

***Underdog Entrepreneurship:  
A Model to Predict  
the Success of Poor  
Entrepreneurs***

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## *Underdog Entrepreneurship: A model to Predict the Success of Poor Entrepreneurs*

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**Abstract:** *Extensive research exists on how positive life circumstances and positive personality traits promote entrepreneurship. More recently another perspective focusing on how negative personal circumstances may potentially breed entrepreneurship has emerged in the literature. In this study, we build upon the theory of underdog entrepreneurship to examine the effect of challenging life circumstances such as poverty on the development of entrepreneurial traits in underdog entrepreneurs that could result in entrepreneurial success. This research analyzed the effect of risk-taking on the entrepreneurial success of underdog entrepreneurs and the role of optimism and persistence as mediating variables. A cross-sectional survey was conducted to collect data from 400 micro-finance borrowers of Akhuwat Foundation Pakistan over two months' time period during March-May, 2023. We found that optimism and persistence significantly mediate the relationship between risk-taking and entrepreneurial success. Additionally, we analyzed the moderating effect of poverty on the relationship between optimism and entrepreneurial success and found a negative moderating effect. A strong positive moderating effect of poverty was found on the relationship between persistence and entrepreneurial success.*

**Keywords:** Entrepreneurship, underdog entrepreneurship, entrepreneurial success, poverty, risk-taking, optimism, persistence.

**JEL Classification:** M13, L26, J23.

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# **Underdog Entrepreneurship: A model to Predict the Success of Poor Entrepreneurs**

## **1. Introduction**

The use of entrepreneurship as a technique to promote innovation, self-employment, and economic self-sufficiency is widespread (Shepherd & Williams, 2020; Williams & Patterson, 2019). According to some academics, entrepreneurship serves as a testing ground for empowering diverse societal segments (Black et al., 2010) (Blanck et al., 1999). Factors including family background, formal education, and the tendency to want control over decisions have been identified as antecedents of entrepreneurship (Sari et al., 2018). However, another stream of research indicates that adverse life conditions breed entrepreneurship (Littunen, 2000; Yu et al., 2022). The existing literature on entrepreneurial orientation suggests that early life experiences shape the cognitive and non-cognitive abilities of a person that have an impact on entrepreneurial decisions later in life (Awaworyi Churchill et al., 2023; Cheng et al., 2021; Yu et al., 2022).

### ***Underdog entrepreneurship***

Extensive research exists on how positive life circumstances and positive personality traits promote entrepreneurship. More recently another perspective focusing on how negative personal circumstances may potentially breed entrepreneurship has emerged in the literature. As opposed to positive environmental settings the negative personal circumstances as a result of economic challenges (poverty), sociocultural challenges (migrants), cognitive challenges (mental disability such as ADHD), emotional trauma, and physical disability may also play a promote entrepreneurship (Miller & Le Breton-Miller, 2017). Those entrepreneurs who face adverse circumstances in life are referred to as underdog entrepreneurs in entrepreneurship research (Miller & Le Breton-Miller, 2017). This theory can be extended to entrepreneurs who are disabled (Jammaers & Zanoni, 2020; Martin & Honig, 2020), students (Ahsan et al., 2021), veterans (Bui et al., 2017), and refugees (Dagnelie, Mayda, & Maystadt, 2019).

The theory of underdog entrepreneurship explains as to how and why adverse personal circumstances such as living in poverty can encourage people to become an entrepreneur. Major setbacks in life as a result of war (Awaworyi Churchill et al., 2023; Churchill et al., 2021) or famine (Cheng et al., 2021), or persistently unfavorable conditions, like poverty (Bruton et al., 2013; Morris & Tucker, 2021; Morris et al., 2020), can inspire the people to become an entrepreneur (Miller & Le Breton-Miller, 2017).

### ***Underdog entrepreneurs and entrepreneurial personality traits***

According to Przepiorka (2017) those entrepreneurs who venture into small businesses are predominately responsible for all the business decisions and therefore entrepreneurial success is entirely based on the personality traits of entrepreneurs. Following this notion there cannot be any doubt in the increasing interest of researchers in the study of entrepreneurial personality traits. The most important personality traits that are found to affect entrepreneurial success are; the need for achievement, risk-taking, innovativeness, need for autonomy, and a pro-activity (see Frese & Gielnik, 2014; Rauch & Frese, 2007; Staniewski et al., 2016). The focus on the entrepreneurial personality traits of underdog entrepreneurs is completely missing in the emerging research on underdog entrepreneurship.

Entrepreneurs who are perceived as underdogs may work harder (Nurmohamed, 2020), approach problems in a different way (Miller & Le Breton-Miller, 2017), have a strong desire to improve their current circumstances (Genicot & Ray, 2017), and have the necessary familiarity and experience to deal with unanticipated setbacks. These findings have aided in the development of a new line of inquiry into how challenging personal circumstances can promote resilience and other abilities required for successful self-employment and entry into the labor market (Awaworyi Churchill et al., 2023; Shepherd & Williams, 2020). In this study, we build upon the theory of underdog entrepreneurship to examine the effect of challenging life circumstances such as poverty on the development of entrepreneurial traits in underdog entrepreneurs that could result in entrepreneurial success. Living in poverty might develop advantageous survival skills that are conducive to having an entrepreneurial attitude (Morris & Tucker, 2021). The abilities and skills needed to start a new business such as “self-confidence”, “innovative problem-solving”, “resource leveraging”, and “resilience” are manifestations of the survival skills that are gained as a result of

overcoming the "liability of poverty" (Morris & Tucker, 2021). In the following pages, we discuss the relationship between poverty and entrepreneurship.

### ***Poverty and entrepreneurship***

Poverty is a form of adversity that is defined as persistent negative circumstances (Morris & Tucker, 2021). Entrepreneurial actions are found to have a significant impact on poverty alleviation. Entrepreneurial actions help people trapped in poverty improve their conditions (Shepherd & Williams, 2020). Many academics, philosophers, and decision-makers have suggested entrepreneurship as a way to combat poverty (Bajde, 2013; Bruton et al., 2013; Najafizada & Cohen, 2017) Alvarez & Barney, 2014 (Sutter et al., 2019) Cohen, 2017. Numerous studies have noted the reciprocal relationship between entrepreneurship and economic development (Ahlstrom, 2010; Alvarez, Barney, & Newman, 2015; Baumol, Litan, & Schramm, 2009; Bruton, 2010; Bruton et al., 2013).

### ***Underdog entrepreneurship in developing economies***

Entrepreneurship is seen as a key driver of economic growth due to its positive effects on employment, innovation, and welfare (Shepherd et al., 2020). Challenges and opportunities faced by entrepreneurs vary greatly in different economies. Entrepreneurs in developed economies enjoy the specifically developed features of the economy such as access to finance, institutional support, infrastructure facilities, and bureaucratic procedures in the administrative system (Ferreira, Fayolle, Fernandes, & Raposo, 2017). Within this context, entrepreneurs from emerging economies can behave differently, particularly in terms of the varying institutional support in their regions (Bruton, Ahlstrom, & Obloj, 2008; Greif & Mokyr, 2016; Jain & Koch, 2020).

There are more entrepreneurial chances in developing countries since there is a stronger need for entrepreneurs (Wang et al., 2021). According to Naude's (2009) empirical research, developing countries have greater rates of opportunity-driven entrepreneurs entering the market as a result of increased demand for and availability of entrepreneurial possibilities. Accordingly, it has been asserted that entrepreneurship is the primary means by which the economy develops and that entrepreneurs are the engine of economic progress (Wiklund et al., 1997; Acs et al., 2008; Anokhin et al., 2008; Shane, 2009) When poor people in developing

economies want to start their own business, they face some basic structural issues such as lack of resources, education, and business-related skills (Valdivia, 2015; Chun and Watanabe, 2011; Garba, 2010), which means they have to overcome obstacles twice as much as people with a middle or high socioeconomic status.

### ***Aftershocks of COVID-19 and underdog entrepreneurship***

After the advent of COVID-19 pandemic, more than 59 million workers in Europe faced the inevitable situation of losing their job and this threat to job security was faced by 80% of the workforce around the globe (Crayne, 2020). Many people had to live in adversity after losing their job and living on the streets as a result of not paying the rent. These circumstances have presented entrepreneurship to people as a lucrative means to pull themselves out of unemployment and adversity. This research focuses on underdog entrepreneurs emerging from poverty and studying the entrepreneurial traits of poor entrepreneurs in the situation after COVID-19 makes our research timely. Although poverty is the cause and an underdog feature in itself, it is unknown how these traits interact with it to influence entrepreneurial behavior. In other words, it's still entirely unknown if living in poverty may work as a motivator for individuals who are afflicted to embrace entrepreneurship as a goal, especially for those who are. Henceforth, we propose the following problem statement;

#### ***1.1 Broad problem statement***

This research aims to investigate whether or not economically challenged (poverty-stricken) underdog entrepreneurs develop entrepreneurial traits namely risk-taking, optimism, and persistence. This research further aims to analyze the moderating effect of poverty on the relationship between entrepreneurial traits and entrepreneurial success in underdog entrepreneurship

#### ***1.2 Specific research questions (RQ)***

RQ1 Do underdog entrepreneurs suffering from poverty develop the entrepreneurial trait of risk-taking?

RQ 2 Do underdog entrepreneurs suffering from poverty develop the entrepreneurial trait of persistence?



RQ3 Do underdog entrepreneurs suffering from poverty develop the entrepreneurial trait of optimism?

RQ 4 Does persistence and optimism act as mediator variables between risk-taking and entrepreneurial success?

RQ5 Does level of poverty moderate the relationship between entrepreneurial traits and underdog entrepreneurial success?

### **1.3 Contribution**

It is noteworthy that underdog entrepreneurs often start their businesses for other reasons than opportunities for growth and success (Wiklund et al., 2019), such as salary substitution, the desire to be their own boss, the need to deal with unemployment, avoiding discrimination in the workplace, and social integration (De Clercq & Honig, 2011). Additionally, compared to other entrepreneurs, underdog entrepreneurs have significant resource endowment disadvantages (Baron et al., 2018). Therefore, a new study agenda has been proposed that calls for repositioning entrepreneurship, focusing on a larger spectrum of diverse entrepreneurial groups, including underdog entrepreneurs (Miller & Breton-Miller, 2017; Wiklund et al., 2019; Dodd et al., 2021).

With this research, we expand the knowledge on the emerging aspect of underdog entrepreneurship. In doing so we make two contributions to this study. Firstly, we empirically test the relationship between negative life circumstances and the breeding of entrepreneurial traits in underdog entrepreneurs. Secondly, we contribute to the limited literature addressing this theoretical relationship in a developing country. In the following pages, we discuss the significance of our contribution.

The emergence of entrepreneurship from poverty is a well-researched topic in academic research. The abundance of research publications addressing this subject focus on developed economies with very few studies addressing this research question in developing economies (Bruton et al., 2008; Moradi et al., 2020; Sutter et al., 2019). More recently, Moradi et al. (2020) carried out a systematic literature review of the rise of entrepreneurship to tackle poverty for the period 1990-2017. Except for a few studies examining the effect of poverty on entrepreneurship in developing economies, the majority of the publications from 1990-2017 only focused on developed economies.

"Scholarly disconnection" is the phrase used for this gap in the literature (Sutter et al., 2019). Following the above-mentioned evidence, the emergence of entrepreneurship as a result of poverty lacks the perspective of developing or poor economies.

Research on entrepreneurship in less developed nations, notably those from Asia, is still lacking. The generalizability of entrepreneurial theories is questioned by the disproportionate emphasis on developed nations (such as the US, UK, and Canada). This study makes a step towards resolving this problem and testing the underdog entrepreneurship theory in Pakistan.

Pakistan is an emerging economy that is still plagued by poverty on a large scale (Meo et al., 2020). The unemployment and poverty trends in Pakistan have been rising since 2010 (Meo et al., 2020). In 2018 the total proportion of the population living below the poverty line (PPP \$1.95 PER DAY CAPITA) was 21.9%. The total proportion of the employed population living below the poverty line in 2021 is 3.7%. The World Bank observed a rise of 5.4% in the poverty level of Pakistan in 2020. World Bank also estimated the poverty level using the lower-middle income poverty rate in Pakistan and concluded that poverty ratio stands at 39.2% for the period 2021-22. The World Bank report also concluded that 40% of the population in Pakistan suffers from moderate to severe food insecurity (<https://www.thenews.com.pk>), (<https://www.business-standard.com/article/international/poverty-in-pakistan-rises-to-over-5-in-2020-estimates-world-bank>).

## **2. Literature Review and Hypotheses Development**

### ***2.1 Theoretical underpinnings***

Miller & Le Breton-Miller (2017) first examined the underdog entrepreneurship. We build on their proposed model by further investigating additional variables such as risk-taking, persistence, entrepreneurial intention, and entrepreneurial success. We expand on Miller & Le-Breton-Miller (2017) model of underdog entrepreneurship to understand the entrepreneurial orientation of people facing economic challenges as a result of poverty. The underdog entrepreneurship model focuses on the following three aspects of the entrepreneurial process among challenged people:

- (1) Life conditions and experiences
- (2) Adaptive requirements as a result of life conditions
- (3) Outcome of adapting to the life conditions

Conditions and experiences of underdog entrepreneurs include incapacity and a person's unchangeable permanent state. One experiences numerous difficulties and forms of prejudice as a result of their condition. Some of the common difficulties faced by underdog entrepreneurs include a lack of infrastructure for their needs, an unfair hiring process, and unwelcome sympathy (Renko et al., 2016). This leads a person towards realizing and comprehending the adaptive necessities to get over the ailment. The model also takes social skills into account as a key factor in this process. Lastly the model concentrates on the results of overcoming the challenges.

## **2.2 Entrepreneurial success**

Antecedents of entrepreneurial success have been studied widely by researchers. Researchers have utilized those antecedents as indicators or proxies to predict success. Economic, psychological, sociological, and management factors are widely recognized antecedents of entrepreneurial success in the literature. (Fisher et al., 2014). Effective planning and strategy, innovation, a focus on entrepreneurship, and challenging environmental conditions are all economic factors that predict entrepreneurial success (Rauch and Frese, 2000). The urge for "achievement", "locus of control", "risk-taking", "human capital", "problem-solving orientation", "assertiveness", "interpersonal responsiveness", and "self-leadership" focused at upholding a positive attitude, and persistence is all psychological aspects of entrepreneurial success (Caliendo & Kritikos, 2010). The entrepreneur's social abilities and the strength of their social networks are examples of social factors that predict entrepreneurial success (Brush, 2008). Management practices to effectively perform business operations and manage relationships with stakeholders comes under the category of management factors that predict entrepreneurial success.

Additionally, an entrepreneur's qualifications, goals, and training were found to be significantly correlated with minimum cost output, which was

used as a proxy for entrepreneurial success (Brush, 2008; Bonet et al., 2011).

### *2.2.1 Indicators of entrepreneurial success*

"Entrepreneurial Success" is defined as currently being an entrepreneur and reaping the benefits of doing so (independence, freedom, contentment at work, and money) (Alstete, 2008). The presence of entrepreneurial success is explained, predicted, and identified using different indicators under different circumstances. For example, Kumar (2007) used psycho-social processes to develop a conceptual framework that explains entrepreneurial success, defined as the interaction between personal capabilities and environmental requirements. Previous research demonstrates the use of various indicators to predict success under various circumstances.

Black et al. (2010) analyzed the set of personal characteristics most likely to be associated with successful entrepreneurship and concluded that a person's skills and abilities contribute to the success of his/her business. Entrepreneurial success has also been predicted using business, economic, and qualitative indicators such as overcoming difficulties or problems (Brush, 2008).

Entrepreneurial success has been measured using a range of generally recognized proxies, indicators, and assessment methods. For instance, engaging in entrepreneurial action has been used as a proxy indicating the achievement of entrepreneurial success. However, depending on where a business stands in its entrepreneurship life cycle, it may or may not be appropriate to use entrepreneurial actions as success indicators (Van Gelderen et al., 2006). Success in entrepreneurship is thus characterized by the presence and perception of benefits or incentives, (Alstete, 2008) as well as by comparisons between entrepreneurs (Fairlie & Robb, 2008). In the context of establishing a new business venture entrepreneurial success can be inferred from the continuity of the venture in the market. The business venture would be regarded as a successful one if it remains in the business while other similar ventures have exited the market (Douglas, 2001).

### 2.2.2 *Type of entrepreneurship and entrepreneurial success*

The use of indicators to measure success varies depending on the type of entrepreneurship. For instance, a social enterprise may use success metrics based on the reach, uptake, or impact of its initiatives rather than using wealth maximization as a benchmark (Austin et al., 2006). Entrepreneurs who aim for value creation or rely on a vision that is packed with value creation could utilize a customized and varied set of indicators to gauge their progress (Brush, 2008; Bolton & Thompson, 2005). Therefore, in the context of underdog entrepreneurship, the indicators to predict success will be based entirely on the conditions of entrepreneurs suffering from poverty. However, keeping in view the diversity attached to the measure of entrepreneurial success Fisher et al (2014) developed a comprehensive measure of entrepreneurial success to which every entrepreneur could associate his/her entrepreneurial experience.

## 2.3 ***Entrepreneurial orientation***

EO at the organization level is defined as “the strategy-making processes that provide organizations with a basis for entrepreneurial decisions and actions” (Rauch et al., 2009, p. 762). EO at the firm level has been widely studied in particular its relationship with firm performance (Basco et al., 2020). Eventually, it was concluded that most of the empirical studies report a significant correlation of EO with firm performance and on average it successfully explains 24% of the variation in performance (Rauch et al., 2009).

### 2.3.1 *Individual entrepreneurial orientation (IEO)*

Further attempts to explain this construct at the individual level involved analyzing employee behavior which could be determined as traits of entrepreneurial personality hence shaping an individual characteristic into becoming an entrepreneur (Robinson & Stubberud, 2014; Koe, 2016). In entrepreneurship literature, these behaviors include innovativeness, willingness to take risks, pro-activeness, competitive aggressiveness, and autonomy (Covin & Slevin, 1989; Miller, 1983). Three of these behaviors namely; “risk-taking, pro-activeness, and innovativeness” has been strongly linked with individual EO (Rauch et al., 2009; Bolton & Lane, 2012).

### 2.3.2 IEO Dimensions

The factors which stimulate individuals to engage in entrepreneurial activities are often rooted in individual personality traits. Three factors namely; personality traits, environmental factors, and social influence directly impact the propensity to take entrepreneurial action (Levenburg & Schwarz, 2008). Environmental factors include any economic opportunity that could be capitalized to establish a business venture such as tax advantages, external funding, and cooperation of governmental bodies for establishing new business. Environmental factors exist at the macro-level and could potentially affect the EO of a firm as well. On the other hand, personality traits and attitudes towards entrepreneurship due to the social influence affect individual EO (Bolton & Lane, 2012). Social influence on an individual could inspire one to start a business and become an entrepreneur this influence could come from the experience of dealing with family business, friends' business and working in a business firm (Levenburg & Schwarz, 2008). We focus on personality traits in this research to determine the individual EO of underdog entrepreneurs.

- **Risk taking**

Individual trait theory in entrepreneurship research suggests that an entrepreneur essentially develops the trait of risk-taking, innovation orientation, and pro-activeness (Zhao et al 2010; Reichert et al. 2021). The propensity to take risks has also been identified as one of the traits of "Big Five" personality traits (Zhao et al. 2010). Risk-taking is defined as "taking bold action by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environments" (Rauch et al 2009).

Becoming an entrepreneur makes a person prone to several types of risks not limited to business failure risk (Brockhaus, 1980). An entrepreneur is exposed to the risk of compromising financial well-being, mental health wellbeing, family life, social life, career, opportunities, and growth (Brockhaus, 1980). The major risk faced by an entrepreneur comes in the form of personal financial obligations he/she has to bear by investing in a new and unsuccessful business venture. This risk put the future of an entrepreneur on the verge of uncertainty that would collapse at any time. An entrepreneur has the realization of the risk he/she is taking and is well aware that the consequences of business failure would not only affect the

finances of an entrepreneur but also leave him/her with an emotional setback. Because of the devastating nature of the risk taking the entrepreneur carefully evaluates the opportunity before taking the risk.

Findings of Cressy (2000) show that a wealthy entrepreneur would take less amount of risk on projects and is more likely to take a proportionate amount of risk for several projects at a time. The element of wealth makes the entrepreneur more risk averse as they do not want to lose their investment without a very lucrative risk premium. Whereas, poor entrepreneurs are more likely to invest in riskier projects as per the findings this risk-taking propensity of poor entrepreneurs is a result of their optimism and the freedom of being their boss (Vereshchagina & Hopenhayn, 2009). At the same time, lack of finances restrict the amount of investment in business by poor entrepreneurs and they are willing to risk the small amount they have in their wealth. Therefore, it is imperative to validate if the underdog entrepreneurs also develop these traits under extremely challenging life circumstances.

## **2.4 Optimism**

One of the personality traits that has garnered a great deal of attention in entrepreneurship research is optimism (Adomako et al., 2016). Optimism is defined as “generalized expectancies of positive outcomes in one’s life” (Scheier & Carver, 1992). Researchers generally agree with the belief that entrepreneurs tend to be more optimistic compared to others (De Meza & Southey, 1996; Hmieleski & Baron, 2016; Ucbasaran et al., 2010).

Recent scholarly work has made a substantial contribution in highlighting the key factors that play a crucial role in entrepreneurial success. One of those key factors is optimism (Lindblom et al., 2020). It follows the rationale of having no knowledge of starting and running a business, therefore, relying on the positive expectations of success in future. This thought is consistent with scholarly work which highlights the notion that highly optimistic individuals are confident of achieving (Lindblom et al., 2020; Ozgen et al., 2021).

Literature discusses many positive consequences of optimism. In the entrepreneurial domain high level of optimism promotes cognitive abilities such as problem-solving (Yeşilkaya & Ylldiz, 2022). Optimism is also recognized as a positive psychological capital of entrepreneurs and it leads to resilience (Baluku et al., 2016). Optimism is the driving force

behind the formation of a new business venture without capital and experience (De Meza & Southey, 1996).

**H1a** *The positive relationship between risk-taking and entrepreneurial success is mediated by optimism*

## **2.5 Persistence**

Persistence is considered to be the cornerstone of entrepreneurship because the process of establishing and managing a new business venture is not an easy one and comes with a lot of uncertain and unforeseen difficulties. (Burke & Miller, 1999). Entrepreneurs very often come across several obstacles throughout daily business operations and their survival in the long run (Cardon & Kirk, 2015). Research findings in entrepreneurship suggest that consistently facing challenges and overcoming obstacles results in self-doubt and cognitive constraints. The cognitive constraints include; difficulty in perception, interpretation, and selection of information needed to make the important decisions that are needed to achieve entrepreneurial goals (Gatewood et al., 2002; Haines & Townsend, 2013).

Persistence is defined as “the continuation of effortful action despite failures, impediments, or threats, either real or imagined” (Gimeno et al., 1997). Persistence aids entrepreneurs in overcoming cognitive constraints in a way that promotes entrepreneurial learning. Persistent entrepreneurs continuously learn the practice of overcoming challenges and accumulate this knowledge to effectively manage uncertainties in the future (Cardon & Kirk, 2015). This accumulation of knowledge leads to the efficient performance of an entrepreneur (Cope, 2005; Cardon & Kirk, 2015; Chen, Chen & Hou, 2021). In other words, being persistent is the way to achieve better business performance and eventually entrepreneurial success.

For such reasons, persistence holds an important place in the process of entrepreneurship (Shane et al., 2003), and those entrepreneurs who are determined to remain persistent in reaching their goals are more likely to be successful (Timmons & Spinelli, 2009; Caliendo et al. 2020). Therefore, understanding the factors that foster the persistent behavior of entrepreneurs is imperative to the study of entrepreneurial success. Moreover, despite the acknowledgment of the key role of persistence in entrepreneurial research (e.g. Cardon & Kirk, 2015; Shane et al., 2003;



Timmons & Spinelli, 2009), the question of under what circumstances persistence is fostered in developing economies has remained unanswered.

Most of the sub-Saharan African economies are characterized by the lacking of several resources needed to promote entrepreneurship (Robson & Obeng, 2008; WorldBank, 2014). In underdeveloped or poor economies such as Ghana, persistence has been reported to be a critical trait in achieving entrepreneurial success (Adamko et al., 2016; Ahsan et al., 2021). Under the conditions of Poverty in Pakistan, it can be assumed that the development of persistence might turn out to be the most important entrepreneurial trait. Following this discussion, we postulate a second hypothesis as follows:

**H2a** *The positive relationship between risk-taking and entrepreneurial success is mediated by persistence.*

## **2.6 Moderating effect of poverty**

People living in poverty usually struggle to make ends meet, experience extreme deficiency of resources and have fewer job opportunities (Houghton & Khandker, 2009). This situation of the poor becomes even worse in developing countries (Khavul & Bruton, 2013), where employment opportunities and social mobility are limited. These difficult challenges hinder the cognitive ability of people suffering from poverty. Such disadvantages and challenges of poverty can also be found in the entrepreneurship literature. Due to the lack of human, financial, and social capital, poor entrepreneurs may find it particularly challenging to identify and seize opportunities (see Alvarez & Barney, 2013). Instead of pursuing a quality education or building their human capital, they are more concerned with satisfying their immediate, and fundamental necessities (Yunus, 1999).

The lack of knowledge, abilities, and cognition makes it difficult for poor entrepreneurs to find and take advantage of opportunities, which further lowers their sense of well-being. Furthermore, receiving a meager sum of money can have a negative impact on people who are already struggling to make ends meet. Economically underprivileged entrepreneurs essentially lack financial capital, particularly in emerging economies (Ansari, Munir, & Gregg, 2012; Banerjee & Duflo, 2011). Usually, they are unable to obtain loans through the established banking system. Their absence of suitable collateral raises the costs associated with screening,

monitoring, and enforcing lending transactions for the banks. As a result, poor entrepreneurs lack the capital needed for investing in their businesses.

Entrepreneurs suffering from poverty are also deprived of the social capital required for effective business development. Their social standing in society is largely established by their economic status, making it impossible for them to develop social capital that could aid them in gaining knowledge and making alliances (Hansen, 1995). This exclusion from social networks may further affect entrepreneurs' success. In the context of underdog entrepreneurship such negative life challenges activate entrepreneurial cognition and resilience (Miller and Breton Miller, 2017). Hence, we propose that underdog entrepreneurs suffering from poverty develop capabilities to cope with challenging circumstances. Following this argument, we postulate our second hypothesis;

**H1b** *The indirect effects from risk-taking to entrepreneurial success are moderated by poverty through optimism and these effects are strengthened when the poverty level is high rather than low.*

**H2b** *The indirect effects from risk-taking to entrepreneurial success are moderated by poverty through persistence and these effects are strengthened when the poverty level is high rather than low.*

**Figure 1 Conceptual Framework**

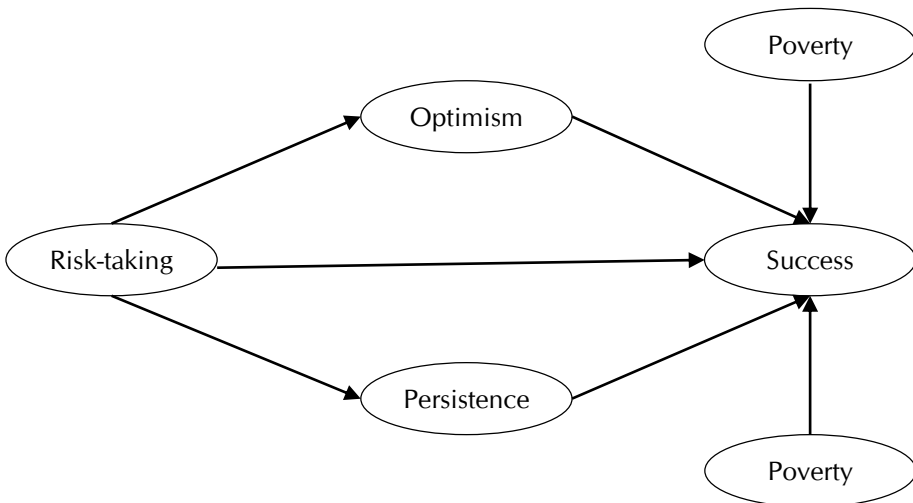


Table 1 Definitions of variables

Sr. No.	Variables	Conceptual definition	Operational definition
1	Risk taking	"Taking bold action by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environments" ( <i>Rauch et al 2009</i> )	"I like to take bold action by venturing into the unknown" "I am willing to invest a lot of time and/or money on something that might yield a high return" "I tend to act "boldly" in situations where risk is involved" ( <i>Bolton and Lane 2012</i> )
2	Optimism	"Generalized expectancies for experiencing positive outcomes" ( <i>Scheier et al., 2001</i> ).	"In uncertain times, I usually expect the best If something can go wrong for me, it will I am always optimistic about my future I hardly ever expect things to go my way I rarely count on good things to happen to me Overall, I expect more good things to happen to me than bad" ( <i>Scheier et al., 1994</i> )
3	Persistence	"The continuation of effortful action despite failures, impediments, or threats, either real or imagined." ( <i>Gimeno et al., 1997</i> )	"I continue to work on hard projects even when others oppose me" "I can think of many times when I persisted with work when others quit" "No matter how challenging my work is, I will not give up" ( <i>Baum and Locke, 2004</i> )
4	Entrepreneurial success	"Entrepreneurial success is a phenomena characterized by positive consequences as perceived by the entrepreneur" ( <i>Fisher et al 2014</i> )	<b>I am successful if I</b> "Achieve the business goals I set out to achieve in founding at least one business" "Exceed the business goals I set out to achieve in founding at least one business" "Am personally satisfied with my life and business" "Do only that which I want to do in life and business" "Continually grow my business Receive public recognition from others e.g. awards, remunerated board seats, speaker invitations" "Never fail" "Exit, or sell some of, my business for profit" "Build a business sustainable beyond my personal involvement" ( <i>Fisher et al 2014</i> )

### **3. Methodology**

This study focuses on empirical testing of the effect of entrepreneurial traits on entrepreneurial success in underdog entrepreneurship. We aim to analyze entrepreneurship in the people living in poverty who lack financial and social capital. This poor population of Pakistan is completely uneducated and reluctant to go to a bank. They prefer to borrow interest-free microfinance either from non-banking institutions or from friends and relatives (Iqbal et al., 2019). A cross-sectional survey was conducted to collect data over two months' period from March-May, 2023 from the micro-finance borrowers of Akhuwat Foundation Pakistan, an interest-free microfinance institution.

#### **3.1 Survey questionnaire**

The first section of the questionnaire contained questions to measure the demographic profile of borrowers, household details, borrowing history, details of their entrepreneurial venture, and income from the entrepreneurial venture. The second section of the questionnaire consisted of 13 questions measuring MPI. The multidimensionality poverty index (MPI) developed by the Government of Pakistan to measure the scale of poverty in the country was used to measure the poor condition of underdog entrepreneurs. The third section consisted of 28 questions measuring all the variables in the research framework. For the measurement of success in micro-entrepreneurship, we cannot rely on financial performance measures as these micro-businesses do not generate wealth. Therefore, the subjective measure of success was utilized.

The questionnaire is based on widely adopted scales from the literature. The 10-item scale of entrepreneurial traits (risk-taking, innovativeness, and pro-activeness) is based on Bolton & Lane (2012). 3-items scale of persistence is adapted from Baum & Locke (2014) and the 9-items scale of entrepreneurial success was developed by Fisher et al (2014). 6-items scale of entrepreneurial optimism was developed by Linen & Chen (2009). The questionnaire was translated in the Urdu language.

#### **3.2 Recruitment of participants**

One of the fundamental prerequisites for success is having access to finance, which is uncommon for people living in countries with high rates

of poverty (Peachey & Roe, 2004; Beck et al 2004; Beck & Demirgüç-Kunt, 2008). People without collateral cannot obtain financing from banking institutions, and arranging collateral for those who are already living on or below the poverty line is not an easy task. Poor entrepreneurs are an excluded segment for banks and other financial institutions because they cannot afford the high collateral requirements and demand for high interest rates (Beck & Demirgüç-Kunt, 2008).

For our study borrowers of non-banking MFIs are ideal respondents because these institutions target needy borrowers who are socially and financially disadvantaged. Hence the profile of the borrowers of MFIs matches with the underdog entrepreneurs that we seek to investigate. Akhuwat Foundation is the leading microfinance institution in Pakistan that provides interest-free loans for small businesses to the poorest people (men and women) in society. Akhuwat is working with the mission of “alleviating poverty by empowering socially and economically marginalized families through interest free microfinance and by harnessing entrepreneurial potential, capacity building, and social guidance” (Zaidi, 2017). Since it was established in 2001, it has successfully distributed small loans of amount \$110 million to 1.9 million families. These loans were granted without any collateral and with a recovery rate of 99.93 %. Such a remarkable achievement by a nonprofit organization makes it a leading interest-free institution in the world (Iqbal et al., 2019). Akhuwat has more than 290 branches in 180 cities of Pakistan. Akhuwat (Leading Islamic Microfinance provider) is the top-ranked microfinance provider in Pakistan with 820,000 active borrowers during the year 2017 (Zaidi, 2017; Rehman et al., 2020).

Akhuwat grants enterprise loans up to PKR 50,000 to unemployed borrowers who decide to become self-employed. Borrowers pay back the loan in small installments over a period of 15 months. This payoff system of Akhuwat is also very convenient for its borrowers. The loan recovery rate of Akhuwat due to this factor is 99.93 %. Borrowing from Akhuwat is very convenient for the underprivileged community as it requires no legal paperwork and collateral. Akhuwat deals with its borrowers with utmost humility. Therefore, the majority of the underprivileged community prefers borrowing from Akhuwat. Tapping for Akhuwat borrowers in our research assures the recruitment and selection of underdog entrepreneurs in our sample. Apart from this crucial reason the influx of borrowers to microfinance banks and other newly established interest-free microfinance lending institutions such as AGAHE Pakistan is very low.

### **3.3 Akhuwat's criteria of dispensing enterprise loan**

A team of Akhuwat is dedicated to the background check of the applicants for enterprise loans. The team visits the home and neighborhood of the applicant and makes their decision upon the following set of criteria:

- Ownership of House (own vs rent)
- Number of household members financially dependent on the applicant
- Monthly utility bills of the household
- Monthly expenditure on food
- Number of school-going children
- Number of members in a house with a persistent medical condition such as diabetes
- Household income
- Number of household assets such as television, refrigerator, and air conditioner

All the above-mentioned indicators are evaluated by Akhuwat to classify a person as poor and needy.

### **3.4 Survey pretest**

Preliminary testing of a survey questionnaire with a sample of 35 borrowers of Akhuwat Foundation in Lahore city was conducted before data collection. Survey questionnaire was translated in Urdu language by experts following Brislin's (1970) approach including back translation into English. The purpose of the preliminary testing was twofold; (a) to pre-test the Urdu translated questionnaire and to eliminate all the ambiguities in the understanding of questions, and (b) to validate the underdog entrepreneurship cases based on microfinance borrowing. The translated version of survey is given in appendix.

From July 24 to August 28, 2022, we conducted a pre-test of the survey questionnaire with 35 enterprise loan borrowers of Akhuwat Foundation Pakistan. The translated version of the survey in Urdu language was pre-tested to ensure that the participants understand the questions. This pre-test was conducted as a verbal survey because the majority of the borrowers lacked the literacy to read and write. Participants did not

identify any ambiguity in questions and comfortably answered the questions in the verbal survey. We asked two additional questions (Q) from borrowers during the pre-test:

Q1: What motivated you to become self-employed?

Q2: What difference has it made in your life?

The majority of the answers given to Q1 supported the link between poverty and entrepreneurship. In doing so we also found that the Akhuwat Foundation is serving disadvantaged and poor entrepreneurs. The preliminary analysis of 35 borrowers validated the existence of underdog entrepreneurship in poor people.

### **3.5 Population, sample and sample size**

In this study individual borrower of Akhuwat's enterprise loan in Lahore city was our unit of analysis. Out of 35 branches of Akhuwat in Lahore city, we randomly selected 4 branches to recruit participants for our study. The sample size for our study calculated using the approach developed by Hair et al.'s (2012) is 340 (calculated by multiplying the number of items/questions in the survey with the minimum responses needed per question i.e.  $34 \times 10$ ). We planned to survey 400 active borrowers collectively from four randomly selected branches. The decision of taking a sample size of 400 was based on the review of relevant quantitative studies where a sample size of 200-500 microfinance borrowers has been deemed sufficient (see Abbas and Sherazi, 2015; Altasseb and Karunakaran, 2016; Khan and Bedi, 2022; Rafay et al., 2020; Zaidi, 2017; ZahidMahmood, 2017).

### **3.6 Screening criteria**

We interviewed Akhuwat's manager of the head office in Lahore city and found out that a borrower can apply up to 7 times for an enterprise loan. We decided to survey borrowers in the second cycle of enterprise loans who have paid their first loan and now have received a second loan. With this selection criterion, we aim to eliminate the effect of COVID-19 pandemic from our findings. During the COVID-19 pandemic the weekly income of microfinance borrowers in Pakistan dropped from 80% to 99% and food security became their top priority (Malik et al., 2020). Similarly, in many developing countries the rising trend of borrowing from MFIs was

observed during the COVID-19 pandemic as the masses from low-income groups in an economy needed capital to fulfill their need for food and health expenses (Brickell et al., 2020; CZura et al., 2022). Therefore, active loan borrowers who applied for their first enterprise loan from August 2021 to August 2022 served as our target population. Based on our screening criteria we employed non-probability purposive sampling to select borrowers from four branches.

### **3.7 Grouping of borrowers: non-randomized approach**

We divided the sample of 400 borrowers into two groups; successful vs unsuccessful entrepreneurs. We adopted non-randomized approach to study group differences. We define successful entrepreneurs as those borrowers who have applied for second loan to invest capital in their business established from the first loan. On the other hand, we define unsuccessful entrepreneurs as those who only borrowed once. We have assumed the following reasons why borrowers did not return for the second loan;

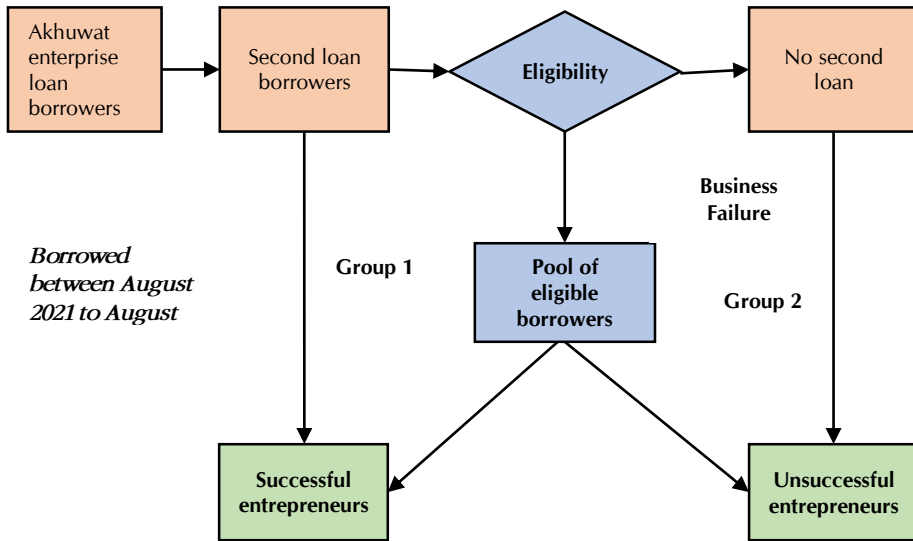
- (a) They failed in earning from business and switched to salaried work.
- (b) They borrowed loans to fulfill an urgent financial need.
- (c) Their business is growing without the need for further capital investment.

After confirming the reason for not applying for a second loan we requested those borrowers who failed in running their business to participate in the survey. In this way we're able to truly gauge the extent role of entrepreneurial capabilities in the success of a business. The sample size of this group was calculated based on population size (the number of borrowers qualifying for sample selection). Kotrlik et al (2001) developed a statistical table to measure the minimum return sample size from the given population size for categorical and continuous data. Kotrlik et al (2001) table to determine sample size is a recommended approach in the scenario where determining the sample size from a selected population is difficult to achieve generalizable results. For instance, if we can locate 100 borrowers qualified as unsuccessful borrowers as per our criterion then following the table approach ( $\alpha = 0.05$ , margin of error = 0.03) the sufficient sample size will be 55. The table is attached in the appendix.



We made telephonic contact with 700 borrowers of enterprise loans who did not apply for second loan after their first loan application during the selected time frame of our study. Out of 700, only 72 participants fulfilled our screening criteria and 54 agreed to participate in the survey.

**Figure 2 Population and sample selection flowchart**



## 4. Results

### 4.1 Data and sample description

400 useful responses were obtained for statistical analysis. The normality of data was tested with Skewness and Kurtosis analysis (skewness  $\pm 1$ , kurtosis  $\pm 4$ ). Both these values fulfill the criteria of West et al., (1995). Common method bias (CBM) was also tested by performing Herman's single-factor test on data. The results of Herman's test showed  $< 50\%$  of the variance in data this value is consistent with the criteria of Podsakoff and Organ (1986).

The sample comprised 45% of male and 55% of female borrowers, 28% of borrowers had no schooling, 26% had primary education and 30% of participants had secondary education. 82% of the borrowers were married, 11% were single and 6% were widowers. 32% of the borrowers were responsible for the financial support of 8 household members, 29%, 26% and 21% of the borrowers were responsible for 7, 9 and 6 household

members respectively. We also noted the type of business the borrowers were engaged in and found out that the majority of borrowers were operating home-based businesses including selling clothes from home (18%) and making ready-to-wear from home (18%). 12% of the borrowers had bought a traditional and small automobile known as a rickshaw with the loan and were earning from driving people around in exchange for a fare. 5% of the borrowers were running a small home-based mom-and-pop shop in the neighborhood and 5% were selling street on a small food stall. Table 2 and 3 shows the complete breakdown of the demographic description of the sample.

**Table 2 Demographics of borrowers**

<b>Demographic Variables</b>	<b>Categories</b>	<b>Sample Description (n = 400)</b>
<b>Age</b>	20-25	11%
	26-31	15%
	32-37	21%
	38-43	24%
	44-49	19%
	50-55	10%
<b>Gender</b>	Male	45%
	Female	55%
<b>Education Status</b>	No schooling	28%
	Less than primary	5%
	Primary education	26%
	Secondary Education	30%
	FA/BA	9%
	Technical Education	2%
<b>Marital Status</b>	Married	82%
	Single	11%
	Widower	6%
	Divorced	1%
<b>Income Type</b>	Daily	43%
	Weekly	44%
	Monthly	13%

**Table 3 Type of business**

<b>Business Type</b>	<b>Frequency</b>
Home based cloth selling	18%
Home based tailor	18%
Rickshaw driver	12%
Kirana/mom and pops store in neighborhood	5%
Home base beauty saloon	7%
Clothes or Shoe Shop	7%
Food stall	5%
Home based small kirana/mom and pops shop	5%
Mechanic workshop	2%
Mobile repair shop	3%
Small house repair business	6%
Tailor/embroidery shop	6%

#### **4.2 Results of Measurement Model**

Confirmatory factor analysis (CFA) was performed on data in AMOS (version 23). CFA results showed a good model fit with the following values of fit indices; Chi-square = 414.23,  $df = 183$ ,  $CMIN/DF = 2.262$ ,  $CFI = 0.977$ ,  $IFI = 0.928$ ,  $TLI = 0.975$ ,  $GFI = 0.982$ ,  $RMSEA = 0.063$ . All the values of the goodness of fit indices meet the criteria of Schreiber et al. (2006). All the factor loadings obtained from CFA were above 0.5. Table 4 shows the factor loadings of all the items of scales used in the questionnaire.

#### **4.3 Reliability and Validity Analysis**

The reliability and validity of variables were established following Fornell and Larcker's (1981) criteria. The values of composite reliability and Cronbach's alpha were above 0.7. The convergent validity was established using the measure of average variance extracted (AVE). All the variables produced an AVE value greater than 0.5. Discriminant validity was concluded by comparing the values of average shared variance (ASV), maximum shared variance (MSV), and the square root of AVE with squared correlations. Table 5 depicts the results of the validity and reliability of the variables.

**Table 4: Factor loadings**

<b>Items</b>	<b>Factor Loadings</b>	<b>Cronbach's alpha</b>
<b>Risk Taking (RT)</b>		<b>0.920</b>
"I like to take bold action by venturing into the unknown"	<b>0.843</b>	
"I am willing to invest a lot of time and/or money on something that might yield a high return"	<b>0.820</b>	
"I tend to act boldly in situations where risk is involved"	<b>0.912</b>	
<b>Persistence (P)</b>		<b>0.890</b>
"I continue to work on hard projects even when others oppose me"	<b>0.725</b>	
"I can think of many times when I persisted with work when others quit"	<b>0.733</b>	
"No matter how challenging my work is, I will not give up"	<b>0.836</b>	
<b>Optimism (OPM)</b>		<b>0.911</b>
"In uncertain times, I usually expect the best"	<b>0.913</b>	
"If something can go wrong for me, it will"	<b>0.439</b>	
"I am always optimistic about my future"	<b>0.911</b>	
"I hardly ever expect things to go my way"	<b>0.743</b>	
"I rarely count on good things to happen to me"	<b>0.780</b>	
"Overall, I expect more good things to happen to me than bad"	<b>0.843</b>	
<b>Entrepreneurial Success (ES)</b>		<b>0.921</b>
"I am satisfied with the success I have received in my business"		<b>0.710</b>
"I am satisfied with the progress I have made towards meeting my overall business goals"		<b>0.811</b>
"I am satisfied with the progress I have made towards meeting my goals for income"		<b>0.675</b>
"I am satisfied with the progress I have made towards meeting my goals for advancement"		<b>0.717</b>
"I am satisfied with the progress I have made towards meeting my goal for the development of new skills"		<b>0.590</b>
"I have accomplished something valuable from my business"		<b>0.764</b>
"I have fulfilled something I want to do from my business"		<b>0.733</b>
"I have made some of my dreams come true to form my business"		<b>0.698</b>
"I have a sense of achievement from my business"		<b>0.848</b>

**Table 5 Validity and reliability Fornell and Larcker (1981)**

	RT	P	OPM	ES	MSV	ASV	CR	AVE
Risk Taking(RT)	<b>*0.859</b>				0.505	0.347	0.894	0.738
Persistence (P)	0.573	<b>*0.766</b>					0.810	0.587
Optimism (OPM)	0.445	0.696	<b>*0.788</b>				0.904	0.621
Entrepreneurial Success (ES)	0.03	0.551	0.344	<b>*0.730</b>			0.911	0.534

\*Square root of AVE in cross-loadings in diagonal and correlation in off-diagonal

#### 4.4 Results of path analysis

Following the CFA, structural equation model (SEM) analysis was performed on data in AMOS (version 23). Results of SEM showed a good model fit with all the fit indices meeting Schreiber et al. 's (2006) criteria; chi-square = 162.41,  $df = 48$ , CMIN/DF = 2.628 CFI = 0.972, IFI = 0.923, TLI = 0.929, GFI = 0.944, RMSEA = 0.071. Table 6 shows the results of path analysis including direct and indirect effects.

We found an insignificant direct effect of RT on ES ( $\beta = 0.150$ ,  $p > 0.05$ ). The direct effect of RT on OPM was found to be significant ( $\beta = 0.08$ ,  $p < 0.05$ ). The direct effect of OPM on ES was significant ( $\beta = 0.35$ ,  $p < 0.05$ ). The total indirect effect of RT  $\rightarrow$  OPM  $\rightarrow$  ES was significant ( $\beta = 0.03$ , CI = 95%, Bootstrap with 5,000 samples). These findings suggest that indirect-only mediation exists as per Zhao et al (2010) mediation approach. The direct effect of RT on P was found to be significant ( $\beta = 0.29$ ,  $p < 0.05$ ). The direct effect P on ES was significant ( $\beta = 0.17$ ,  $p < 0.05$ ). The total indirect effect of RT  $\rightarrow$  P  $\rightarrow$  ES was significant ( $\beta = 0.04$ , CI = 95%, Bootstrap with 5,000 samples). These findings suggest that indirect-only mediation exists as per Zhao et al (2010) mediation approach. Conclusively, the results of path analysis accept H1a and H2a. Table 6 and 7 show the results of direct and indirect effects.

**Table 6 Mediation results with direct effects**

Relationship	Direct Effect	SE	t-value	p-value
$RT \rightarrow ES$	-0.02	0.04	-0.55	NS
$RT \rightarrow OPM$	0.08	0.02	3.21	***
$OPM \rightarrow ES$	0.35	0.12	2.85	**
$RT \rightarrow P$	0.29	0.04	6.27	***
$P \rightarrow ES$	0.17	0.03	5.66	**

NS = Not significant at  $p > .05$

\*\*p-value  $< .05$

\*\*\*p-value  $< .01$

**Table 7 Mediation results with total indirect effects**

Relationship	Indirect Effects	Boot SE	Boot LLCI	Boot ULCI
$RT \rightarrow OPM \rightarrow ES$	0.03	0.01	0.003	0.061
$RT \rightarrow P \rightarrow ES$	0.04	0.02	0.003	0.072

CI 95% Bootstrapping with 5,000 samples

BootSE = Bootstrap Standard errors

LLCI = Lower limit confidence interval, ULCI Upper limit confidence interval

#### 4.5 Moderated mediation analysis

Moderated mediation was analyzed in SPSS using Hayes (2018) process macro version 4. A significant value for the index of moderated mediation was achieved. The results showed a negative moderating effect of poverty on the relationship between risk-taking and optimism. With an increase in poverty, the effect of optimism on success weakens and the effect size becomes smaller and smaller. A strong moderated effect of poverty was found on the relationship between risk-taking and persistence. Table 8,9 and 10 shows the results of moderated mediation. The graphs of moderated effect given in the following pages show the varying level of optimism and persistence at three different levels of poverty (low, medium, and high).

**Table 8: Index of moderated mediation**

Relationship	Moderator	Index	Boot SE	Boot LLCI	Boot ULCI
$OPM * poverty$		-0.019	.0087	-0.036	-0.001
$RT \rightarrow OPM \rightarrow ES$	Poverty	-.045	.023	-.097	-.064
$P * poverty$		.242	.018	.248	1.345
$RT \rightarrow P \rightarrow ES$	Poverty	.077	.028	.357	1.465

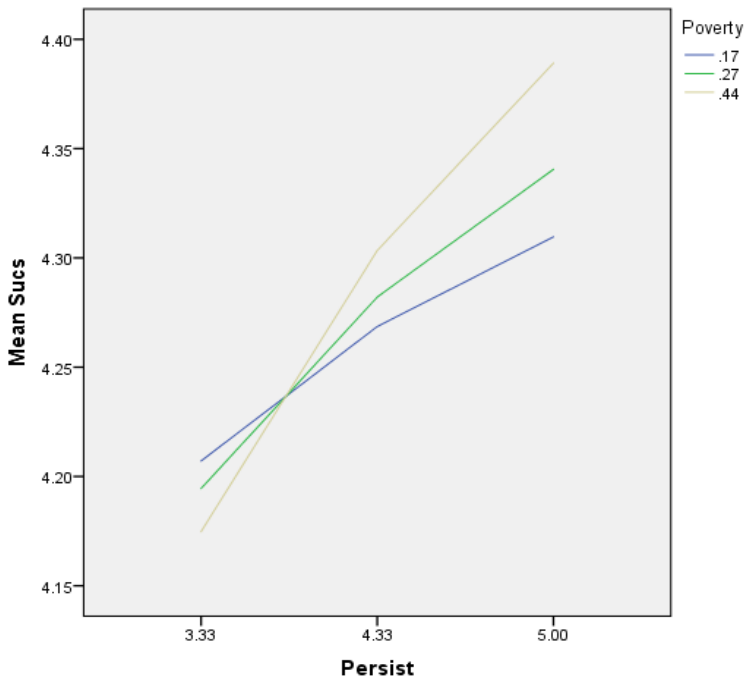
**Table 9 Conditional indirect effects from risk-taking to entrepreneurial success through optimism for different levels of poverty**

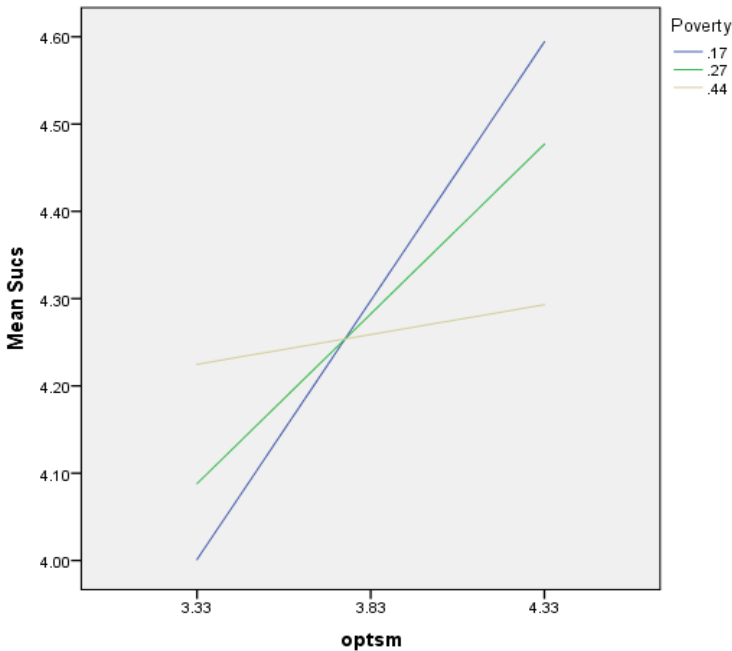
Moderator	Level	Conditional Indirect Effect	Boot SE	Boot LLCI	Boot ULCI
Poverty	<i>Low</i>	0.519	0.164	0.267	0.913
	<i>Mean</i>	0.388	0.125	0.145	0.632
	<i>High</i>	0.068	0.017	0.023	0.049

**Table 10 Conditional indirect effects from risk-taking to entrepreneurial success through persistence for different levels of poverty**

Moderator	Level	Conditional Indirect Effect	Boot SE	Boot LLCI	Boot ULCI
Poverty	<i>Low</i>	0.193	0.042	0.107	0.222
	<i>Mean</i>	0.305	0.046	0.1594	0.3246
	<i>High</i>	0.371	0.051	0.2079	0.4122

**Figure 3 Interaction effect poverty\*persistence**



**Figure 4 Interaction effect poverty\*optimism**

#### **4.6 Results of multi-group analysis (successful vs unsuccessful entrepreneurs)**

We screened 700 one-time borrowers to survey the borrowers who failed in running a small business. We surveyed 54 borrowers categorized as unsuccessful borrowers. The purpose of this group was to test group differences. The chi-square difference between the constrained and unconstrained model was significant ( $\Delta\chi^2 = 75.95$ ,  $df = 22$ ,  $p < 0.05$ )

Results show that difference in the total indirect effect of RT on ES through P (RT→P→ES) for the successful and unsuccessful entrepreneurs was insignificant. The difference in the total indirect effect of RT on ES (RT→OPM→ES) with optimism as a mediator was found to be statistically significant for the successful ( $b = 0.072$ ,  $p < 0.05$ ) and unsuccessful ( $b = -0.149$ ,  $p < 0.05$ ) entrepreneurs. Additionally, the results show that the direct effect of OPM on ES is significantly greater for successful entrepreneurs ( $b = 0.292$ ,  $p < 0.05$ ) compared to unsuccessful entrepreneurs ( $b = -0.256$ ,  $p < 0.05$ ). The direct effect of P on ES is significantly greater ( $b = 0.748$ ,  $p < 0.001$ ) for successful entrepreneurs as



compared to unsuccessful entrepreneurs ( $b = 0.415, p < 0.05$ ). Hence, we accept H3: *Risk-taking, optimism, and persistence significantly explain entrepreneurial success in successful entrepreneurs as compared to an unsuccessful entrepreneur.*

**Table 11 shows the summary of the results**

**Table 11: Summary of results**

<b>H1a</b> <i>The positive relationship between risk taking and entrepreneurial success is mediated by optimism.</i>	<b>Supported</b>
<b>H2a</b> <i>The positive relationship between risk taking and entrepreneurial success is mediated by persistence.</i>	<b>Supported</b>
<b>H1b</b> <i>The indirect effects from risk taking to entrepreneurial success are moderated by poverty through optimism and these effects are more strengthened when poverty level is high rather than low.</i>	<b>Not Supported</b>
<b>H2b</b> <i>The indirect effects from risk taking to entrepreneurial success are moderated by poverty through persistence and these effects are more strengthened when poverty level is high rather than low.</i>	<b>Supported</b>
<b>H3</b> <i>Risk-taking, optimism and persistence significantly explain entrepreneurial success in successful entrepreneurs as compared to unsuccessful entrepreneurs</i>	<b>Supported</b>

## 5. Conclusion and Discussion

This research analyzed the effect of risk-taking on the entrepreneurial success of underdog entrepreneurs and the role of optimism and persistence as mediating variables. As opposed to anecdotal evidence of high-risk tolerance of underdog entrepreneurs, we found an insignificant direct effect of risk-taking on entrepreneurial success. We found that optimism and persistence significantly mediate the relationship between risk-taking and entrepreneurial success. Additionally, we analyzed the moderating effect of poverty on the relationship between optimism and entrepreneurial success and found a negative moderating effect of the level of poverty. A strong positive moderating effect of poverty was found on the relationship between persistence and entrepreneurial success.

The negative moderating effect of poverty on the relationship between optimism and entrepreneurial success suggests that as the level of poverty increases the effect of optimism becomes weaker. These findings negate the theoretical relationship between optimism and challenging life

circumstances quoted in the underdog entrepreneurship literature. Our findings show that underdog entrepreneurs become less and less optimistic with increasing economic challenges such as poverty. Recently Morris and Tucker (2023) identified optimism as one of the components of the affective dimension of an entrepreneurial mindset. Optimism alone does not contribute to the development of an entrepreneurial mindset. When uncertainty is greater, the entrepreneurial mindset plays a critical role in dealing with complexities attached to a given situation (Morris and Tucker, 2023).

The strong moderating effect of poverty on the relationship between persistence and entrepreneurial success can be explained by the fear of failure. According to Tubadji et al (2022) fear of failure in entrepreneurs stems from the society's attitude towards failure. In Pakistan, joint family system prevails where a man, the head of the household, is responsible for the financial support of all the members (Ali et al., 2011). The sole breadwinner of the household cannot fail to provide for the family as this idea is embedded in the culture (Sarwar and Imran, 2019). Thus, persistence; as a result of cultural embeddedness, acts as a shield in times of crisis to ensure the survival of the underdog entrepreneurs. In line with this reasoning, our findings further validate the relationship between poverty and persistence i.e. increase in persistence with the severity of poverty.

### ***5.1 Theoretical implications***

Our study makes three contributions to the literature. Firstly, we contribute to the literature by exploring unique antecedents of underdog entrepreneurs' success in poverty. As noted earlier, underdog entrepreneurship has attracted increasing scholarly attention (Williams and Shepherd 2016). Entrepreneurial success is an important dependent variable in "its own right" (Williams and Shepherd 2016), and focusing on it in the context of underdog entrepreneurship is a significant contribution to the field. Prior studies in this regard mainly cover the theoretical aspects, namely, personal resources, social resources, stressors, and physical environment (Miller and Breton, 2017). While scholars call for future research that identifies more unique traits of underdog entrepreneurs that have an impact on their decision-making, we provide empirical evidence to this field.

Secondly, our study contributes to the underdog entrepreneurship literature by examining the situational effects of poverty. The mainstream entrepreneurship literature identifies entrepreneurship as an effective measure to reduce poverty in economies (e.g. Bruton, Ahlstrom, and Si 2015). Thirdly, poverty reduction is used as a key indicator of poor entrepreneurs' success (e.g. Van Praag and Versloot 2007). However, in our study poverty is analyzed as a moderating variable; that is, we argue that the effect of entrepreneurial personality traits affecting underdog entrepreneurs' perception of success is subjected to poverty levels. For example, our findings show that the effect of persistence on entrepreneurs' success becomes stronger in higher poverty levels than in lower poverty levels. Similarly, the effect of optimism on entrepreneurial success diminishes with increasing poverty levels. These findings strongly suggest the need to better understand the nature of entrepreneurs' perception of success as well as its boundary conditions, and pave the way to instigate the building blocks of future theory development on underdog entrepreneurs' success.

## **5.2 Future directions and limitations**

The policy-makers and academicians have not agreed upon a single definition of poverty which could help them elaborate its different levels (e.g. Tasavori, Zaefarian, and Ghauri, 2015). The widespread practice of measuring poverty is to rely on economic indicators based on the "absolute income level" or "percentile-based benchmarks" (World Bank 2012). More recently multidimensional approach to measure poverty (MPI) has taken the attention of policymakers and global organizations such as the World Bank and the UN. Because the severity of poverty varies in different economies, the scoring criteria attached to measuring poverty from different MPI dimensions could eliminate potential poor people who do not fulfill the scoring criteria.

Social poverty is defined as "the absence or dearth of social resources" (Lewandowski, 2008). Thus, social poverty refers to those living at the bottom of social strata and are unable to build up a social network. Socially poor entrepreneurs may have access to necessities to live a humble life. But they may suffer from psychological problems, limiting their ability to deal with challenges in operating their businesses. Despite of their adverse social condition, millions of socially poor entrepreneurs do not get the attention of policy makers and hence are not part of the anti-poverty policies and programs in many countries, including China.

(Su et al., 2020). Integrating social poverty into the underdog entrepreneurship research can lead to invaluable practical and policy implications. It can help to promote social equality and enhance the morale of entrepreneurs stuck at the bottom of the social hierarchy.

Even though the present study provides several interesting findings, it also has limitations that should be acknowledged. First, as the study used data that are cross-sectional in nature inferences regarding the direction of the relationship between risk-taking, optimism, persistence and entrepreneurs' perception of success should be carefully drawn. Future researchers need to use longitudinal and experiment designs to analyze underdog entrepreneurs' success. Future investigations focusing on the subjective well-being of entrepreneurs as a result of success and changing levels of poverty could result in many practical implications.

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## Appendix (Survey questionnaire in Urdu)

غربت کی حالت میں کاروباری صلاحیتوں اور کاروباری کامیابی کی پیش گوئی کرنے کا ایک ماڈل

محترم جواب دہندہ!

اس سروے کے سوالنامے کا مقصد کاروباری لوگوں کی کاروباری صلاحیتوں کی نشوونما اور کاروباری کامیابی کے معنی کو سمجھنا ہے۔ اس سروے میں آپ کے کاروبار کے آغاز، کاروبار کو چلانے کی آپ کی صلاحیتوں اور کاروبار کی کامیابی کے بارے میں آپ کی رائے سے متعلق سوالات شامل ہیں۔ اس سروے کو مکمل ہونے میں صرف پندرہ سے بیس منٹ لگیں گے۔

آپ کے جوابات اور آپ کی شناخت گمنام اور خفیہ رہے گی۔ یہ سروے لاہور سکول آف اکنامکس میں ایک تعلیمی تحقیقی منصوبے کا حصہ ہے۔ اس سروے میں شرکت رضاکارانہ ہے۔ آپ کو کسی ایسے سوال کا جواب نہ دینے کا حق ہے جس کا آپ جواب دینا پسند نہیں کرتے۔

اس سروے سے جمع کردہ ڈیٹا کو تجارتی مقاصد کے لیے استعمال نہیں کیا جائے گا۔ آپ کے وقت اور تعاون کے لیے آپ کا شکریہ۔

کیا آپ اس سروے میں حصہ لینے کے لیے رضامند ہیں؟

جی ہاں

نہیں

سرورے سوالنامہ

سیکشن 1: آبادیاتی پروفائل، قرض اور آغاز کی تفصیلات

	1. عمر
	2. جنس
	3. تعلیم
	میاں/ بیوی کی تعلیم
	بچوں کی تعداد
	شریک حیات کی آمدنی
	گھر کا سربراہ
	قرض؟
	کیا آپ نے پچھلے قرضے کی ادائیگی کی ہے؟
	اس وقت لیے گئے قرض کی رقم؟
	قرض لینے کا فیصلہ (انفرادی بمقابلہ شریک حیات یا گھر کے کسی دوسرے فرد کی طرف سے دباؤ)؟
	قرض پر سود؟
	قرض کے لیے ضمانت؟
	پچھلے قرض کا کتنا حصہ ذاتی اخراجات کے لیے استعمال کیا گیا؟
	ذاتی خرچ کی کیا ضرورت تھی؟
	کیا آپ کا شریک حیات قرض کی ادائیگی میں مدد کرتا ہے؟
	ابتدائی سرمایہ کاری کی رقم اور قیام کا سال؟
	کاروبار کی تفصیلات
	کاروبار سے کمائی
	کاروبار کو منافع بخش بننے میں کتنا وقت لگا؟

## MPI Questions

	آپ کے گھر کے 10 سال سے زیادہ عمر کے کتنے افراد نے کم از کم 5 سال کی اسکولنگ (تعلیم) حاصل کی ہے؟
	آپ کے گھر کے کتنے بچے اسکول جاتے ہیں
	آپ کے گھر کے بچے اسکول کیوں نہیں جاتے؟
	کیا آپ کو اپنے رہائشی علاقے کے قریب ہیلتھ کلینک تک رسائی حاصل ہے؟
	کیا آپ کے گھر کے 5 سال سے کم عمر کے بچوں نے حفاظتی ٹیکے لگائے ہیں؟
	کیا آپ کے گھر کی خواتین کو قبل از پیدائش طبی دیکھ بھال تک رسائی حاصل ہے؟
	کیا آپ کے گھر کی خواتین کو بچے کی پیدائش کے لیے ہسپتالوں تک رسائی حاصل ہے؟
	کیا آپ کے گھر میں پینے کا پانی دستیاب ہے؟
	کیا آپ کے گھر میں بیت الخلا ہے؟
	کیا آپ کے گھر میں اینٹوں سے بنی دیواریں ہیں؟
	آپ کے گھر میں کتنے لوگ ایک بیڈروم شیئر کرتے ہیں؟
	کیا آپ کے گھر میں بجلی ہے؟
	کیا آپ کے گھر میں گیس کا کنکشن ہے؟
	آپ کے گھر میں کتنے گھریلو آلات ہیں؟ جیسے ٹی وی، ریڈیو، اور سائیکل



## سیکشن 2: تحقیقی فریم ورک کے متغیرا

بمیشہ	بہت اکثر	کبھی کبھی	شاذ و نادر بی	کبھی نہیں	
					عام طور پر، میں کاروبار میں پہلے آزمائے گئے طریقوں کی بجائے منفرد طریقوں پر زیادہ زور دینے کو ترجیح دیتا ہوں
					میں ہر کسی کی طرح سیکھنے کے بجائے اپنا منفرد طریقہ آزمانے کو ترجیح دیتا ہوں۔
					میں عام طریقوں کو استعمال کرنے کی بجائے مسئلے کو حل کرنے کے لیے منفرد طریقہ کی حمایت کرتا ہوں۔
					مجھے کاروبار میں جرات مندانہ اقدام کرنا پسند ہے جو پہلے کسی نے نہیں کیا۔
					میں کسی ایسی چیز پر بہت زیادہ وقت اور پیسہ لگانے کو تیار ہوں جس سے زیادہ منافع حاصل ہو سکے
					میں ایسے حالات میں "دلیری سے" کام کرنے کا رجحان رکھتا ہوں جہاں خطرہ شامل ہو۔
					میں عام طور پر مستقبل کے مسائل اور تبدیلیوں کے لیے آگے کی منصوبہ بندی کرتا ہوں۔
					میں مستقبل کے منصوبوں کے لئے پہلے سے تیاری کرتا ہوں۔
					میں اپنے طور پر کام شروع کرنے کو ترجیح دیتا ہوں بجائے اس کے کہ کسی اور کے پہل کرنے کا انتظار کریں۔
					میں مشکل پراجیکٹس پر کام جاری رکھتا ہوں جبے دوسرے میری مخالفت کریں
					مجھے بہت سے واقعات یاد ہیں جب میں نے کام جاری رکھا جبکہ دوسروں نے کام چھوڑ دیا۔
					میرا کام کتنا ہی مشکل کیوں نہ ہو، میں ہار نہیں مانوں گا۔
					غیر یقینی وقتوں میں، میں عام طور پر بہترین کی توقع کرتا ہوں۔
					اگر میرے لیے کچھ غلط ہو سکتا ہے تو ہو جائے گا۔

بہت اکثر	بہت کم	کبھی کبھی	شاذ و نادر ہی	کبھی نہیں	
					میں اپنے مستقبل کے بارے میں ہمیشہ پر امید ہوں۔
					میں شاید ہی کبھی توقع کرتا ہوں کہ چیزیں میرے حق میں ہوں گی۔
					میں شاذ و نادر ہی توقع کرتا ہوں کہ میرے ساتھ اچھی چیزیں ہوں گی۔
					مجموعی طور پر، میں توقع کرتا ہوں کہ میرے ساتھ برے سے زیادہ اچھی چیزیں ہوں گی۔

بیان سے سختی سے اختلاف کرتے ہیں۔	بیان سے اختلاف	بیان کے لیے غیر جانبدار	بیان سے اتفاق کرتے ہیں	بیان سے سختی سے اتفاق کرتے ہیں۔	
					میں اپنے کاروبار میں ملنے والی کامیابی سے مطمئن ہوں۔
					میں اپنے مجموعی کاروباری اہداف کو پورا کرنے کے لیے کی گئی پیش رفت سے مطمئن ہوں۔
					میں اپنی آمدنی کے اہداف کو پورا کرنے کی طرف جو پیش رفت کی ہے اس سے مطمئن ہوں۔
					میں اپنے کاروبار میں ترقی کے لیے اپنے اہداف کو پورا کرنے میں جو پیش رفت کی ہے اس سے مطمئن ہوں۔
					میں اپنی ترقی سے مطمئن ہوں جو میں نے نئی مہارتوں کی نشوونما کے لیے اپنے ہدف کو پورا کرنے میں کی ہے

					میں نے اپنے کاروبار میں کچھ قیمتی کام کیا ہے۔
					میں نے اپنے کاروبار سے جو کچھ کرنا تھا اسے پورا کر دیا ہے۔
					میں نے اپنے کچھ خوابوں کو اپنے کاروبار کی شکل میں پورا کیا ہے۔
					مجھے اپنے کاروبار سے کامیابی کا احساس ہوا ہے۔

**Determination**

paragraph, uses both the five to one and ten to one ratios.

**Table 1: Table for Determining Minimum Returned Sample Size for a Given Population Size for Continuous and Categorical Data**

Population size	Sample size					
	Continuous data (margin of error = .03)			Categorical data (margin of error = .05)		
	alpha = .10 t = 1.65	alpha = .05 t = 1.96	alpha = .01 t = 2.58	p = .50 t = 1.65	p = .50 t = 1.96	p = .50 t = 2.58
100	46	55	68	74	80	87
200	59	75	102	116	132	154
300	65	85	123	143	169	207
400	69	92	137	162	196	250
500	72	96	147	176	218	286
600	73	100	155	187	235	316
700	75	102	161	196	249	341
800	76	104	166	203	260	363
900	76	105	170	209	270	382
1,000	77	106	173	213	278	399
1,500	79	110	183	230	306	461
2,000	83	112	189	239	323	499
4,000	83	119	198	254	351	570
6,000	83	119	209	259	362	598
8,000	83	119	209	262	367	613
10,000	83	119	209	264	370	623

NOTE: The margins of error used in the table were .03 for continuous data and .05 for categorical data. Researchers may use this table if the margin of error shown is appropriate for their study; however, the appropriate sample size must be calculated if these error rates are not appropriate. Table developed by Bartlett, Kotrlik, & Higgins.



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