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Analysis of the factors affecting probable failure of local entrepreneurs

Forecasting approach of greenhouses in rural areas of Jiroft, Iran

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Abstract

Purpose – This study aims to investigate and analyze the factors affecting the probable failure of rural entrepreneurs so that the most important factors responsible for failure in the business of small and local entrepreneurs are identified.

Design/methodology/approach – The present survey was conducted through the descriptive-analytical method by using a researcher-made questionnaire. The statistical population of the study included 1,641 greenhouse owner entrepreneurs in five rural communities. To clarify the key criteria affecting probable failure of greenhouse businesses, LISREL 8.8 computer software was used and the effects of selected indices on the process of probable failure of entrepreneurs were assessed using stepwise regression in the SPSS computer application environment.

Findings – According to the results, individual and managerial skills factors, deterrent financial and legal issues, social barriers and infrastructural issues investigated in this study were of the first to the fourth priorities in clarifying factors affecting probable failure of greenhouse businesses. Considering the intragroup relations in these factors, it could be said that individual and managerial skills factors and infrastructural issues had the highest correlation coefficient which could be attributed to individual and management weaknesses of entrepreneurs in understanding infrastructural issues as the most important parameters to be considered in starting businesses.

Originality/value – So far, few studies analyzed the failure of rural entrepreneurs and evaluated the probable factors affecting it. Thus, the present study is among the earliest instances in the field and its results could be of great benefit to domestic entrepreneurs and similar cases in other countries.

Keywords Jiroft, Local entrepreneurs, Probable failure, Greenhouse businesses, Forecasting

Paper type Research paper

1. Introduction

The impact of entrepreneurship on the socioeconomic development of rural regions is so transparent that several scholars call this era the age of entrepreneurship (Eschker *et al.*, 2017). According to modern development theories, entrepreneurship could be viewed from

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the point of view of both instruments and solutions (Markley and Barkley, 2003). The solution side refers to creating the potential in local communities so that the structure of the economy in local communities is reorganized and restructured to help it become a dynamic and competitive economy (Oser and Volery, 2012). From the instrumental perspective, the direction of meritocracy and local entrepreneurs' potentials is leading toward individual goals, social inclusion and employment (Elijah-esema and Stefanovic, 2014). However, it should be noted that not all businesses established by entrepreneurs are expected to succeed. Despite the presence of innovative and creative individuals, businesses may face the problem of institutionalization in the society; various barriers of different types such as lack of legal knowledge, proper planning in projects, trust in plagiarism of ideas, common innovative prospect, access to authentic information and supporting culture along with the tension, dissatisfaction and management isolation induce probable failures of local businesses (Faraji-sabokbar *et al.*, 2011). It is also worth mentioning that the factors affecting this phenomenon vary over different periods in different societies based on their economic, social and cultural conditions. Thus, the chances of survival for the business are diminished. These factors are sometimes neglected particularly in underdeveloped societies and this necessitates an autopsy for these obstacles. Naghvi (2011) believed that unstable political and economic environment coupled with complex taxes and weak regulations and disorder are the most important barriers for local entrepreneurs in these countries. For instance, Iran is a developing country with a semi-traditional agriculture which on the one hand needs achievements of local businesses in the fields of employment, development, innovation and competition and on the other hand, considering the improper ground for businesses, experiences a high rate of failure in agriculture-related businesses and a low rate of cooperation and interaction of farmers particularly in case of new businesses both implicitly and explicitly (Naghvi, 2011). It is disappointing to say that many of the entrepreneurs starting a business are then isolated for known and unknown reasons and this provides the ground for their failure. Nonetheless, they have no systematic plan to escape this failure. Thus, investigating the negative events happening to rural entrepreneurs that induce their failure necessitates and justifies scrutinizing this process. It may be impossible to prevent entrepreneurs' failure; yet, it would at least be possible to provide failed entrepreneurs with the opportunity to improve and restart their business and avoid probable future failures. This is not happening unless the outcomes of such failures in rural entrepreneurs' lives are identified so that the negative effects are relieved and they could return to the business environment via systematic planning (Rasekhi *et al.*, 2017). In this regard, Jiroft, a town in southeast of Kerman Province in Iran could be considered a good example for it has more than 230,000 hectares of fertile farmland in rural regions and the countryside along with more than 40 per cent of fruit and vegetable greenhouses of the country and plays a great role in employment in the region (Sharifi *et al.*, 2011); yet its farmers face excessive distresses that could finally end in the failure of their businesses as local entrepreneurs. Nevertheless, despite such intensive necessity to investigate the factors affecting unsuccessful local and rural entrepreneurs' businesses, no systematic study has been conducted in Iran in this field. Therefore, the present study aims to investigate and identify the most important factors and reasons for the probable failure of local entrepreneurs in Jiroft.

The results of this study can be a good roadmap for future local entrepreneurs, government executives and policymakers to support local entrepreneurs and improve their failure areas.

2. Theoretical issues and related literature

To revise economic policies particularly in rural areas, one of the strategies tested in the world is to give special consideration to entrepreneurship given the title "reorganizing the structure of economy in rural regions" in development and renovation texts (Eftekhari and Sojasi-Qeidari, 2010). Therefore, nowadays, development of villages has a broader link to the concept of entrepreneurship compared with the past, and agriculture is a basic ingredient of national and local economy that can facilitate development. Development of agriculture provides the ground for development of other sectors without which factors and inputs necessary for activity of other economic sectors could not be accessed (Poorrajab, 2010). A closer look at developmental trend of agriculture in underdeveloped countries shows how significantly entrepreneurs contribute in providing employment. Nevertheless, only a few entrepreneurship activities have become operational and most of them have failed. This reveals the complexity of the factors affecting entrepreneurs' success (Kolagar and Aghaei, 2014).

According to definitions of bankruptcy, when the efficiency rate of investments is lower than the ones common in similar investments, bankruptcy of an economic activity occurs. In this regard, various criteria such as insufficient revenue to cover expenses or low level of average investment efficiency compared with investment costs are used; yet, determining the exact reason or reasons for each single case of bankruptcy is not an easy task to accomplish. In many cases, however, numerous reasons induce the bankruptcy phenomenon together (Deakin, 1972). Generally speaking, findings of researchers in their studies have divided the reasons behind bankruptcy into two groups: the intra and extra organizational reasons. The most important extra-organizational reasons for bankruptcy are:

- *Characteristics of the economic system*: Unstable and developing economic systems are at further risk of bankruptcy compared with the stable ones. Entrepreneurs as executive managers have to predict changes in the economic structure so that its probable outcomes are estimated.
- *Competition*: It will increase the risk of bankruptcy as well for in competitive environments, there is no chance for compensation. Although one of the reasons for bankruptcy is competition, effective management is in contrast to it.
- *Rapid technological advancement*: It is also a significant factor inducing bankruptcy because it outdates the process of production and the products. In case entrepreneurs fail to use modern methods and identify consumers' demands swiftly, they will experience failure.
- *Business fluctuations*: One of the modern theories – an efficient market – focused on rational investors. According to it, investors rationally manage their investment portfolio, rationally respond to constantly changing information and make rational changes to newly acquired information. However, the prospect theory has proven that irrational investor decisions play an important role in the investment process. An assessment of irrationality of investors is important for governments, fund managers and investors, eventually for all participants of financial market (Bikas and Saponaitė, 2018). So, factors such as reduction in price of goods or sudden increase in prices and reduction in sales along with other similar factors rise the risk of bankruptcy.

On the other hand, intra-organizational reasons for bankruptcy of businesses are the ones that could be prevented through taking certain measures. Most of these factors are the result of bad decisions and their responsibility is directly on a manager. These factors are:

- *Management inefficiency*: Inefficiency of entrepreneur executives is among the most important reasons for bankruptcy, and success or failure is directly affected by executive measures and decisions. Lack of education and experience affects management ability and innovation in the field of competition and technology.
- *Insufficient sale*: This could be caused by inappropriate location, inefficient marketing department, insignificant measures to improve sales and offering low quality services and products. In other words, an entrepreneur fails to make enough income to continue his/her activities.
- *Improper pricing*: Considering manufacturing costs, a product sold for extremely low prices will end in very low profit or even loss on selling the manufactured product (Newton, 2009).

Approaches, factors and the hypotheses discussed in management and business schools on entrepreneurial failure define it differently. These definitions could be typologically divided into three categories; the first category considers failure as the halt and termination of a business. According to this definition, any business terminating its business activities is called failed. However, this definition is of several shortcomings the first and the most important of which is that it considers all business activities terminated by an entrepreneur to be failed; yet, reasons such as personal and executive problems and even the termination of a mission after reaching business goals could be found behind termination of a business (Watson and Everett, 1993). The second definition of failure is more precise, in this approach, failure is taken as the commercial failure. A failed business in this regard is the one that has failed to reach its goals and has gone bankrupt. This, as a result, ends in the termination of activities and the dissolution of the business (Singh *et al.*, 2007). Shepherd (2003) believes that entrepreneurial failure occurs as the revenues of an organization excessively decrease or its costs excessively increase, the business goes bankrupt and current business managers and proprietors could not keep on its activities. Shepherd (2003) on the other hand defines project failure as termination of a project due to extremely low and unacceptable performance diagnosed operationally by key suppliers of resources for the project (Mohammadi-Eliasi and Notash, 2011). The third and final approach, however, does not necessarily consider failure as dissolution of a business. In other words, failure of a business does not merely refer to its bankruptcy or dissolution of an investment. In this approach, survival of a business or the decision to terminate an investment depends on personal view of the entrepreneur and his concept of the performance of the investment unit (Ucbasaran *et al.*, 2010).

Therefore, considering the significance of the issue of business failures, numerous studies have been conducted with a positivist paradigm and have broadly discussed failure forecasting or factors of success in entrepreneurial businesses (Khelil, 2016).

Arasti and Gholami (2010) emphasized that inaccurate estimation of costs and revenues, neglecting important and effective changes in business and insufficient market research along with lack of knowledge on production and service processes at the establishment level and before that cause serious problems at the beginning and other upcoming levels. Disregarding relevant groups and networks such as different associations and syndicates coupled with other problems accelerate the business failure.

The narrative study by Mohammadi-Eliasi and Notash (2011) was conducted via in-depth and purposeful interviews through which biographies of 10 veteran entrepreneurs who had experienced failures in their lives were compiled and were categorized the reasons for their failures in seven categories: lack of entrepreneurship knowledge, experience and

skills, marketing and sale challenges, problems of improper partnerships, inflexibility of methods, financial problems, attachment to the wrong path and inappropriate business environments. The distinguishing property of their study was to identify the role of improper partnerships and weak flexibility in the failure of businesses.

Quadir and Jahur (2011) revealed that the stable factor with an average score of 4.60 had the largest impact on failure of small and medium-sized enterprises (SMEs). This factor includes indices such as insufficient funds, inaccessible raw materials, problem with finding work force and lack of marketing strategy.

Shafique *et al.* (2012) classify the most important reasons behind business success or failure, including financial management and management accounts, marketing management, production and operation management and human resource management. Proper education, knowledge and facilitation of information and institutions have to be conducted regularly to activate these firms so that the rate of failure decreases.

Findings of Hoyos-Ruperto *et al.* (2013) revealed that activities of entrepreneurs in Puerto Rico lack the efficient networks and are inadequate for overcoming the institutional structure. It is, therefore, recommended that a more integrated entrepreneurship system be designed so that entrepreneurs could use the networks to make themselves known better. Furthermore, their findings showed that further studies must be conducted in the field of organizational and individual interactions to help develop the entrepreneurship environment.

Tsai *et al.* (2016) reveal several interesting results. First, perceived capability positively affects entrepreneurial intention through perceived opportunity; this indirect linkage is stronger in China than in Taiwan. Second, compared with the fear of failure, perceived opportunity has a stronger mediating effect in linking perceived capability and entrepreneurial intention. This difference is more remarkable in China than in Taiwan. Third, gender partially moderates the mediating effect of perceived opportunity. Specifically, perceived capability has a stronger indirect effect on entrepreneurial intention through perceived opportunity among men than among women in Taiwan; however, the difference is not significant between men and women in China. In addition, age negatively affects perceived opportunity and entrepreneurial intention.

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Amankwah-Amoah *et al.* (2016) compile insights from the literature on entrepreneurial learning in light of past failures to illustrate how previous business experiences on new business start-ups with the help of a fuzzy model. The results show the impact of unique cultural and social characteristics (e.g. family and religious values and norms). But these factors can vary from community to community.

Pardo and Alfonso (2017) showed that the principal attributions of failure for Colombian entrepreneurs were financial and organizational issues, the external environment and marketing. Specific sub-issues included insufficient income generated to maintain the

business, lack of proper financing, problems with the control of the business, as well as legal and economic instability.

Rasekhi *et al.* (2017) demonstrated that low revenue, personal debt, loaning money, sudden drop in social status, decreased self-confidence, feeling of shame, the sense of depression, being scolded and feeling regret are the biggest problems faced by many entrepreneurs. Results from their regression analysis showed that variables of gender, financial status, entrepreneurship experience, employment to other businesses, taking entrepreneurship courses, culture of failure, optimism and self-confidence decrease failure risks for rural entrepreneurs.

Kollmann *et al.* (2017) show how fear of failure, as a barrier for emerging entrepreneurs, affects their performance. The perception of social barriers also creates fear of failure, which in turn has a negative impact on the evaluation and exploitation of opportunities.

Mergemeier *et al.* (2018) reveal that financing difficulties and especially certain personal characteristics impede venture creation. Furthermore, results show that constraints beyond a Nascent Entrepreneurship's (NES), own control are lethal for the continuance of the intention to create a new business.

Nikolić *et al.* (2019) examine factors influencing SMEs' failure as a function of its prevention and fast recovery after failure. Having in mind various factors identified by different researchers in their studies, the authors of this paper formed a basic hypothetical framework as well as a qualitative framework for evaluation of the most significant factors influencing SME failure and recovery. Using the structural equation model to derive results, the authors have found that all the analyzed factors except the factors related to private time activities of entrepreneurs/owners of SMEs have a statistically significant influence on SME success, with external non-individual factors having the greatest influence. Furthermore, the results indicate that the level of recovery, business life cycle stage and the sector of a failed SME impact on the ranking of the factors leading to SME failure. The study points to the necessity of improving the conditions under which SMEs operate, primarily by removing the obstacles that hinder growth and development of SMEs as well as by developing the appropriate system of support for entrepreneurs. In addition, having a clear vision of the factors of failure can help SMEs to become more resistant to the adverse effects of these factors and deal with them more effectively.

A closer look at resources in this field represents the fact that most of the studies have investigated failed entrepreneurs and not many have scrutinized the probable failure for the entrepreneurs who have not yet failed. On the other hand, the scale of the studies has mostly been focused on national or industrial entrepreneurs and local and small-sized entrepreneurs have been neglected. Thus, considering the factors affecting failure of local entrepreneurs investigated in the present study it could be stated that although local entrepreneurs are the forerunners of a revolution causing economic renovation in a broad scale (Welter and Smallbone, 2011); various factors and inappropriate conditions may end in their failure. This leads researchers to further interpret their limitations from various perspectives, some of which need an interaction of external factors such as losing entrepreneurial opportunities and local view toward entrepreneurship with individual factors such as social merits (Thompson *et al.*, 2000), effectiveness and its impact on successful or unsuccessful entrepreneurial businesses (Hoyos-Ruperto *et al.*, 2013). Although national governments invest in initiatives aimed at encouraging rural entrepreneurship on the assumption that it contributes to competitiveness and employment (Kasabov, 2016) but factors may sometimes be caused by inappropriate conditions and legal and financial problems (Sadeghloo *et al.*, 2018). Unstable governmental policies and changes in these policies, lack of governmental support, complex regulations, inadequate regulations, unstable economy of the country and international sanctions on the one hand and lack of coordination between business partners and high tax rates could increase the

fear of low profit and discourage entrepreneurs. Lack of tax exemption plans, weak legal support from businesses and the problems of getting loans from banks and repaying their interests end in bankruptcy of businesses and could be mentioned as the reasons for exit (Noori *et al.*, 2016). In this regard, two hypotheses could be developed on probable failure of local entrepreneurs in their attempt to expand greenhouse businesses in rural regions:

H1. There is a significant relationship between lack of a business plan designed by the entrepreneur and legal issues and regulations in the probable failure of local entrepreneurs.

Having a business plan before starting a business is to accept and welcome calculated risks. Rural entrepreneurs are always unwilling to take risks and invest their capitals in businesses with a dim prospect for the original investment and its profits. Entrepreneurs mostly have to conduct financial analyses to get better efficiency despite the risk. However, in a conventional market in which market agents has access to information, high level of efficiency comes with a high level of risk and this necessitates the existence of a business plan (Sadeghloo *et al.*, 2018). The proposed structure for business plan development, based on any approach or guideline, should be flexible, with slight variations in different conditions and updated to suit business requirements. However, most business failures are due to lack of flexibility, roadmap and legal and bureaucratic processes (Amoah, 2019).

H2. There is a significant relationship between issues related to the intervention of partners and its relevant factors, financial and legal issues and level of intervention of partners with the probable failure of entrepreneurs.

In conceptualizing business failure, researchers have surprisingly neglected the role of economic partnerships. This is often due to the lack of attention to the emerging culture of entrepreneurship, namely economic interactions between individuals and doing economic partnerships (Wyrwich *et al.*, 2018). Failures are sometimes the outcome of social and value issues so that they both directly affect failure of businesses and, via other factors, indirectly affect it which is of a great diversity in different societies with different cultures (Pardo and Alfonso, 2017). What should be noticed in understanding the difference in behavior is the effect factors such as beliefs, norms, rewards, national and personal ideals and religious schools. Although entrepreneurs may have beliefs and values different from common people in the society, entrepreneurship culture is still influenced greatly by dominant culture in the society and could provide the ground for the success or failure of businesses (Saljooghi, 2009). However, the negative effect of fear of failure on entry is moderated by the cultural practices of institutional collectivism and uncertainty avoidance (Wennberg *et al.*, 2013). In societies that have a negative attitude toward entrepreneurial activities, the tendency to take risks from entrepreneurship is very weak. Because people are afraid of the lack of social and even legal protection of their business. Because in local communities, it is difficult to accept new business by any public or official. Therefore, psychological theories are used to understand the social problems of entrepreneurs and the fear of failure in a local community (Spigel, 2017). In regard to social issues and their role in probable failure of local businesses in development of greenhouse businesses, the following hypothesis is developed:

H3. There is no significant relationship between level of education of individuals and social barriers of entrepreneurs' success in their businesses and their probable failures.

Entrepreneurship education is growing worldwide, but key educational issues remain. What are we talking about when we talk about entrepreneurship education? What are we really doing when we teach or educate people in entrepreneurship, in terms of the nature and the impact of our interventions? What do we know about the appropriateness, the relevancy, the coherency, the social usefulness and the efficiency of our initiatives and practices in entrepreneurship education (Fayolle, 2013)? In other words, realities like values governing the society like education could be the determining factor for success or bankruptcy of entrepreneurs. Thus, a weakness in cognitive and motivational learning can lead to the failure of a business (Liu *et al.*, 2019). Failure sometimes come from infrastructural barriers and issues like lack of proper infrastructures such as telecommunication and network problems, and technical infrastructures are among the indices that could be a key to unsuccessful development of businesses and probable failure of their entrepreneurs. However, business failure due to infrastructure barriers is an important issue in the twenty-first century in the field of global commerce (Cui *et al.*, 2019). Governmental support for economic growth through expanding infrastructures, allowing subsidies, bank loans and agriculture and technology parks along with anything that encourages businesses coupled with access to public facilities and services such as decent roads, electricity, communication and eliminating bureaucracy to access the facilities mentioned encourage and attract good entrepreneurs. Otherwise, entrepreneurs face some unsurmountable challenges.

In this regard, two hypotheses are developed on the probable failure of local entrepreneurs in developing greenhouse businesses in rural regions:

H4. Infrastructural issues such as lack of storehouses for products and local markets play a significant role in decreased sale of greenhouse products and even sometimes end in their failure.

H5. There is a relationship between lack of access to internet facilities, weak marketing of farmers and technical and infrastructural barriers ending in probable failure of entrepreneurs.

In case of individual and executive skills and their relationship with failure of businesses and also from a psychological point of view, it should be noted that an individual must possess various characteristics and aptitudes like imagination, assertion, practicality, perseverance, attachment, scrutiny, controlling professional fate, making income and distributing wealth for even when all these are available success will not come unless the individual gains management insights in case of crises (Dominguinhos *et al.*, 2008). An individual's power of management in critical situations is to see everything before they occur. Drucker (1999) in his book *Management challenges for the 21st century* explains a skill needed for a good manager and leader (Drucker, 1999). This skill necessary for the anarchy time is foresight. Although age and gender are not the cause of failure, sometimes in developing societies, it can be a deterrent to issues such as tolerating ambiguity and risk taking, Mental and psychological issues, including a lack of a sense of continuity (Simmons *et al.*, 2019). Because cultural, social and gender constraints in some societies impede women's growth in innovation. Also, being young and inexperienced or old or impulsive can pave the way for business failure.

In regard to personal and executive issues, two hypotheses are developed on the link they have with probable failure of local entrepreneurs in developing greenhouse businesses:

H6. The link between gender and individual-executive barriers in developing businesses has a significant role in probable failures of rural entrepreneurs.

H7. There is a significant relationship between an individual's age and individual-executive barriers particularly the issue of weak foresight skills and preference of short-term purposes with probable failure of entrepreneurs.

3. The methodology of the study

The present study is a descriptive analytical study whose data were collected through library and field studies and a researcher-made questionnaire. Accordingly, a list of criteria and indices were initially made after reviewing the related literature. Then, considering the conditions in the region under study, the indices were adjusted so that four criteria of social barriers, inadequate infrastructures, financial and legal problems and individual and executive weaknesses were extracted along with 45 subcategories introduced in Table I.

The region under study is the city of Jiroft in Kerman Province, known widely as a center for greenhouse farming. The statistical population of the study included all greenhouse business owners who may have had a depression in their income or even bankruptcy in one of the stages of their lives. All these 1,641 local entrepreneurs owned greenhouses in Jiroft region and its five rural centers. To calculate the size of the sample, Cochran formula was used with 0.8 per cent and the size was calculated to be 137 individuals. To increase the precision, the number of the sample was decided to be 140. Stratified sampling was used to reach the samples and filling out the questionnaires. Validity of the questionnaire was confirmed through views from 21 experts in the field of entrepreneurship and was imposed on the questionnaire. Reliability of the questionnaire on the other hand was calculated by Alpha Cronbach coefficient whose total value was 0.763. This proves a desirable reliability for a questionnaire. To clarify the key criteria effecting probable failure of greenhouse businesses, LISREL 8.8 computer software was used and the effects of selected indices on the process of probable failure of entrepreneurs were assessed using stepwise regression in SPSS computer application environment.

4. The findings

According to the findings of the study, 76.4 per cent of the respondents were male. 20.6 per cent of them were between 40 to 45 years of age and 33.3 per cent of them held high school diploma. Furthermore, almost 40 per cent of them had an area of 1 to 2 hectares under cultivation and their annual sale ranged between US$2,380 and US$11,900. Around 80 per cent of the respondents were new to the field and had not experienced a failure in business. Financial management of most of the businesses was personal and only 25 per cent of them acknowledged to have a business plan before starting their business and 20 per cent of them were members of cyber business groups or real related syndicates. In case of financial resources, 35 per cent of the respondents had loaned from friends or acquaintances, 21.40 per cent had received loans from public banks and 21.40 per cent had received financial fund from charity organizations. The remaining ones had started the business with their own funds. The highest share of non-financial resources, however, was for the family human resources due to their low costs.

Table II represents the average rank of factors affecting the probable failure of local entrepreneurs in developing the greenhouse businesses in the region under study. Accordingly, indices of lack of proper advertisement techniques and knowledge, insufficient technical knowledge in professional field, holding exhibitions and fairs to introduce products, lack of access to basic items like seeds, compost, etc. and production equipment, weak technical and engineering services, swift rotting of products and lack of guaranteed markets, decreased

Table I.
Variables, dimensions, indices and items of the research

Variable	Dimension	Index	Item
Probable bankruptcy of local entrepreneurs	Social barriers	Cooperative barriers	Q 1: Cliché beliefs as the basis for failure in the society; Q 2: the feeling of insecurity in the region; Q 3: low level of membership in groups and networks like associations and syndicates; Q 4: cultural birthplace of rural community as a barrier to cooperation
		Weak educational issues	Q 5: lack of proper advertisement techniques and knowledge; Q 6: Inadequate technical knowledge in the professional field; Q 7: lack of learning skills for activities related to greenhouse businesses; Q 8: holding exhibitions and fairs to introduce and promote consumption; Q 9: insufficient skilled workers in factories; Q 10: insufficient skill and educational plans
	Inadequate infrastructures	Weak infrastructures	Q 11: high prices of gas, electricity and water bills; Q 12: inefficient packaging, storage and preserving products; Q 13; lack of access to internet facilities to market products; Q 14: lack of access to basic items like seeds, compost, etc. and other agriculture equipment; Q 15: quick rotting of products and lack of guaranteed markets
		Weakness in technical issues	Q 16: weak access to modern technologies of producing standard greenhouse products; Q 17: low quality of basic items like seeds, compost, etc. Q 18: weak technical and engineering services; Q 19: presence of dealers in the market
	Preventive financial and legal barriers	Profitability challenges	Q 20: decreased price of products in recent years; Q 21: high and illogical wages for human resources and basic items; Q 22: lack of local markets in villages
		Barriers of job opportunities	Q 23: excessive subordination and lack of power to reject requests; Q 24: lack of interest in self-employment and activity; Q 25: lack of motivation and trying to reach new opportunities; Q 26: making hasty and swift decisions
		Economic risk	Q 27: unprofitability of agricultural activities; Q 28: uncertainty about stability of economy in the society; Q 29: elimination of opportunities and potentials of the society
		Preventive legal issues	Q 30: incompatible regulations; Q 31: time-consuming regulations of starting businesses; Q 32: weak supportive regulations for businesses; Q 33: issues and problems with getting a loan and repaying it
	Individual and executive skills	Individual barriers of business	Q 34: decreased entrepreneurship spirit in villagers; Q 35: decreased role of entrepreneurs in development and marketing; Q 36: individual skills and entrepreneurship motives; Q 37: elimination of credit and power in rural communities
		Executive barriers	Q 38: problems of marketing greenhouse products; Q 39: lack of foresight approach to compensate the lost chances; Q 40: having short-term goals
		Factors related to weak organization of businesses	Q 41: lack of proper market research and information issues; Q 42: selecting inappropriate promotion and sale methods; Q 43: unwillingness to select competitive strategies of market; Q 44: problems of inadequate partnership; Q 45: lack of interest in using proper sale channels

Sources: Arasti and Gholami (2010), Faraji-sabokbar *et al.* (2011); Mohammadi-Eliasi and Notash (2011); Eftekhari and Sojasi-Qeidari (2010); Rasekhi *et al.* (2017); Eschker *et al.* (2017)

Factors	Items	Average rank	SD	Coefficient of variation
Social barriers	Q 1	3.27	1.05	0.32
	Q 2	3.34	0.99	0.30
	Q 3	3.01	1.06	0.35
	Q 4	3.34	0.99	0.30
	Q 5	3.69	0.97	0.26
	Q 6	3.69	0.88	0.24
	Q 7	3.26	0.98	0.30
	Q 8	3.59	0.94	0.26
	Q 9	2.98	1.06	0.33
Inadequate infrastructures	Q 10	2.79	0.89	0.32
	Q 11	2.76	0.91	0.33
	Q 12	3.09	1.07	0.34
	Q 13	2.89	1.25	0.43
	Q 14	3.74	0.96	0.26
	Q 15	3.43	0.87	0.25
	Q 16	0.24	0.87	0.24
	Q 17	3.35	1.09	0.32
	Q 18	3.58	0.92	0.26
	Q 19	3.85	0.85	0.22
Preventive financial and legal barriers	Q 20	3.54	0.88	0.25
	Q 21	2.75	1.16	0.42
	Q 22	2.65	1.00	0.38
	Q 23	2.60	0.95	0.37
	Q 24	3.14	0.93	0.30
	Q 25	3.58	1.03	0.29
	Q 26	3.76	1.87	0.50
	Q 27	3.11	1.16	0.37
	Q 28	3.02	1.24	0.41
	Q 29	3.38	1.29	0.38
	Q 30	3.15	0.85	0.27
	Q 31	2.77	0.96	0.35
	Q 32	3.81	1.03	0.27
	Q 33	3.31	0.91	0.28
Individual and executive skills	Q 34	3.26	1.00	0.31
	Q 35	3.10	1.09	0.35
	Q 36	2.62	1.12	0.43
	Q 37	3.24	1.12	0.35
	Q 38	2.51	0.93	0.37
	Q 39	2.49	1.08	0.43
	Q 40	2.53	0.89	0.35
	Q 41	2.65	1.13	0.43
	Q 42	2.91	1.08	0.37
	Q 43	2.94	0.97	0.33
	Q 44	3.65	0.91	0.25
	Q 45	3.69	0.98	0.26

Source: Research findings of the study

Table II.
Prioritizing the factors affecting probable failure of local entrepreneurs

price of products over recent years, decreased motivation to find new opportunities, making hasty and emotional decisions, weak supportive regulations for businesses, improper partnership problems and not using proper distribution channels are the strongest factors causing discouragement and failure of businesses compared with other indices.

To describe the factors affecting probable failure of greenhouse owning rural entrepreneurs the distance of standard deviation from mean was used. In this method, parameters of mean and standard deviation of effective factors are ranked in four levels of weak, average, high and very high:

- A < Mean. St. d: A = weak;
- Mean. St. d < B < Mean: B = average;
- Mean < C < Mean + St. d: C = High; and
- Mean + St. d < D: D = Very high.

According to the findings represented in Table III, more than half (57.86 per cent) of entrepreneurs ranked the effect of mentioned factors on the failure of their businesses from average to very high, whereas the rate of irrelevant factors was only 9.29 per cent.

According to the theoretical framework and the methodology serving it, confirmatory factor analysis in LISREL 8.8 computer software was used to clarify the key criteria of the process of formation of the factors affecting the probable failure of greenhouse businesses. As it was mentioned earlier, overall, 46 measures or variables were considered in relation to 11 criteria (Table IV).

As it could be seen in the fitted model for analyzing factors affecting probable failure of local entrepreneurs in rural regions of Jiroft, standardized factor loads of items demonstrates that the measurement tool was of proper structural credit. Furthermore, results from coefficients of significance revealed that the *t-values* calculated for all variables under study were bigger than the numerical value 1.96 and thus the relationship between variables and related factors was significant.

Therefore, it could be concluded that individual and managerial skills factors, deterrent financial and legal issues, social barriers and infrastructural issues investigated in the study were of the first to the fourth priorities in clarifying factors affecting probable failure of greenhouse businesses. Considering the intragroup relations in these factors, it could be said that individual and managerial skills factors and infrastructural issues had the highest correlation coefficient (0.90) which could be attributed to individual and management

Table III.
Distribution of frequency of respondents according to the effect of factors related to predicting failure in established businesses

Factors affecting probable failure	Frequency	(%)	Cumulative percentage
Weak	13	9.29	9.29
Average	81	57.86	67.14
High	25	17.86	85.00
Very high	21	15.00	100

Source: Research findings of the study

Table IV.
Results from adaptation of the research model to fit indices

Fit index	Recommended criteria	Results in research
$\frac{x^2}{df}$	Below 3	1.58
Level of significance	Lower or equal to 0.05	0.000
RMSEA	Higher or equal to 0.09	0.085

weaknesses of entrepreneurs in understanding infrastructural issues as the most important parameters to be considered in starting businesses. The next factors are deterrent legal issues and social issues with a coefficient of 0.75 the most important reason for which is the developing culture of entrepreneurship and financial and legal problems as risk factors and deterrent barriers concerning better facilities (Figure 1).

As it could be seen from the findings, the fourth index related to individual and managerial skills possess the highest variance. On the other hand, according to the results from confirmatory factor analysis, the 10th criterion (managerial barriers) had the highest load of 0.93 which could be attributed to issues like marketing problems. After that, the index of weak organization of businesses with a weight of 0.85 and the third position is for individual barriers of expanding businesses with a load of 0.83. The main reason behind these could be issues concerning improper partnership, selecting indecent competitive strategies in the market and lack of a prospective approach.

After individual and managerial skills index, the index of financial and legal barriers had the highest variance. This index was composed of four categories. The highest weight of 0.73 was for the profitability challenges which prove the decrease in prices of agricultural products and lack of proper local markets. The next category is the deterrent legal issues with the weight of 0.57 which demonstrates incompatibility of time-wasting regulations and laws for starting new businesses which in turn ends in their failure. The next important factor in this category is the economic risks for entrepreneurs (0.56) induced by lack of trust in economic stability in the society. The last factor, however, is the job opportunity barriers with 0.47 weight which has the lowest ratio among all financial and legal deterrents the most significant of which is the lack interest in self-employment. The third factor influencing probable failure of greenhouse businesses is the social issues. In this index, the highest weight is for the cooperative barriers (0.69) which are affected by subcategories such

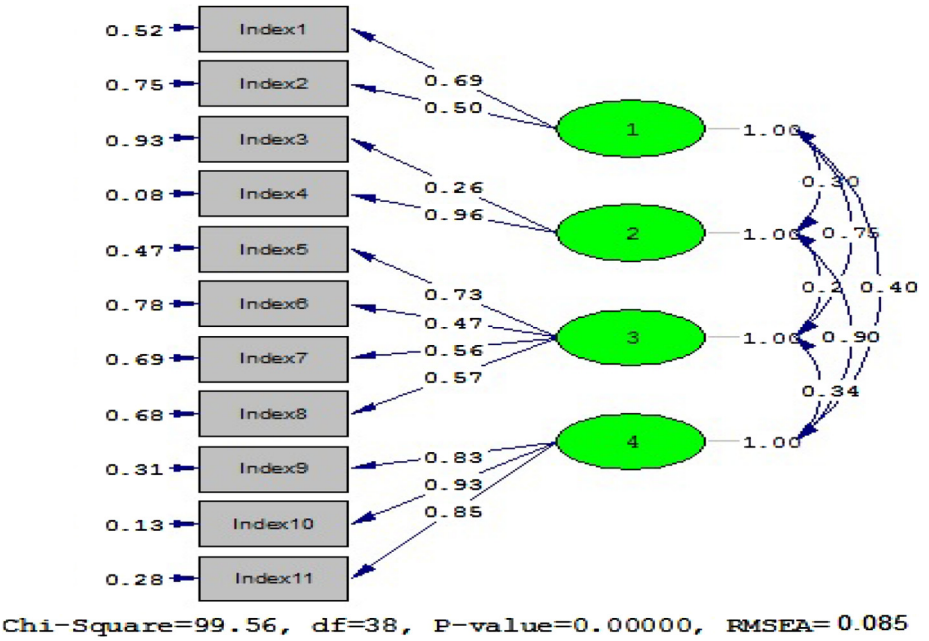

Figure 1.
Standardized factor load along with the level of significance of the model

as stereotype beliefs, low rate of membership in professional networks and businesses syndicates after that, weak education has the weight of 0.50 and includes issues like insufficient technical information in professional field and lack of training in skills related to entrepreneur-oriented businesses. The fourth important factor affecting probable failure of greenhouse businesses refers to infrastructural issues. In this regard, the most important category is weak technical issues with the highest coefficient (0.96) among all factors influencing probable failure of business in this area. This factor is mainly influenced by lack of access to advanced technologies, low quality of input and weak technical and engineering consulting services. The next influential factor in this category is the weakness in infrastructural dimensions with 0.26 weight and is induced by underdeveloped product packaging and the large number of dealers in the market.

To respond the hypotheses developed on financial and legal issues, secondary hypotheses had to be developed to cover the main question. Accordingly, the two questions are as follows:

To prove the first hypothesis, Pearson correlation coefficient was used. Results from this test revealed that the level of significance is 0.000 and the level of correlation between two variables is 0.40. This shows that there is a significant relationship between not having a business plan by entrepreneur and legal issues and regulations with probable failure of local entrepreneurs (Table V). The pre-designed business plan for entrepreneur farmers of this study was supposed as the same general image entrepreneurs have of starting greenhouse entrepreneurships including information on geographical position, marketing aspects and personal benefit. These entrepreneurs often use business plan as a financial tool to receive bank loans. Although business plan aims to help start new businesses, it has to be used all around the life cycle of the business. However, this is not the common image among local entrepreneurs and Table V demonstrates that only about 25 per cent of the statistical population under study had a business plan before starting their business.

To prove the second hypothesis, Pearson correlation coefficient was also used. The level of significance is 0.000 and the level of correlation between two variables is 0.371 (Table VI). It could be stated that there is a significant relationship between issues related to the intervention of partners and its relevant factors, financial and legal issues and level of intervention of partners with the probable failure of entrepreneurs. The concept of improper partnership refers to selecting people and the mutual cooperation between them to create and manage a business. A bad partnership is one of the biggest problems that sooner or later will fail businesses among greenhouse entrepreneurs. Factors such as lack of enough precision in selecting partners, coordination in having common ideals and not being frank in requests are all among the factors that can end in unsuccessful businesses. This concord with finings of Mohammadi-Eliasi and Notash (2011) on the reasons behind failure of elite entrepreneurs of Iran.

Table V.
Coefficient of correlation between pre-designed business plan and legal issues and regulations

Correlation	Not having a pre-designed business plan
Legal issues	
Pearson correlation coefficient	0.40
Sig.	0.000
Number of the sample	140

Source: Research findings of the study

4.1 Testing the hypothesis related to social issues and barriers

The relationship between these factors and the probable failure of entrepreneurs was tested via ANOVA. The most important principle in ANOVA is the difference in the level of significance between mean of the society, group or indices under investigation through ANOVA. If it is less than 0.05 and more than 0.01, it could be stated that in groups under study, the difference is at the 95 per cent level. In case the output of ANOVA is larger than 0.05 with the level of significance 0.337 (Table VII), the zero hypothesis of lack of relationship between level of education and social barriers of entrepreneurial businesses and probability of failure is confirmed. In case of the level of education and its relationship with social barriers in the level under study, it could be said that education is not an individual factor and could be reached through integrated education in the society. However, skills possessed by greenhouse entrepreneurs are gained through unofficial education and via learning through errors and failures in the past. Thus, it is safe to conclude that experience is not something to be neglected and education plays an important role in it.

To test the fourth hypothesis, the Pearson correlation coefficient was used. The level of significance is 0.000 and the level of correlation between two variables is 0.93 (Table VIII). Therefore, it could be assumed that inadequate storehouses for products and inefficient local markets either willingly or unwillingly affect the sale of greenhouse products. Issues like week storing facilities, improper packaging, inefficient transportation and dominance of dealers over market, lack of knowledge on the structure of the market and status of competitors, export terminals and several other problems decrease the sale of greenhouse products by rural entrepreneurs could end in their probable failure in the region under study.

The fifth hypothesis is tested through the Pearson correlation coefficient as well. In this case, the level of significance is 0.000 and the level of correlation between two variables is 0.427 (Table IX). Therefore, it could be concluded that lack of access to internet facilities, weak marketing of farmers and technical and infrastructural barriers and probable failure of entrepreneurs are probably linked. Modern countries have all eliminated traditional marketing techniques and have turned into electronic marketing. Electronic marketing

Correlation	Partners' intervention
Legal issues	
Pearson correlation coefficient	0.371
Sig.	0.000
Number of samples	140

Source: Research findings of the study

Table VI. Coefficient of correlation between financial and legal issues and rate of partners' intervention

Education	Significance	Square	Mean of squares	Degree of freedom	Sum of squares
Intergroup	0.337	1.128	1.027	16	16.438
Intragroup			0.910	123	111.984
Total				139	128.421

Source: Research findings of the study

Table VII. The relationship between education and probable failure of entrepreneurship

methods are economical in case of costs, time and human resources and increase efficiency indices. However, these methods are not very popular in Iran and the case is more severe in case of rural regions underinvestigated for there is not enough knowledge about these facilities in these regions and/or existing problems prevent residents from having access to them. Moreover, governmental organizations governing agriculture do not intend to open Web pages to introduce rates and sale of agricultural products.

Finally, the impact of individual and executive skills on the probable failure of local entrepreneurs is investigated through two hypotheses:

To test the sixth hypothesis, Mann–Whitney U test was utilized using the component of gender (Table X). In this test, the closer the means of the ranks to each other, the less probable the hypothesis will be. In this case, the mean was 76.28 for men and 51.77 for women. In other words, in this study, the mean of men was more than women. The table reveals overall ranks and means of the ranks. According to the test statistics table, the level of significance is 0.002. Thus, there is no reason to reject the hypothesis. In other words, the relationship between genders and probable failure is significant. This finding confirms the findings of Rasekhi *et al.* (2017) in which the stated that women are more prone to failure compared to men and bear the further costs in case of probable failures. Despite the fact that women in recent years have reached higher academic degrees and have become more involved in social and economic activities, decent use of their potentials have not been possible for several reasons such as finding sufficient financial resources, access to information, balancing life and family and gaining trust from other people. This is approved by several other studies on entrepreneurship and in the present study as gender entrepreneurship problems and probable failure they face in their entrepreneurial activities.

Findings from Pearson test from the seventh hypothesis clearly revealed that considering the fact that most of the farmers are aged between 40 to 45 years (Table XI), there is a significant relationship between an individual's age and individual-executive barriers particularly the issue of weak foresight skills and preference of short-term goals with probable failure of entrepreneurs for as the age goes up, they become less risk-taking and lose their motivation to work. Thus, younger investors have a higher horizon compared

Table VIII.
Coefficient of correlation between infrastructural issues and low sales of greenhouse products

Correlation	Sale
Infrastructural issues	
Pearson correlation coefficient	0.093
Sig.	0.000
Number of samples	140

Source: Research findings 2017

Table IX.
Coefficient of correlation between lack of access to internet facilities and weak marketing and technical issues

Correlation		Weak technical issues
Lack of access to internet facilities and weak marketing	Pearson correlation coefficient	0.427
	Sig.	0.000
	Number of samples	140

Source: Research findings of the study

to their older counterparts and this makes them more risk-taker. It could, therefore, be said that senior investors have a short-term view toward investment and are less risk-taking; nevertheless, it is not the single factor affecting risk taking and several other factors affect peoples' risk-taking skills (Table XII).

The correlation between independent variables and entrepreneurs' probability of failure in greenhouse businesses.

To determine the correlation between research variables according to the type of variables, Spearman correlation coefficient was used. Results, however, demonstrated that there is a deeply significant relationship between financial and legal barriers and individual and executive barriers with probable failures of entrepreneurs. In fact, it could be said with a 99 per cent confidence that as these two types of barriers increase, rural entrepreneurs' probability of failure in their greenhouse businesses increase and social and infrastructural barriers are less effective in their failure (Table XIII).

Table X. Mann–Whitney U Test for analyzing the relationship between gender and probable failure in businesses

Test statistics				
				Individual executive factors
Mann–Whitney U test				1147.500
Wilcoxon W				1708.500
Z				–3.041
Value of Mann–Whitney				0.002
	Grouping variable: Gender			
	Gender	Number	Mean average	Sum of means
Individual and executive factors	Female	33	51.77	1708.50
	Male	107	76.28	8161.50
	Total	140		

Source: Research findings of the study

Table XI. Pearson correlation coefficient between age and individual barriers of business

Correlation	Individual barriers
Age	
Pearson correlation coefficient	0.325
Sig.	0.000
Number of samples	140

Source: Research findings of the study

Table XII. Pearson correlation coefficient between age and individual barriers of business

Correlation	Executive barriers
Age	
Pearson correlation coefficient	0.246
Sig.	0.000
Number of samples	140

Source: Research findings of the study

Regression analysis is a statistical process to evaluate the relationship between variables. In this method, various techniques are used to model and analyze special and unique variables especially when the focus is on the relationship between one independent variable and one or more dependent ones. The particular contribution of regression analysis is that it helps simplify the understanding how dependent variable changes with changes in other dependent variables or their stability. To predict the range of changes of independent variables (indices of social barriers, financial and legal barriers, individual and executive barriers and infrastructural barriers) with dependent variable (probable failure of businesses), regression analysis is used. The table reveals the variance regression analysis, significance or insignificance of the regression and the linear relationship between variables. Table XIV demonstrates the ratio of F to correlation square for each independent and dependent variable in the level of significance 0.000. This proves the 0.999 confirmation.

As it could be seen in Table XV, the value of R^2 in this test is 0.464. Thus, independent variables clarify 46 per cent of the changes in the dependent variable. Unclarified variance (the difference between clarified variance with 1) is 54 per cent which shows the effect of other uncalculated variables on the dependent variable.

5. Conclusion and suggestions

The fear of probable failure then has stabilized in the minds of most rural entrepreneurs and they try to conduct primary forecasting to remove probable bases for failure in their entrepreneurial activities. The present study, therefore, took a prospective approach to investigate the factors affecting the probable failure of entrepreneurs.

The present study was conducted to reach two purposes the first of which was to clarify the key criteria affecting probable failure in greenhouse businesses. Considering the intragroup relations in these factors, it could be concluded that individual and managerial factors and infrastructural issues had the highest coefficient which could be

Table XIII.
The level of correlation between probable variables affecting failure of greenhouse businesses

Probable failure				
Correlation coefficient	0.213	0.408	0.364	0.195
Level of significance	0.000	0.000	0.000	0.000
Number of the sample	140	140	140	140

Source: Research findings (2017)

Table XIV.
Results for variance regression analysis for estimating the relationship between variables

Model	Sum of squares	Degree of freedom	Mean of squares	Square	Significance
1					
Regression	7.467	4	1.867	9.240	0.000[b]
Remainder	27.276	135	0.202		
Total	34.743	139			

Dependent variable: Probable failure
Independent variables: social barriers, financial and legal barriers, individual and executive barriers and infrastructural barriers

Note: [b]Dependent variable: Probable failure
Source: Research findings (2017)

attributed to the inefficient individual and managerial skills of entrepreneurs and lack of decent knowledge about infrastructures as the most important issues in starting businesses.

Besides, testing related hypotheses revealed that the relationships between factors such as lack of predesigned business plan and legal problems in probable failure of local entrepreneurs, legal and financial issues (integrate with Quadir and Jahur (2011)) and level of partners' intervention, level of education and social barriers of businesses' success, infrastructural issues and lack of local markets and its effect on lower sales of greenhouse products, lack of access to internet facilities and weak marketing techniques of farmers and technical and infrastructural barriers, gender and individual and executive barriers of developing businesses and individuals' age and individual and executive barriers particularly in case of foresight approach and prioritizing short-term goals and the probable failure of businesses started by entrepreneurs are significant.

Comparing findings of the research with other studies demonstrates some similarities which are briefly stated here; the individual aspect of research concord with the study by Arasti and Gholami (2010). Also, not being a member of networks and groups related to associations and syndicates was investigated along with other problems that accelerate the failure of businesses which are confirmed by findings of the Amankwah-Amoah *et al.* (2016), a study related to social and especially the cooperative barriers. Furthermore, findings such as challenges of marketing and sale, weak organization of businesses, improper partnership problems, inflexibility in methods, financial problems, attachment to wrong path and undesirable work environment concord fully with preventive legal barriers investigated in the present study have adaptation with Nikolić *et al.* (2019) and Kollmann *et al.* (2017) studies. On the other hand, comparing the present results with the ones reached by Rasekhi *et al.* (2017) demonstrates that low income, personal debt, loaning money, sudden decrease in social status, decrease in self-confidence, feeling of shame, feeling of depression, blaming others and feeling of regret are the biggest problems faced by entrepreneurs are like the issues discussed in social and individual aspects of this study.

According to above discussion, research to identify negative effects of entrepreneurs' failure after starting a business and preventing it from becoming a crisis, the following suggestions are made: considering legal and financial barriers as a variable with the highest effect on probable failure of rural entrepreneurs, it is suggested that the government pass laws to decrease the problems of bankruptcy and encourage taking risks and on the other hand assign budgets to help failure-prone entrepreneurs and bankrupt ones so that they could resume their activities after failure. This assistance may help them avoid the fear of failure and revise their view toward risk, reward and failure. Entrepreneurship policy must be in a way that unsuccessful entrepreneurs bear the failure more positively and the government should pass laws to reduce its negative effects. Focusing on economic infrastructures through governmental aids in economic infrastructures with accurate

	Summary of the model			
Model	R	R^2	Adjusted R^2	Summary of estimation
1	0.464[a]	0.215	0.192	0.44949

Note: [a]Independent variables: social barriers, financial and legal barriers, individual and executive barriers and infrastructural barriers
Source: Research findings (2017)

Table XV.
Effects coefficient of research variables

supervision on entrepreneurs will prevent funds being wasted on surface structures and consumption. Entrepreneurship culture to let the society become creative, professional courage, risk-taking power and transforming a threat into a work opportunity must be formed for volunteer entrepreneurs. Holding field trips for local entrepreneurs in successful domestic and international businesses aiming to make them familiar with marketing techniques are also recommended. It is also suggested that unsupportive and indecent laws, improper work conditions, improper market, high interest rate for bank loans, etc. be corrected by government officials.

Finally, the findings of this study can be useful both for government organizations and local agricultural entrepreneurs. Because government agencies can identify deficiencies in their support for local entrepreneurship development, by recognizing the factors contributing to the failure of local entrepreneurs. Local entrepreneurial farmers can also draw on their experiences to increase the sustainability of their businesses by recognizing the reasons for their similar businesses failing.

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Further reading

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