

# Entrepreneurial intentions of progressive farmers: the influence of innovativeness, risk-taking and proactiveness

EI of  
progressive  
farmers

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## Abstract

**Purpose** – Progress in agriculture significantly relies on the adoption of innovative farm practices by farmers. Being proactive and risk-taking catalyses this innovativeness. Progressive farmers in general are proving to be effective in developing their farms along entrepreneurial lines. The paper aims to examine the relationship between the entrepreneurial traits of risk-taking, proactiveness, innovativeness and entrepreneurial intention (EI) of progressive farmers in Kashmir.

**Design/methodology/approach** – A quantitative research approach was used to evaluate how innovativeness, risk-taking and proactiveness affect EI. The data was collected from registered progressive farmers using a structured questionnaire via both online and offline means. 203 useable responses were received. The data was then analysed using partial least squares structural equation modelling (PLS-SEM).

**Findings** – The results reveal that progressive farmers' EI is influenced by innovativeness, risk-taking and proactiveness. As hypothesized, a significant and positive relationship was found between entrepreneurial orientation (EO) traits of risk-taking, proactiveness and innovativeness and EI.

**Research limitations/implications** – The study adds to the existing body of knowledge on agri-entrepreneurship by conceptualizing EO traits influencing EI of progressive farmers and offering insightful advice to policymakers on how to improve progressive farmers' entrepreneurial abilities and in turn convert their EI into agro venture establishment in Kashmir.

**Originality/value** – This study makes advancements in the field of farming-related EO by examining the EI of progressive farmers. This study covers a knowledge gap as there aren't many empirical studies on agricultural entrepreneurship that concentrate on the EO of progressive farmers and how it influences the EI in general in India and the Kashmir valley in particular.

**Keywords** Progressive farmers, Entrepreneurial intention, Entrepreneurial orientation, Innovativeness, Risk-taking, Proactiveness, Kashmir, PLS-SEM

**Paper type** Research paper

## 1. Introduction

To remain competitive and to get an economic edge, the farmers choose the best operational alternatives for their farms (Nikam *et al.*, 2022). The current agribusiness system is multifaceted and dynamic (Kandel *et al.*, 2022; Zawislak *et al.*, 2022), where farmers ought to innovate in a way that helps communities' social, economic and environmental needs (Ludden *et al.*, 2018). Gellynck *et al.* (2015) revealed that robust transformations and unforeseen challenges have evolved on both the demand and supply sides of the agriculture sector. Market shifts, changing customer habits, concerns about food safety, health consciousness, climatic crises and sustainability issues are a few examples of these



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developments (Dias *et al.*, 2019; Lans *et al.*, 2020; Khan *et al.*, 2020). To keep pace with this changing socio-economic scenario, farmers have to adjust to these dynamic changes.

Moreover, it has been found that entrepreneurship is a crucial tool for adjusting to these necessities of the present and developing a prosperous agricultural sector (Alsos *et al.*, 2011; Grande *et al.*, 2011; Yessoufou *et al.*, 2018). Since farmers often enhance their base income by becoming rural entrepreneurs, creating new services and pursuing new markets (Knickel *et al.*, 2009). Additionally, the scholars opined that there exists a link between farming and entrepreneurship (Lourenço *et al.*, 2014; Dias *et al.*, 2019; Devkota *et al.*, 2022). McElwee (2008) and De Wolf and Schoorlemmer (2007) argue that entrepreneurship is indeed critical for farmers' sustenance and development in the current dynamic economic and business climate. It is rapidly becoming the most essential component of contemporary farming (Smit, 2004). In progressive farming, entrepreneurship offers farmers more opportunities to support sustainable livelihoods (Abdalla and Chen, 2021). Therefore, to better understand agri-entrepreneurship proclivity, it becomes pivotal to know that farmers possess entrepreneurial orientation (EO). When farmers possess EO, it means that they are "ready to innovate to revitalize market offers, take calculated risks to try out novel and unexplored products, services and markets, and be more proactively engaged towards new market prospects than their competitors" (Wiklund and Shepherd, 2005). According to the research, innovativeness, risk-taking and proactiveness are the three prominent components that makeup EO (Miller, 1983; Covin and Slevin, 1989; Swierczek and Ha, 2003; Wiklund and Shepherd, 2005). Verhees *et al.* (2011) pointed out that proactiveness is the EO component that has the greatest impact on farm success. The other two components of EO, innovation and taking risks, are crucial to enabling a farmer to take initiative. Likewise, Lourenço *et al.* (2014) argued that EO encourages farmers to engage in activities, assists them in adjusting to a free-market economy and connects them to progressive agribusiness. Farmers are under pressure to improve their EO and competitiveness as a result of increased competitive challenges from market-oriented agriculture and increased market volatility (Phillipson *et al.*, 2004; Vesala and Vesala, 2010).

Kumar *et al.* (2015) state that innovativeness among farmers is becoming a prominent trend in the farm's overall development. The term "progressive farming" is gaining traction in the agricultural extension community and agricultural entrepreneurial literature. Chaudhuri *et al.* (2021) define a progressive farmer as one who is ready to try out new paradigms of innovation, technology or cropping practices. Progressive and innovative farmers are prepared to take chances and are among the first in their community to attempt novel and robust methods, harness previously untapped resources or use first-hand knowledge to establish a new marketplace for farm commodities (Shane and Venkataraman, 2000; Barzola Iza *et al.*, 2019). Farmers adopting sustainable and climate-smart agro-practices (FAO, 2017) and implementing cutting-edge farmland management procedures (McKenzie, 2011) are two examples of adaptive farm innovation.

Furthermore, farmers who possess EO are smart enough to convert the risks associated with diversification in dynamic circumstances into possibilities for creativity (Shane and Venkataraman, 2000; Audretsch *et al.*, 2006). By managing agricultural risks, farmers with EO focus on generating value-added agro-commodities and services rather than increasing yield (Santiago and Roxas, 2015). Research has also shown that farmers are proactive (Verhees *et al.*, 2011) and possess a remarkable ability to adapt to dynamic market conditions (Kahan, 2012; Andrade, 2016). Possessing EO and capitalizing on entrepreneurial behaviour is predicted to enhance farm management (Clark, 2009; Morgan *et al.*, 2010).

It can be noted that agri-entrepreneurship has a significant reliance on the adoption of innovative farm practices by farmers. Being proactive and taking risks catalyses their innovations. Research has shown that many farmers have entrepreneurial behaviour and are vigilant, helping them spot and capture opportunities (Wang and Liang, 2015; Kristensen *et al.*, 2019). They are constantly looking for ways to improve the way they organize their farms and run their farm

businesses as long-term investments to make them more sustainable. Kahan (2012) and Kristensen *et al.* (2019) pointed out that these farmers develop their farms on entrepreneurial lines effectively. Although a major portion of farmers are progressive and possess entrepreneurial behaviour (Wang and Liang, 2015). But many of them lack this EO and entrepreneurial attitude and are not able to respond proactively to market conditions (Molina *et al.*, 2021). So it becomes vital to understand their entrepreneurial behaviour, and to determine these progressive farmers' propensity toward the business scene, it is necessary to understand their entrepreneurial intention (EI). Intention development research is usually acknowledged as a first step toward gaining a comprehensive understanding of entrepreneurship (Liu *et al.*, 2020; Yaseen *et al.*, 2018). Venturing into farm entrepreneurship and diversifying on farms are perceived as inherently helpful to both the farmer's prosperity and rural development (Grande, 2011). So anticipating EI, which is the first step toward agricultural progressiveness, is dependent on farmers' EO (Tambwe *et al.*, 2020).

This guides the motivation for taking up progressive farmers as our respondent group in the study. We aim to measure the relation between EO components (innovativeness, proactiveness and risk-taking) and the EI of progressive farmers in Kashmir, a division of the Union Territory (UT) of Jammu and Kashmir, located in the Northern Himalayas in India between latitudes 32° and 36° N and longitudes 74° and 80° E. Almost 70% of the people of Kashmir work in agriculture or related fields, either directly or indirectly. Kashmir's agriculture business is valued at roughly Rs. 1,600 crore, and it is growing year after year, resulting in improved developments. Agriculture accounts for around 65% of J&K's revenue. Consequently, the region becomes reliant on agriculture. The necessity of the hour for agriculture is that it is to be transformed into entrepreneurship through successful participation in the fiercely competitive agricultural markets. Prior to that, it is necessary to know the impact of entrepreneurial traits on EI. This was the reason for selecting Kashmir as the study area for this study. The objective of this study is

To find out the impact of EO components. (Innovativeness, Risk-taking, and Proactiveness) on EI of progressive farmers of Kashmir.

Our study adds to the existing body of knowledge on agri-entrepreneurship by conceptualizing EO traits influencing EI of progressive farmers and offering insightful advice to policymakers on how to improve progressive farmers' entrepreneurial abilities and in turn convert their EI into agro venture establishment in Kashmir.

The rest of the paper is organized as follows. The second part discusses the conceptual frame and relevant literature around EI and advances to the hypothesis development, the relationship between EO traits and EI. The third portion outlines the research methods used to assess the variables and test the hypothesis, while the fourth section offers the empirical results. The fifth section then highlights the theoretical and methodological contribution to agri-entrepreneurship, and section six provides the conclusion. Sections seven and eight provide the research implications and limitations respectively.

## 2. Literature review and hypothesis development

Entrepreneurship is in demand in the present scenario (Majid and Yaqun, 2016). Entrepreneurs are considered to be working diligently to produce new goods and services, hence fostering company and entrepreneurial growth (Zeb and Ihsan, 2020). Along with other sectors of the economy, agricultural entrepreneurship is also gaining momentum. Farmers are expanding and innovating their farm operations to stay relevant in the current competitive marketplace. Moreover, the globalization of markets and the evolving business climate also make agri-entrepreneurship essential for the growth of the agriculture industry (Shane and Venkataraman, 2000; Audretsch *et al.*, 2006).

Undoubtedly, research has shown that farmers are a crucial group when it comes to starting new firms in rural areas (Carter and Rosa, 1998), expanding their farm operations via

entrepreneurship with the use of new technology (Morris *et al.*, 2017) or resorting to alternative farm enterprises (Phelan and Sharpley, 2011; Sher *et al.*, 2019). Farmers are also operating on entrepreneurial lines by implementing new business strategies and on-farm diversification (McElwee and Wood, 2018; Kristensen *et al.*, 2019). However, there is currently a dearth of studies on the factors that encourage farmers to start their businesses (Alsos *et al.*, 2003), and farmers' EO is a significant and underexplored notion in the development of procedures for entrepreneurship strategy-making (Dias *et al.*, 2019).

EI is a prerequisite to entrepreneurial behaviour, as the decision to engage in entrepreneurial action is determined by one's EI (Ajzen, 1991, 2005; Yaseen *et al.*, 2018). Kong *et al.* (2020) and Sheeran (2002) pointed out that EI is a state of mind that guides one's interest and focus toward specific business goals to achieve entrepreneurial objectives. Being a vital component in the research of new business formation, EI acknowledges that people are taking steps to start new businesses or add value to current ones (Thompson, 2009).

Research has shown that EI is related to EO (Ibrahim and Lucky, 2014; Koe, 2016; Cho and Lee, 2018). Twum *et al.* (2021) discovered that EO traits including innovativeness, risk-taking and proactiveness affect EI. A substantial statistical link between EO and entrepreneurial inclination is documented in the literature (Bolton and Lane, 2012; Ibrahim and Lucky, 2014). EO is the strategic stance of entrepreneurial tactics and endeavours (Covin and Slevin, 1990; Lumpkin and Dess, 1996; Kreiser, 2011). While the notion of EO has a general management concept (Robinson *et al.*, 1991; Lumpkin and Dess, 1996), attempts have been made to adjust the concept of EO to the unique peculiarities of the agricultural sector (Fitz-Koch *et al.*, 2018). In light of Krauss *et al.* (2005), agricultural literary studies modified the evaluation of the farm and the EO of the farmer to take into account three crucial dimensions: innovativeness, risk-taking and proactiveness (Cherotich *et al.*, 2019; Barzola Iza and Dentoni, 2020; Dung *et al.*, 2021). Gellynck *et al.* (2015) pointed out that in agriculture EO has a favourable relationship with innovation and performance of the farm-related business, similar to those of non-farm sectors.

Studies like those of Lai *et al.* (2017a, b) and Barzola Iza *et al.* (2019) have researched EO in the agricultural sector. Likewise, Xhoxhi *et al.* (2022) revealed that the traits of innovativeness, risk-taking and proactiveness accurately capture EO in farm-based entrepreneurship. But there is a gap in determining the progressive farmers' propensity toward the business scene and how these traits influence their EI. For this reason, we examine the impact of EO traits of innovativeness, risk-taking and proactiveness on Kashmiri progressive farmers' EI.

### 2.1 Entrepreneurial traits

Different researchers have attributed different traits to entrepreneurs and entrepreneurship. For example; three fundamental traits of entrepreneurs, according to Covin and Slevin (1990), are risk-taking, proactiveness and innovativeness. Knight (2000), lists innovativeness and pro-activeness as the two basic attributes of an entrepreneur. However, the list is exhaustive as per Lumpkin and Dess (1996). They outlined seven important qualities of an entrepreneur: risk-taking, innovativeness, proactiveness, competitive aggressiveness and autonomy. Wathanakom *et al.* (2020) believe that innovativeness, desire for starting a business, work happiness and perceived opportunity are all characteristics that led to entrepreneurial intent.

In our present study, we are taking innovativeness, risk-taking and proactiveness and trying to evaluate their relationship with the EI of progressive farmers of Kashmir.

### 2.2 Innovativeness and entrepreneurial intention

Innovativeness may be defined as the fundamental readiness to diverge from established technology or practices, which includes engaging in and supporting creative solutions, novelty, experimenting and new ideas (Lumpkin and Dess, 1996). Entrepreneurship and innovativeness are associated because innovation is one of the most crucial success elements for entrepreneurs and is

essential to the entrepreneurial process. Several researchers have proven that a relationship does exist between the two. According to [Baron et al. \(2012\)](#), the capacity to develop, adapt and put into practice ideas that add value is viewed as an essential component of innovation. Likewise, [Wathanakom et al. \(2020\)](#) believe that innovativeness can effectively predict EI. Many studies have found that innovativeness is one of the prime traits that is strongly linked with EI ([Chaudhary, 2017](#); [Rauch and Frese, 2007](#); [Nasip et al., 2017](#)). Additionally, research has found a statistically significant correlation between innovativeness and intentions to start a business ([Bolton and Lane, 2012](#); [Dinis et al., 2013](#); [Law and Breznik, 2017](#); [Syed et al., 2020](#)).

Based on the above premises, we hypothesize:

*H1.* Innovativeness is positively associated with EI.

### *2.3 Risk-taking and entrepreneurial intention*

Risk-taking is the readiness to invest resources in initiatives with a plausible likelihood of expensive failures ([Wiklund and Shepherd, 2005](#)). Entrepreneurial activities are inherently risky, and assessing risk is an important element of entrepreneurial intention. It is anticipated that people who choose to take a significant amount of risk will be more entrepreneurial. Research has shown that EI is linked to a favourable attitude toward risk or a willingness to accept unknown outcomes ([Douglas and Shepherd, 2002](#)). Multiple studies have revealed that risk-taking has a substantial influence on EI, and both are positively linked ([Yoopetch, 2021](#); [Zhang et al., 2015](#); [Bolton and Lane, 2012](#)). The research has shown the other way round as well. For example, [Dinis et al. \(2013\)](#) noted that the inclination to take a risk has a negative impact on one's intent to be entrepreneurial.

Based on the above premises, we hypothesize:

*H2.* Risk-taking is positively associated with EI.

### *2.4 Proactiveness and entrepreneurial intention*

Being proactive is described as being prepared to take action in advance of potential issues, client demands or alterations in the business environment ([Lumpkin and Dess, 1996](#)). Proactivity is indeed a critical success factor in entrepreneurship, as it gives an entrepreneur an edge over others ([Anwar and Shah, 2021](#)). Proactiveness, according to [Koe \(2016\)](#), is a need for identifying business possibilities. [Acheampong \(2017\)](#) asserts that proactive people initiate and take the lead to inspire those in the business by seizing opportunities. Studies like [Crant's \(1996\)](#), [Prabhu et al.'s \(2012\)](#), and [Hussain and Malik's \(2018\)](#) found a direct, positive and significant link between proactiveness and EI. Studies like [Kumar and Shukla's \(2022\)](#) and [Prabhu et al.'s \(2012\)](#) have also found a substantial and positive influence of proactiveness on entrepreneurial intention. [Hu et al. \(2018\)](#) and [Ferreira et al. \(2017\)](#), on the other hand, discovered that being proactive didn't appear to significantly affect one's entrepreneurship intention. Farmers who are proactive are more likely to want to start their own businesses.

Based on the above premises, we hypothesize:

*H3.* Proactiveness is positively associated with EI.

The Proposed model of the study is shown in [Figure 1](#).

## **3. Research methods**

### *3.1 Design, population, sample and data collection*

This research included a quantitative design. Registered progressive farmers of Kashmir Valley (India) made up the study's population. Specifically, progressive farmers were chosen because they are innovative and adaptive to novel ways and new techniques in order to keep

pace with the dynamic environment. First, the list of registered progressive farmers was obtained from different KVKs (*Krishi Vigyan Kendras*), Sher-I-Kashmir University of Science and Technology (SKUAST), Srinagar, Kashmir, and the Directorate of Agriculture, Kashmir. Then, the respondents were chosen by random sampling. The data was collected from March to July 2022. 250 progressive farmers belonging to all 10 districts of Kashmir were approached, out of which 213 were retrieved yielding a response rate of roughly 85.2%. 10 of the received questionnaires were found to have inconclusive entries after closer scrutiny; hence they were not included in the data analysis.

3.2 Profile of respondents

Table 1 represents the demographic characteristics of residents who have been part of our study. The gender characteristics of 203 respondents are unevenly distributed (11.33% female; 86.66% male). The majority of the progressive farmers among respondents are residing in rural areas (84.73%) in comparison to urban localities 31(15.27%). Most respondents were 31–40 and 41–50 years old (24.6 and 35%, respectively). The progressive farmers of Kashmir primarily have their self-owned 80.78% farms. Also a significant number, i.e. 19.21% are carrying out farming activities on their family-based farms. Regarding marital status, the married respondents were larger than the unmarried respondents (13.79% Unmarried; 86.20% married). Most of the respondents in the sample (43.8%) hold a high school degree. Around 65% of the respondents have a monthly income between 15,000–34,000 Indian Rupees. Table 1 reflects the profile of respondents.

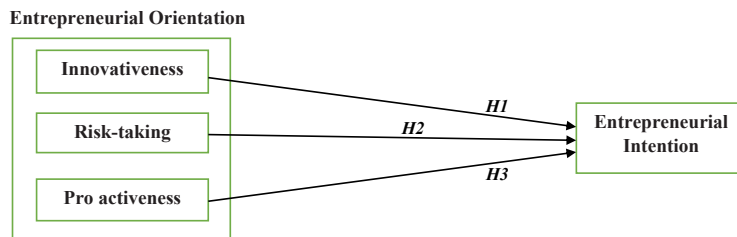


Figure 1. Proposed model

Demographic	Frequency (%)	Demographic	Frequency (%)
<i>Gender</i>		<i>Marital Status</i>	
Female	23 (11.33%)	Unmarried	28 (13.79%)
Male	180 (88.66%)	Married	175 (86.20%)
<i>Age</i>		<i>Farm income</i>	
20–30	19 (9.4%)	Less than 15,000	33 (16.3%)
31–40	50 (24.6%)	15,000–24,000	62 (30.5%)
41–50	71 (35%)	25,000–34,000	70 (34.5%)
51–60	37 (18.2%)	35,000–44,000	28 (13.8%)
61 or above	26 (12.8%)	45,000 and above	10 (4.9%)
<i>Education</i>		<i>Type of farm</i>	
No Schooling	19 (9.3%)	Family Based	39 (19.21%)
Less than High School	67 (33%)	Self-Owned	164 (80.78%)
High School	71 (34.98%)	<i>Place of residence</i>	
College	31 (15.27%)	Rural	172 (84.73%)
University	15 (7.39%)	Urban	31 (15.27%)

Table 1. Respondents' profile (n = 203)



### 3.3 Research instrument

The questionnaire employed in this study comprised 14 items adapted from previous research (Table 2). A 5 Point Likert scale, with 1 denoting “strongly disagree” and 5 denoting “strongly agree,” was used to evaluate each item. Prior to wide dissemination, the questionnaire was pilot-tested. As a result, feedback from participants was gathered, and changes were made to the questionnaire to make it better.

### 3.4 Models used

In the current study, the hypotheses are tested using partial least squares structural equation modelling (PLS-SEM). PLS-SEM is the best approach in our study instead of covariance based structural equation modelling (CB-SEM) because our study is exploratory and the sample size is relatively low (Hair *et al.*, 2011). Furthermore, PLS-SEM becomes a viable option when predictive accuracy is crucial and the sample size is small (Hwang *et al.*, 2010; Wong, 2010; Esposito Vinzi *et al.*, 2010). For PLS-SEM, the goodness of fit (GoF) has been devised as an overall measure of model fit. However, because the GoF cannot discriminate between valid and invalid models and because its relevance is confined to certain model settings (Hair *et al.*, 2017) we have not incorporated GoF. The questionnaire of our study consisted of 14 parameters, which indicates that a 140-sample size is sufficient (Mueller, 1999); likewise, 203 samples are an appropriate sample size (Bagozzi and Yi, 2012) for this study when using SEM.

PLS-SEM is carried out in two steps (Chin, 2010); the first is the evaluation of the measurement model, followed by the structural analysis (Hair *et al.*, 2019). Establishing and assessing the estimating models connected to the structural model is the key stage of this PLS-SEM component. This stage looks at the validity, reliability and connection between the variables and the observable items that are linked to them (Hair *et al.*, 2019). This process also

Construct	Items	Source/s
Innovativeness	(INO1) <i>I actively introduce improvements and innovations on my farm</i> (INO2) <i>The operational activities on my farm are creative</i> (INO3) <i>I seek out new ways to do things on my farm</i>	Hughes and Morgan (2007)
Risk-taking	(Risk1) <i>I would keep my current varieties on the farm rather than substituting them with others that I do not know</i> (Risk2) <i>I prefer avoiding investments in my farm if I do not know the benefits that I will get</i> (Risk3) <i>I do not want to expand my farm activities because I do not want to incur more costs</i> (Risk4) <i>If someone suggests including more/new varieties on my farm, I will take the risks for a chance for higher profits</i>	Krauss <i>et al.</i> (2005), Lai <i>et al.</i> (2017a, b)
Proactiveness	(ProAct1) <i>I always try to take the initiative in every situation (e.g. against competitors, in projects when working with others)</i> (ProAct2) <i>I excel at identifying opportunities</i> (ProAct3) <i>I initiate actions to which other farmers respond</i>	Hughes and Morgan (2007)
Entrepreneurial Intention	(Inten1) <i>I intend to start a new business activity or project in the next three years (i.e. trading, processing)</i> (Inten2) <i>I intend to include new technologies to increase the yield of my farm production in the next three years</i> (Inten3) <i>I intend to expand the contacts with other actors in my value chain in the next three years</i> (Inten4) <i>I intend to use credit and savings to expand my farm production in the next three years</i>	George <i>et al.</i> (2015)

**Table 2.**  
Factors and their constituents

verifies the validity and fit of the scales' factorial patterns that are speculative or theoretical in the model being studied.

#### 4. Results

##### 4.1 Reliability and validity

Four constructs namely innovativeness, proactiveness, risk-taking and EI, were included in the measurement model for this study. Hair *et al.* (2019). States that while considering the model's reliability, each item's acceptable loading on its associated latent variable (LV) must be more than 0.7. Similarly, if the value is less than 0.4, the item should be deleted, and if the loading of 0.4–0.7 of items raises composite reliability (CR) and average variance extracted (AVE) over the threshold, it should also be removed (Hair *et al.*, 2019). In the first step, demonstrated in Table 3, three items of Innovativeness, three items of proactiveness, four items of risk-taking and four items of EI, show acceptable loadings, which indicates acceptable reliability.

The validity and reliability of the model were assessed using the AVE and CR (Chin, 2010). Cronbach's alpha is another method that may be used to assess the model's reliability. Its value typically ranges from 0 to 1. As the alpha value gets closer to 1.0, the internal consistency of the data points on a scale increases. Table 4 demonstrates the values of alpha in this study are above 0.7 which is deemed to be pretty excellent according to the thumb rule (George and Mallery, 2003). Construct reliability is assessed by using the CR coefficient (Kock, 2015; Hair *et al.*, 2019). This CR coefficient must be greater than 0.7 for construct reliability to be authenticated (Hair *et al.*, 2019). Table 4 displays the CR values computed for the present study. As shown in Table 4, the CR coefficient for each construct is above 0.9, which reflects the measuring model's acceptable reliability. For convergent validity to be acceptable, AVE must be greater than 0.5. As shown in Table 4, the AVE in the current study is greater than 0.5, which is regarded as acceptable.

By contrasting each LV square root of AVE with those of the other LVs in the model, discriminant validity may be assessed. Each LV's square root of AVE is supposed to be

Factor items	Loadings
<i>Innovativeness</i>	
INO1	0.90
INO2	0.86
INO3	0.87
<i>Proactiveness</i>	
ProAct1	0.88
ProAct2	0.86
ProAct3	0.88
<i>Risk Taking</i>	
Risk1	0.75
Risk2	0.81
Risk3	0.73
Risk4	0.79
<i>Entrepreneurial Intention</i>	
Inten1	0.83
Inten2	0.84
Inten3	0.84
Inten4	0.87

**Table 3.**  
Factor loadings



higher than its strongest correlations with other LVs in the model (Chin, 2010; Hair *et al.*, 2019). The results presented in Table 5 demonstrate that the square roots of each LV's AVE are more than the high correlations between that LV and other LVs in the measuring model.

4.2 Structural model assessment

The significance of path coefficients and R-square ( $R^2$ ) tests are necessary for evaluating the structural model (Chin, 2010; Hair *et al.*, 2019). In this study,  $R^2$  for EI is 0.72 shown in Table 6. For each proposed association (hypothesis) in the model, the path coefficients and corresponding  $p$ -values were calculated.

4.3 Hypothesis testing

The hypothesis was carried out by path analysis with the aid of PLS-SEM. The evaluation of the structural model is PLS-SEM's second step. The findings of the hypothesis analysis are shown in Table 7 and Figure 2.

Hypothesis H1 is supported, which implies that innovativeness ( $\beta = 0.21$ ,  $p = 0.01$ ) has a positive influence on the EI of progressive farmers. H2 is also supported, which implies that risk-taking ( $\beta = 0.24$ ,  $p = 0.00$ ) has a positive influence on the EI of progressive farmers. H3 is supported, implying that proactiveness ( $\beta = 0.46$ ,  $p = 0.00$ ) positively influences the EI of progressive farmers.

Construct	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Entrepreneurial Intention	0.87	0.91	0.72
Innovativeness	0.85	0.91	0.77
Proactiveness	0.84	0.91	0.76
Risk Taking	0.77	0.85	0.59

Table 4. Results of construct reliability and validity

	Entrepreneurial intention	Innovativeness	Proactiveness	Risk taking
Entrepreneurial Intention	0.85			
Innovativeness	0.74	0.88		
Proactiveness	0.82	0.78	0.87	
Risk Taking	0.76	0.70	0.79	0.77

Table 5. Results of discriminant validity

	R square	R square adjusted
Entrepreneurial Intention	0.72	0.716

Table 6. Evaluation of structural model

Hypotheses	Quotient	SD	t-value	p-values	Results
Innovativeness → Entrepreneurial Intention	0.21	0.08	2.71	0.01	Supported
Risk Taking → Entrepreneurial Intention	0.24	0.07	3.37	0.00	Supported
Proactiveness → Entrepreneurial Intention	0.46	0.08	5.60	0.00	Supported

Table 7. Results of path relationships

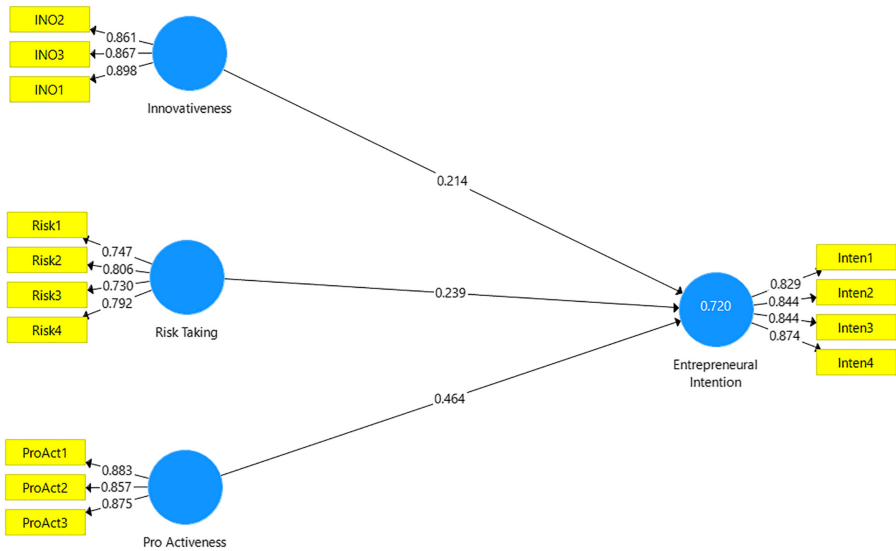


Figure 2.  
Path analysis

## 5. Discussion

This study examined the significant impact of EO measurements on progressive farmer's entrepreneurial intention.

This study's results accept H1, which further demonstrates that innovativeness has a positive influence on entrepreneurship intention among progressive farmers. These findings are consistent with those of (Tu *et al.*, 2021; Syed *et al.*, 2020; Law and Breznik, 2017; Wathanakom *et al.*, 2020).

Entrepreneurship is the purposeful advocacy of change and the grasping of opportunities, not just a personality characteristic or way of thinking. Today's entrepreneurs have a different perspective even on small issues than other others. They thus start to act before others and promptly. In the agro-entrepreneurship arena, the sector is also assessed to see if it can fulfil demand. A progressive farmer is more inclined to explore crop varieties and methods if they are innovative. The creation of better ideas and production processes is innovation. Agricultural Universities and governments must encourage farmers to be innovative and creative. Additionally, institutions that support an atmosphere conducive to innovation and agro-progress are concerned about the ecosystem of agri-entrepreneurship.

H2 is supported by the findings of this study, which reveal that risk-taking that has a positive impact on EI. This is in line with the findings of (Xhoxhi *et al.*, 2022; Yoopetch, 2021; Zhang *et al.*, 2015). This finding stands in contrast to previous findings from the rural Philippines and rural Uganda by Lai *et al.* (2017a, b) and Barzola Iza *et al.* (2019), respectively, who both found that taking risks does not reflect a relevant component of EO empirically.

A successful entrepreneur thinks creatively and takes measured risks while launching a new, innovative method or product in the market. This also entails the consequences of uncertainty. Therefore, to be successful and profit the most, a progressive farmer is driven to take risks. Entrepreneurs are more prone to take risks and work in uncertain situations. Entrepreneurs prefer to take calculated risks as their ambition for success rises, which drives them to act quickly in challenging situations with limited knowledge. Risk-taking is what drives entrepreneurs to thrive and generate the biggest potential return. It demonstrates that farmers frequently take risks in order to benefit from financial gains and professional opportunities as well as the success of their innovative and creative production methods.

H3 is supported by this study's findings, which also implies that proactiveness has a positive impact on EI and is already in agreement with studies (Koe, 2016; Hussain and Malik, 2018; Tu *et al.*, 2021; Kumar and Shukla, 2022).

Proactiveness means seizing and utilizing economic possibilities while also forecasting and accomplishing market demands before they are wasted or carried out by possible rivals. Instead of just becoming fresh copies of those who came before them, successful entrepreneurs have the resources required for a first-mover advantage in the market to obtain a competitive edge and become industry leaders. Their ability to grab new business possibilities, examine potential hurdles and be open to new ideas should be strengthened by their intellect, willingness and capacity to do so.

## 6. Conclusion

The article tries to explore how innovativeness, proactiveness and risk-taking in making the gestalt construct of EO influence the EI of progressive farmers in Kashmir Valley. Progressive farmers are widely recognized as creative agents of change in promoting and enhancing an entrepreneurial mind-set. They ought to adopt a more entrepreneurial vision and look for the required managerial and technical assistance services to boost productivity and stay competitive in the long run. However, existing knowledge and understanding of progressive farmers' EO are insufficient and inadequate to make efficient and productive interventions; therefore, to effectively take advantage of expanding agribusiness prospects, present and potential farmers need to be encouraged and supported.

Progressiveness and EI are linked to progressive farmers' proactiveness, innovativeness and risk-taking attitude. The study revealed that the proactiveness, innovativeness and risk-taking attitude of progressive farmers does have an impact on EI. Thus, novel and innovative ways of farming ought to be promoted among farmers to enhance their knowledge, creativity and alignment with the EI. This empirical work could therefore be expanded to other diversified agro-platforms like farm tourism, horticulture, permaculture, organic farming, residual farming, etc. that have the potential to have a substantial impact on society as a whole. In this context, developing and promoting entrepreneurial skills is critical for promoting agribusiness among marginal, small-scale, medium-scale and progressive farmers, or, in other words, motivating them to grab the expanding prospects in the agribusiness industry.

## 7. Research implications

This article highlights that innovativeness, proactiveness and risk-taking all positively influence the EI of progressive farmers. These farmers are aspiring farm entrepreneurs who can capitalize on these EO dimensions by focussing on novel approaches and improving their current operational approaches to enter agribusiness and stay relevant in the dynamic business world.

Since farmers are evolving as emergent entrepreneurial subjects, the government ought to highlight and boost agribusiness entrepreneurship, especially for the reduction of unemployment and motivating youth in the agribusiness sector. The government need to induce entrepreneurial behaviour among farmers. Entrepreneurial training can be imparted to the farming community and students who are from farming backgrounds via KVKs, universities and the agricultural department to foster an entrepreneurial spirit among farmers. Although the government of India has already started many schemes that focus on boosting the farming sector on entrepreneurial lines, *e.g. Make in India, Kissan Smridhi Yojana and Krishi Vikas Yojana*, It should now take the lead in creating a solid structure and environment to channel the EI's influencing EO traits among farmers, ensuring that the entrepreneurial mind-set is capitalized in both rural and urban areas. The government

can collaborate with other stakeholders, like universities, NGOs, etc., in expanding the opportunities for agricultural entrepreneurship. A strong strategy needs to be implemented based on two guiding principles: converting the farmer into an agricultural entrepreneur and making agriculture a lucrative and profitable business. This can ultimately create a feasible environment and consequently develop farm entrepreneurs.

## 8. Limitations and research recommendations

This article provides practical implications for farmers and government agencies. However, it also has several limitations that subsequent researchers might address to enhance this field of study. This study's survey approach for gathering data may have introduced social desirability biases into the results. By using both qualitative and quantitative techniques of data collection, future research might lessen this bias. Furthermore, triangulation methods and mixed-method approaches can be valuable to overcome these constraints. The study revealed that progressive farmers' traits of innovation, proactiveness and risk-taking influence EI. Studies need to be carried out to know how the EI of progressivism can be harnessed positively. Our study employed a small sample size of 203 people covering a limited geographic region, i.e. the Kashmir Valley. To generalize the findings, in the future, the researcher can increase the sample size and incorporate a larger geographic region for the study. Future studies may also examine additional factors, like creativity, that could affect the EI to start a business.

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