944
Makes it possible to increase opportunities for profit: EM6	0.711	0.774

Note: Extraction method: principal component method.

Table 3 Communalities (continued)

<i>Entrepreneurial motivation</i>	<i>Initial</i>	<i>Extraction</i>
Allows me to get a comfortable life: EM7	0.549	0.581
Helps me to increase personal income: EM8	0.627	0.636
Enables me to get public recognition: EM9	0.675	0.713
Allows me to afford independence: EM10	0.795	0.848
Allows me to be my own boss: EM11	0.818	0.854
Allows me to have the power to make decisions: EM12	0.663	0.724
Allows me to participate in the whole decision-making process: EM13	0.874	0.913
Allows me to ensure a secure future for the family: E14	0.744	0.787
Enables increased funding for retirement: EM15	0.546	0.616

Note: Extraction method: principal component method.

Table 4 Descriptive analysis for entrepreneur motivation

<i>Entrepreneurial motivation</i>	<i>N</i>	<i>Mean</i>	<i>Std. deviation</i>
Enables me to prove that I can be successful: EM1	533	4.43	0.944
Enables my personal fulfilment: EM2	533	4.01	0.969
Allows me to face challenges: EM3	533	4.03	0.965
Is exciting: EM4	533	3.49	1.309
Allows me to acquire economic wealth: EM5	533	3.64	1.089
Makes it possible to increase opportunities for profit: EM6	533	3.73	1.041
Allows me to get a comfortable life: EM7	533	3.83	1.214
Helps me to increase personal income: EM8	533	3.64	1.172
Enables me to get public recognition: EM9	533	3.43	1.292
Allows me to afford independence: EM10	533	3.65	1.204
Allows me to be my own boss: EM11	533	3.74	1.287
Allows me to have the power to make decisions: EM12	533	3.90	1.104
Allows me to participate in the whole decision-making process: EM13	533	3.99	1.120
Allows me to ensure a secure future for the family: E14	533	3.76	1.202
Enables increased funding for retirement: EM15	533	3.57	1.368

Source: Survey results

Table 5 Total variance explained

<i>Factor</i>	<i>Initial eigen values</i>		
	<i>Total</i>	<i>% of variance</i>	<i>Cumulative %</i>
1	6.714	52.743%	52.743%
2	1.331	17.145%	58.888%
3	1.227	9.643%	68.531%

Note: Extraction method: principal component method.

Table 5 Total variance explained (continued)

<i>Factor</i>	<i>Extraction sum of squared loadings</i>		
	<i>Total</i>	<i>% of variance</i>	<i>Cumulative %</i>
1	6.143	49.635%	39.635%
2	0.843	10.435%	52.070%
3	0.614	4.732%	56.802%
<i>Factor</i>	<i>Rotation sum of squared loadings</i>		
	<i>Total</i>	<i>% of variance</i>	<i>Cumulative %</i>
1	3.072	24.818%	24.818%
2	2.417	21.221%	46.039%
3	2.231	10.763%	56.802%

Note: Extraction method: principal component method.

Table 6 Reliability statistics

	<i>Cronbach's alpha</i>	<i>Cronbach's alpha std. items</i>	<i>N</i>
Enables me to prove that I can be successful: EM1	0.735	0.712	533
Enables my personal fulfilment: EM2	0.747	0.752	533
Allows me to face challenges: EM3	0.722	0.733	533
Is exciting: EM4	0.847	0.819	533
Allows me to acquire economic wealth: EM5	0.934	0.901	533
Makes it possible to increase opportunities for profit: EM6	0.783	0.767	533
Allows me to get a comfortable life: EM7	0.841	0.856	533
Helps me to increase personal income: EM8	0.835	0.857	533
Enables me to get public recognition: EM9	0.725	0.754	533
Allows me to afford independence: EM10	0.945	0.911	533
Allows me to be my own boss: EM11	0.731	0.722	533
Allows me to have the power to make decisions: EM12	0.856	0.834	533
Allows me to participate in the whole decision-making process: EM13	0.784	0.790	533
Allows me to ensure a secure future for the family: E14	0.765	0.771	533
Enables increased funding for retirement: EM15	0.842	0.813	533

Table 7 Factors of entrepreneurial motivation

	Pearson correlation	EM1	EM2	EM3	EM4	EM5	EM6	EM7	EM8	EM9	EM10	EM11	EM12	EM13	EM14	EM15
EM1	Corel	1	.731**	.465**	.291**	.320**	.411**	.212**	.122	.172*	.121	.006	.044	.012	.272**	.016
EM2	Sig		.000	.000	.007	.000	.000	.000	.169	.048	.157	.217	.655	.892	.003	.187
EM3	Corel		1	.414**	.273**	.267**	.371**	.199*	.177	.285**	.122	.078	.125	.078	.257**	.217*
EM4	Sig			.000	.001	.001	.000	.020	.059	.004	.117	.077	.125	.552	.008	.013
EM5	Corel			1	.377**	.231**	.277**	.286**	.276**	.222*	.147	.006	.059	.083	.120*	.101
EM6	Sig				.000	.002	.002	.001	.001	.011	.114	.811	.871	.156	.017	.193
EM7	Corel				1	.345**	.111	.122	.070	.247**	.375**	.141	.091	-.025	.285**	.401**
EM8	Sig					.000	.101	.152	.536	.003	.000	.109	.287	.760	.000	.000
EM9	Corel					1	.378**	.456**	.203	.258**	.291**	.188*	.109	.059	.380**	.267**
EM10	Sig						.000	.000	.190	.003	.001	.042	.214	.477	.000	.001
EM11	Corel						1	.411**	.349**	.265**	.076	.155	.234**	.073	.270**	.281**
EM12	Sig							.000	.000	.002	.285	.071	.008	.373	.001	.002
EM13	Corel							1	.517**	.253**	.274**	.074	.241*	.236**	.316**	.233**
EM14	Sig								.000	.002	.008	.414	.017	.004	.000	.006
EM15	Corel								1	.414**	.174*	.090	.341**	.208*	.229**	.011
	Sig									.000	.041	.356	.000	.011	.005	.263
	Corel									1	.434**	.212**	.108	.090	.174*	.277**
	Sig										.000	.004	.220	.273	.033	.002
	Corel										1	.419**	.127	.044	.227**	.261**
	Sig											.000	.153	.611	.003	.002
	Corel											1	.493**	.116	.137	.381**
	Sig												.000	.197	.094	.000
	Corel												1	.472**	.336**	.234**
	Sig													.000	.000	.009
	Corel													1	.218**	.184*
	Sig														.001	.034
	Corel														1	.591**
	Sig															.000
	Corel															1
	Sig															

Notes: **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

Table 8 Table of significant moderate positive correlations

<i>Correlating factors</i>	<i>Table of significant moderate positive correlations</i>				
EM1	EM2	EM3	EM6		
EM2	EM1	EM3	EM6		
EM3	EM1	EM2	EM4		
EM4	EM3	EM5	EM10	EM15	
EM5	EM4	EM6	EM7	EM14	
EM6	EM1	EM2	EM5	EM7	EM8
EM7	EM5	EM6	EM8	EM14	
EM8	EM6	EM7	EM9	EM12	
EM9	EM8	EM10			
EM10	EM4	EM9	EM11		
EM11	EM10	EM12	EM15		
EM12	EM8	EM11	EM13	EM14	
EM13	EM12				
EM14	EM5	EM7	EM12	EM15	
EM15	EM4	EM11	EM14		

4 Discussion

From the table of correlations a new table of moderate positive correlations has been derived. An analysis of the table of moderate positive correlations reveals that factor EM6 has positive moderate correlations with the most number of factors, i.e., five factors. Furthermore, factors EM4, EM5, EM7, EM8, EM12 and EM14 have significant positive relationships with the second most number of factors, i.e., 4. In order to determine Crammer's V association behaviour amongst these factors the following associations have been analysed:

$$EM_4 = \beta_1 EM_3 + \beta_2 EM_5 + \beta_3 EM_{10} + \beta_4 EM_{15}$$

$$EM_5 = \beta_1 EM_4 + \beta_2 EM_6 + \beta_3 EM_7 + \beta_4 EM_{14}$$

$$EM_6 = \beta_1 EM_1 + \beta_2 EM_2 + \beta_3 EM_5 + \beta_4 EM_7 + \beta_5 EM_8$$

$$EM_7 = \beta_1 EM_5 + \beta_2 EM_6 + \beta_3 EM_8 + \beta_4 EM_{14}$$

$$EM_8 = \beta_1 EM_6 + \beta_2 EM_7 + \beta_3 EM_9 + \beta_4 EM_{12}$$

$$EM_{12} = \beta_1 EM_8 + \beta_2 EM_{11} + \beta_3 EM_{13} + \beta_4 EM_{14}$$

$$EM_{14} = \beta_1 EM_5 + \beta_2 EM_7 + \beta_3 EM_{12} + \beta_4 EM_{15}$$

Model for mediation analysis:

$$EM_6 = \beta_1 EM_1 + \beta_2 EM_2 + \beta_3 EM_5 + \beta_4 EM_7 + \beta_5 EM_8 + \beta_6 EM_{12}$$

Table 9 Association with: EM4

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM3	0.325	0.081
EM5	0.125	0.125
EM10	0.137	0.041
EM15	0.111	0.097

Table 10 Association with: EM5

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM4	0.333	0.137
EM6	0.212	0.111
EM7	0.127	0.227
EM14	0.125	0.010

Table 11 Association with: EM6

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM1	0.756	0.000
EM2	0.813	0.019
EM5	0.523	0.031
EM7	0.729	0.022
EM8	0.691	0.000

Table 12 Association with: EM7

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM5	0.124	0.085
EM6	0.017	0.021
EM8	0.325	0.047
EM14	0.025	0.311

Table 13 Association with: EM8

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM6	0.133	0.715
EM7	0.217	0.042
EM9	0.070	0.918
EM12	0.370	0.056

Table 14 Associated with: EM12

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM8	0.095	0.079
EM11	0.845	0.008
EM13	0.533	0.013
EM14	0.913	0.005

Table 15 Associated with: EM14

<i>Model</i>	<i>Cramer's V</i>	<i>P-values</i>
EM5	0.325	.061
EM7	.227	.917
EM12	.129	.010
EM15	.915	.091

Table 16 Dependent variable: EM6

<i>Model</i>	<i>Unstandardised coefficients</i>	<i>P-values</i>	<i>F-test</i>
EM1	3.756	0.000	0.004
EM2	5.813	0.019	
EM5	4.523	0.031	
EM7	3.729	0.022	
EM8	7.691	0.000	

Table 17 Dependent variable: EM6

<i>Model</i>	<i>Unstandardised coefficients</i>	<i>P-values</i>	<i>F-test</i>
EM1	1.056	0.061	0.091
EM2	0.813	0.119	
EM5	0.523	0.071	
EM7	1.029	0.072	
EM8	0.691	0.091	
EM12	2.574	0.043	

4.1 Discussion

KMO's value of 0.817 and significant value of Bartlett's test shows that the sample is adequate for the purpose of our research. The test results of communalities have been reported in Table 3 which are above 0.5 confirming the results of KMO and Bartlett's test about sampling adequacy. The reliability statistics have been reported in Table 6 where the Cronbach's value of over 0.7 shows that the data has internal consistency and is reliable for the purpose of research. Table 7 reports correlation results and Table 8 reports their interpretation tabular form. Table 8 reveals that the factors of entrepreneurial motivation are clearly divided into two groups, where one group is from factors EM1 to EM8 and the other group is from EM9 to EM15.

In order to determine the determinants of entrepreneurial motivation the focus is on seven variables which have positive correlation with the most number of variables. To test the model seven models have been examined to test the original model and possible alternatives, the results of which have been reported in Table 9 to Table 15. Analysis of results from Tables 9 to 15 shows that as observed in correlation table, there exists an association model in upper portion of Table 8 where EM6 is associated with EM1, 2, 5, 7, 8 and one association model in lower portion of Table 8 where EM12 is associated with EM8, 11, 13, 14.

In the second step, mediation analysis has been conducted to test our model. The results of mediation have been reported in Tables 16 and 17. Tables reveal that EM12 fully mediates the relationship between EM6 and EM1, EM2, EM5, EM7, E8. In order to analyse influence of family profile on entrepreneurial motivations, we have applied Crammer's V test the results of which have been reported in Table 18. The results depict that family profile, occupation and business history have significant associations with entrepreneurial motivations, while the family education profile has no association in this context. In this way, our results conform to the results of Berdie (1959), Finlayson (1971), Fotheringham and Creal (1980), Cherian (1992), Seginer and Vermulst (2002) and Seaman et al. (2016) and also with the theory of Dana et al. (2019). Our results however do not conform to the results of Socialisation theory as indicated by Duncan et al. (1972) and Eccles et al. (1982) that working status of the parents does not play any role in entrepreneurial motivations of the students, which is very dominant in the case of this research. Lastly, our results also conform to the results of Eccles et al. (1982), Eccles (1983), Stevenson and Newman (1986) and Hill and Duncan (1987) that role of the mother has significant impact on motivations of a child, however, our study finds significant impact from education and occupational aspects as well. The acceptance/rejection of hypotheses has reported in Table 19.

Table 18 Table for the results of Crammer's V test

<i>Model</i>	<i>Crammer's V test</i>	<i>P-values</i>
Family education	0.127	0.096
Family occupation	0.257	0.031
Father education	0.511	0.085
Father occupation	0.334	0.022
Mother education	0.386	0.037
Mother occupation	0.478	0.041
Business person in family	0.564	0.021
Family business history	0.611	0.033
Business graduates in family	0.318	0.017
Work motivation from family	0.219	0.024

Table 19 Results of hypotheses testing

<i>Hypotheses</i>	<i>Results</i>
H1 Intention of the student to become his own boss positively effects entrepreneurial motivation of the university students.	Failed to reject
H2 Intention of the student for participation in decision process positively effects entrepreneurial motivation of the university students.	Failed to reject
H3 Intention of the student about securing family future positively effects entrepreneurial motivation of the university students.	Failed to reject
H4 Intention of the student power to make decision positively effects entrepreneurial motivation of the university students.	Failed to reject
H5 Intention of the student about personal success positively effects entrepreneurial motivation of the university students.	Failed to reject

Table 19 Results of hypotheses testing (continued)

<i>Hypotheses</i>	<i>Results</i>
H6 Intention of the student about increasing personal income positively effects entrepreneurial motivation of the university students.	Failed to reject
H7 Intention of the student personal economic wealth positively effects entrepreneurial motivation of the university students.	Failed to reject
H8 Intention of the student about comfortable life positively effects entrepreneurial motivation of the university students.	Failed to reject
H9 Intention of the student personal fulfilment positively effects entrepreneurial motivation of the university students.	Failed to reject
H10 Intention of the student about personal profit opportunities positively effects entrepreneurial motivation of the university students.	Failed to reject
H11 Power to make decisions of the student fully mediates the relationship between independent variables and entrepreneurial motivation amongst university students of Pakistan.	Failed to reject
H12 Family education has association with entrepreneurial motivations of university students.	Reject
H13 Family occupation has association with entrepreneurial motivations of university students.	Failed to reject
H14 Father education has association with entrepreneurial motivations of university students.	Reject
H15 Father occupation has association with entrepreneurial motivations of university students.	Failed to reject
H16 Mother education has association with entrepreneurial motivations of university students.	Reject
H17 Mother occupation has association with entrepreneurial motivations of university students.	Failed to reject
H18 Having a business in person has association with entrepreneurial motivations of university students.	Failed to reject
H19 Family business history has association with entrepreneurial motivations of university students.	Failed to reject
H20 Business graduates in family has association with entrepreneurial motivations of university student.	Failed to reject
H21 Work motivation from family has association with entrepreneurial motivations of university student.	Failed to reject

5 Conclusions

The results of the study confirms that the results of Hassan et al. (2018) that there exists association between entrepreneurial motivation and personal success, personal income, personal economic wealth, comfort in life, personal fulfilment and personal profit opportunities. Furthermore, the factors intention to become own boss, participation in decision making process, intention to increase personal income and securing personal future have significant association with perception of the students for power to make

decisions. Also, our study confirms our hypothesis that perception of the students about power to make own decision serves as a factor that fully mediates the relationship of entrepreneurial motivation of university students with all independent variables. The results of the study also suggest that intention of the students to increase personal income somehow plays dual role in the entrepreneurial motivation as firstly, it has a direct impact on personal profit opportunities and then it also impacts through intention of the students about power to make decisions but here the impact is insignificant. This leads to form a conclusion that entrepreneurial motivation amongst university students in Pakistan is a complex phenomenon that has dimensions which are 'psychological' and 'economic' which are similar to the results of Kadir et al. (2012) and Mat et al. (2015). The factors in physiological category include 'power to make own decisions', 'intention to become own boss', 'participation in decision process', 'securing the future of the family', 'personal success', 'comfortable life' and 'personal fulfilment'. Whereas economic factors include 'personal income', 'personal economic wealth' and 'personal profit opportunities'. Furthermore, it can also be argued that the 'power to make decisions' is a psychological phenomenon that partially mediates the entrepreneurial motivation of university students in Pakistan, though there exists other psychological factors that affect entrepreneurial motivation of university in Pakistani settings.

Regarding the impact of family profile on entrepreneurial motivations of university students, our study finds that family occupational profile plays significant role in building up entrepreneurial motivations of university students. Furthermore, this study also finds that educated mothers playing dual role of looking after family and also having professional engagements have more profound impact on bringing up entrepreneurial motivations.

5.1 Novelty

This study has many novelties from various dimensions. Firstly, it encompasses universities from major cities of the province of Punjab which form a diversified sample that has never been explored before. Secondly, the application statistical methods to identify various combination of variables to be explored for the purpose of identifying factors that contribute towards entrepreneurial motivation in university students in Pakistan. Thirdly, identification of 'psychological' and 'economic' factors that affect the 'entrepreneurial motivation' of university in Pakistan. Fourthly, identification of mediating role of certain 'psychological factors' that impact 'entrepreneurial motivations'. Fifthly, this study also identifies a more profound role of family profile on entrepreneurial motivations. It identifies the role of professional mothers and occupational status of the families as important factors that bring up the entrepreneurial motivations. Lastly, this study conforms to the theory of Dana et al. (2019) about the influence of family on entrepreneurial motivation of students that comes mainly from mothers and family occupational roles.

5.2 Economic implications

This study has very important implications for a developing country like Pakistan. It can be helpful for resolving the rising unemployment problem that on what 'psychological' and 'economic' grounds university should be motivated to increase their acceptability and integration into the society. More entrepreneurs will more business setups generating

more employment opportunities which will have more profound economic results compared to working as an employee.

5.3 Limitations and future research directions

This study suffers from various limitations. A study on similar dimensions with larger sample and different economic and geographic settings can be made to confirm results. Keeping in view the complexity future studies may also be carried out taking into account specific settings. For example, entrepreneurial motivation factors amongst the students of various disciplines, different genders, rural and urban areas, developed and developing countries from the perspective of psychological and economic factors.

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