The Motivation and Creativity of Farmers on the Innovation of Entrepreneurial Agriculture on Urban Farming in Makassar City

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Abstract: Urban farming is currently an interesting focus to be further developed due to the various complexity factors that occur in urban areas. The development of urban agriculture in Makassar, especially on vegetable commodities has been implemented by farmers who cooperate in the form of urban farming groups. Increased involvement of farmers in the form of farmer groups is expected to increase the quantity and quality of vegetable commodities to meet the needs of consumers in the city of Makassar.

This research was carried out with the aim to analyze the influence of farmers’ motivation towards entrepreneurial innovations in urban farming of vegetable commodities in Makassar city and analyze the influence of farmers’ creativity on entrepreneurial innovations in urban farming of vegetable commodities in city of Makassar.

This research is an exploitation survey research that reveals the various facts of a phenomenon based on the perception of 360 farmers in conducting its activities entrepreneurial agriculture in urban areas with a focus on motivation, creativity and innovation entrepreneurial farmer conducted in the city of Makassar based on the concept of urban farming. Further testing of the research hypothesis was conducted using Structural Equation Model Partial Least Square (SEM-PLS) analysis.

The results showed that: (1) Farmers’ motivation affects the innovation of agricultural-entrepreneurial farmers in the city of Makassar; (2) The creativity of farmers affects the innovation of entrepreneurial vegetable commodities in Makassar city; (3) The model estimate shows the creativity of farmers to produce the strongest influence on the innovation of entrepreneurial agriculture in the city Makassar.

Keywords: Motivation, creativity, innovation, urban farming

I. Introduction

Urban farming is currently an interesting focus to be further developed due to the various complexity factors that occur in urban areas such as the area of increasingly narrow land, the increasing urbanization flows, increased household food consumption, and increased number of poor people, increasingly severe environmental pollution and other things that occur urban. The application of urban farming directly impacts the community's economy, primarily through the expansion of the city's economic base through production, processing, packaging and marketing of consumer products. This led to increased entrepreneurship activities and job creation, as well as decreasing production costs and improving the quality of food products. According to Yudi Sastro (2013), urban agriculture is an activity of cultivation, processing, marketing, and distribution of foodstuffs, forestry and horticultural products that occur in and around the urban areas. The general purpose of urban farming is as a means of increasing the availability of food ingredients and income or also as an activity that poses pleasure to the perpetration. The tendency to change the land utilization pattern from agrarian to Non agrarian will affect the farming behavior of farmers in urban areas. The tendency of urban agricultural land utilization will affect the motivation and farming enthusiasm for some farmers in urban areas, because they tend to see other alternatives to source income other than working in the agriculture sector. Therefore, it takes creativity and high innovation in making use of limited land in order to meet the needs of consumers.

Implementation of vegetable commodities cultivation in the city of Makassar based on the data of the central statistic of Makassar City in 2019 shows that the commodity of vegetable in the region still has a lower production amount is with a production amount of 1078 tons on the crop area of 408 hectares. While the harvest area owned by farmers in the city of Makassar tends to be larger than the other harvest area in two urban areas in South Sulawesi Province namely Pare-Pare and Palopo city, they production is still lower compared to Pare-pare city which is able to produce as much as 2217 in the crop area of 145 hectares. It shows that the cultivation of vegetable commodities in the city of Makassar still requires further handling. Development of urban agriculture in Makassar, especially in vegetable commodities has been implemented by farmers who cooperate in the form of urban farming groups in each district in the area of Makassar. To increase the productivity of

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entrepreneurial agriculture required innovation in the implementation of urban farming business, especially in Makassar city. Innovative vegetable commodities can be produced through a series of processes that synergy each other which are influenced by high farmer motivation in carrying out the production process. In addition, creativity also plays an important role in this because there are ideas and new ideas will be able to produce a variety of high-competitiveness vegetable commodities and able to master the market share, especially the fulfillment of food consumption that is hygienic and quality for the community.

Based on the above studies covering many important aspects in entrepreneurial activities in urban areas, focus research is aimed at motivation and creativity and innovation in conducting agricultural activities in urban areas. Therefore, the researcher formulates the title of motivation and creativity of farmer to entrepreneurial agriculture on urban farming in city of Makassar.

II. Literature Review

A. Study of Entrepreneurship motivation Theory

Motivation is the underlying behavior activity in the effort to meet the desired needs. In general there is a strong relationship between motivation and entrepreneurship, which is the motivation that encourages one to become an entrepreneur.

The research on motivation has also resulted in several theories related to motivation, such as the theory of motivation of the need hierarchy expressed by Abraham Maslow (1943) in Robbins (2017). This theory classifies motivation based on the level of fulfillment of needs on the five needs hierarchy:

1. **Physiological Needs**
   These needs include hunger, thirst, shelter, and other physical needs. Physiological needs are the starting point for various other needs. The restoration of such needs is necessary to sustain life.

2. **Safety needs**
   These needs include safety and protection from physical and emotional harm. This requirement is a second requirement consisting of a need for clothing, housing, and environment that has a pattern that can be predicted such as the certainty of employment, retirement and insurance.

3. **Social needs**
   These needs include the need for compassion, a sense of belonging, a good reception of others and friendships.

4. **Esteem Needs**
   Such needs are reflected by the need for self-respect that includes internal factors, such as sense of self-esteem, independence, and external factors, such as status, recognition, and attention.

5. **Self Actualization**
   It need is the last need on the hierarchy of needs and the complete realization of one's potential. This need is a boost that establishes a person to be what, covering growth, achievement of self-potential and self-fulfillment. Based on the analysis of the theory presented by Maslow, Fahmi (2013) stated that the understanding of an entrepreneur should see it based on the process. That is, fulfillment of needs and achievement of the highest level must begin gradually. When an entrepreneur wants to build a business, he must start from the smallest step to the next step. A big businessman must start a small business; to start a big step. It takes a small step first.

Another research on the motivation that is specific to urban farming development is among other things that Ruggeri et al. (2016) suggests that the motivation to implement agricultural activities in urban areas is caused by changes in environmental conditions that demand public awareness of the region to be able to exploit the potential surrounding environment to obtain a decent and comfortable life. Thus, the motivation of society as a farmer plays an important role in changing attitudes and behavior for health.

Another study based on Maslow’s motivational theory of farmer participation in urban farming sustainability has been done by Othman et al. (2019) stated that the fundamental reason for the farmers’ participation in Selangor, Malaysia in the use of urban farming concept is to fulfill physiological needs or basic needs then further motivated by the need to create a good kinship relationship, both among farmers and with others to achieve a common goal is to improve the welfare and comfort of life in the urban areas. Thus the realization of good harmonization in daily life.

Based on the theory and results of the research that has been expressed above, then in this research the motivation is expressed as an exogenous variable. The exogenous variable observed through three dimensions is the need for physiological, sociological needs and self-actualisation needs. The dimensions of physiological needs are measured by welfare indicators, the dimensions of social needs are measured by communication indicators and self-actualization dimensions are measured by potential development indicators.
B. Study of Entrepreneurship Creativity Theory

Today, creativity is an important part of organizational life because rapid global change has transformed organizations so organizations and managers must find new ways to make their actions fit into global changes and developments. The concept of creativity concerns the relationship between creativity and intelligence, mental, type, health, education, training, learning and technology. The definition of creativity varies, depending on the viewpoint, the phenomenon and the context. The economic perspective sees creativity as the creation of something new, both in the form of goods and services that are economically valuable to solve problems or issues. The theories that have been developed by experts related to creativity in entrepreneurship include those presented by Zimmerer and Scarborough (2008:57) who stated that creativity is the ability to develop new ideas that are meant to get new ways to solve problems and to improve opportunities.

The development of the concept of creativity has also been proposed by Suryana (2013) stating that if it is reviewed from an economic standpoint, creativity is more demonstrated in human creation action. Creativity shows a phenomenon that one creates something new, both in the form of goods and services and in the form of problem solving an issue of novelty goods and services that have economic value. The concept of creative economics is heavily influenced by the problem and viewpoint of every interest. In the concept of creativity there are five important elements:
1. Originality; means creating something from nothing or reworking something that already exist
2. Imagining; is a process of consideration about something new.
3. Inspiration; Are new ideas that can be visualized.
4. Ingenuity; A person's ability to think and act.
5. Discovery; Something that was not previously found.

An important concept of the dimension of creativity developed by Rhodes was further stated by Sarijani (2014) who said creativity can be defined into four different types of dimensions known as Four P's Creativity (4-h), namely the Person, Process, Press and Product dimensions as follows;
1. Person is an attempt to define creativity that focuses on an individual or person from an individual who can be called creative
2. Process is a creativity focused on the thinking process that brings out unique and creative ideas.
3. Press emphasizes on impulse factor, internal push (self-desire and desire to create or self-whistle), or external and social and psychological environment
4. Product focuses on the product or what is produced by the individual either something new/original or an elaboration or innovative merger,

Technical studies on the development of creativity based on the stage of the thought process have also been declared by Zimmerer in Husain Syam (2007) stated that on the development of thinking skills, one uses the left brain while to learn to develop a person's creative skills using his right brain. There are 7 (seven) stages of creative process that can be obtained through the use of the left brain thought process, i.e. (1) Preparation, (2) investigation, (3) transformation, (4) Incubation, (5) Illuminaion, (6) verification, and (7) implementation.

Various theories and concepts regarding the development of ideas to produce novelty of economic value are needed. It aims to analyze the important role of creativity in entrepreneurship as well as on agricultural entrepreneurs because it is very related to the entrepreneurial thinking skills as business actors. In principle people have a certain capacity to remember a variety of knowledge and experience, so that the wider the insight of a person tends to be higher in creativity. To increase creativity can be done by increasing the accumulated productive knowledge.

Based on various theories, concepts, and research results related to creativity then in this research entrepreneurial creativity is set as an exogenous variable analyzed through two dimensions of intelligence thinking and the driving factor. Furthermore, the dimensions of intelligence are observed based on two indicators, decision making indicators and opportunity utilization indicators. Another observed dimension is the dimension of the driving factor measured based on flexibility indicators.

C. Study of entrepreneurial innovation theory

Entrepreneurship is influenced by innovations that are an implementation of creativity. The goal is to provide added value from the resources it belongs to. Etymologically, innovation comes from the word innovation that means renewal. Ordinary innovations also mean a new invention or as something new by society. Innovation is not confined to the product but also includes behavior or movement to change. Thus, it can be stated that innovation is an idea, product, technological information, institutional, behavioural, a set of values and new practices that are not widely known (accepted) and applied by most communities in a particular region that can encourage the change in the behavior of the community to be able to realize a better quality of life.

The theory of innovation that has been a reference to the analysis and the study of innovation in entrepreneurship is the theory posed by one of the leading management experts, Peter F. Drucker. In his book
Innovation and Entrepreneurship: Principles and Practice are widely referenced in several studies discussing the specialty entrepreneurship about innovation. Drucker Innovation Theory (1985) in Prof. Tang et al (2015) suggests that major innovations can occur among others when the analysis of the symptoms of change among other things that occur beyond the expectation (unexpected) caused by the change of product and price that initially does not mean), on the other side of innovation can also occur massively due to new knowledge that is a result of great scientific breakthrough.

In addition, another concept of innovation was also put forward by Schumpeter (2008) in Bossle et al (2015) whose innovations play an important role in its association with the fulfillment of consumer satisfaction efforts. In addition, Schumpeter also stated that the occurrence of dynamic imbalance is caused by entrepreneurial innovation. Innovation for entrepreneurs is more to take advantage of changes to the invention that caused the change.

Furthermore the variety and type of innovations are categorized by Oslo Manual (2005) in Dhewanto et al (2015) which classifies into four types namely product innovation, process innovation, marketing innovation and organizational innovation. Product innovations and processes are closely related to technological innovations, while marketing and organizational innovations have a wider scope. The type of innovation that applies to small and micro businesses is product innovation, process and marketing. In entrepreneurship or small and micro enterprises the third type of innovation (product innovation, process innovation, and marketing innovation) can be done simultaneously as well as choosing to do one of the three types. It is adjusted to the situation and conditions experienced by the small and micro business. However, what happens often is to choose to do one type of innovation that it considers possible to do based on the resources it belongs to.

Since the research is conducted on small and micro enterprises, the innovation variable is observed based on two dimensions, namely the dimensions of production systems and the dimensions of the marketing system. Observations of the production system dimensions are measured based on two indicators, process innovation indicators and product innovation indicators. The marketing system dimensions are observed based on distribution innovation indicators. The observation of various dimensions and indicators is further describing the innovations that farmers do in carrying out its activities to develop agricultural entrepreneurship in the city of Makassar.

III. Research Methods

A. Type and Design Research

This research is a survey that reveals a variety of facts from a phenomenon using questionnaires as a primary Data collector tool, which is then evaluated and drawn conclusions relating to the activities of farmers as an agriculture farmer business in city of Makassar. This research was conducted in the city of Makassar by focusing on agriculture farmers members of the farmer road group (poktanrong) management of farmers who applied urban farming system that is located in city of Makassar. The farmer carries out his plant effort in the yard of each house and around the residential area where they reside.

This research uses a quantitative approach aimed at describing the characteristics of the research variables studied in relation to the phenomenon that occurred based on the opinion of the agriculture farmers in managing the farming of vegetable commodities focused on the efforts to increase the competitiveness of vegetable commodities as one of the products of urban agricultural farming in city of Makassar. The focus of a variable study on the research is the motivation, creativity, innovation and competitiveness of vegetable commodities on urban farming in city of Makassar. In the research hypothesis, it used explanatory research to get more in-depth study results relating to linkage and inter variable relationships through hypothesis testing, which could further address the issues studied.

B. Research variables

The variables examined were the motivation with symbols (X1), and creativity with the symbol (X2), which is expressed as independent variables and also an exogenous variable. Furthermore, the innovation variable is assigned a symbol (Y) as the dependent variables and is also an endogenous variable. This research is aimed at the agriculture farming business that belongs to the farmer Group (Poktan) in city of Makassar.

C. Population and Research samples

The population in this study is all members of the Urban Farming System (Poktan) farming group known as the Road Farmer group (Poktanrong), which is scattered in six sub-districts. The farmer has a total of 3600 farmers. Determination of the number of samples used the formula of Slovin in Husein Umar (2001) in Sudaryono (2018) is as follows:
D. Data Collection Techniques
The data types in this research are primary data obtained through the dissemination of questionnaires and interviews to respondents. Secondary Data was information and documentation obtained from some related institutions. The data collection techniques used in this study was:
1. Observation, which is the collection of data done by direct observation of the research object to complete the data obtained through interviews, polls or documentation.
2. Interviews, conducted to various parties related to the main focus on farmers who manage urban farming efforts on vegetable commodities. Interviews are also conducted to other competent parties in the field, among others, on agricultural extension which is a companion of farmers in entrepreneurial farming.
3. Research questionnaire, used to obtain data from farmers. For that, there are several models of questionnaires, as survey instruments, which include: Farmer identity, peasant entrepreneurial motivation, creativity skills in entrepreneurial farming, and entrepreneurial innovation of farmers.

E. Data Analysis
This research not only describes, confirms and describes the empirical facts found in the field, but also analyzes the causality relationship between variables one with other variables including the analysis of motivational influences (X1) and creativity (X2), to entrepreneurial innovation (Y), through hypothesized testing using Structural Equation Modeling Partial Least Square (SEM-PLS). The processing of this data begins with the coding of questionnaires, the re-configuring; process them into software that has been prepared up to the interpretation of data.

Through SEM analysis, the structure of the relationship is clearly known in the pathway diagram reflecting the hypothetic proportion proposed with its structural equation so that it is apparent what is an exogenous variable and endogenous variable.

IV. Research Results And Discussion
RESULT
The description of the variables studied in this study is explained based on the determination of the categories gained through respondents’ perception of the research focus. The results of this study reveal about the innovation of entrepreneurial agriculture by analyzing and measuring the variable motivation and variable creativity, as an influential factor in answering the problem of innovation-entrepreneurial behavior of farmers on urban farming entrepreneurship in the city of Makassar. More can be explained through the description analysis results on each research variable.

1. Variable Description Analysis
A. Motivation variable description
The rationale for motivational variables is measured among others by analyzing the dimensions of fulfilling physiological needs (basic). The concept of physiological needs is all activities that are carried out routinely by farmers in fulfilling the needs of family life because on urban farms generally farming activities are carried out as a side activity. Farmers as social creatures need interaction with the surrounding environment in order to be able to perform the activities well. Various factors play an important role in establishing interaction with both farmers and others, for that social need is one of the factors of farming in the city of Makassar.

Another dimension of the observed motivation is about self-actualisation which is one of the needs of a person in developing its potential in order to develop further and be able to adapt well to the environment where it is active. Appreciation towards a person will increasingly give a high spirit and motivation in carrying out activities, so it is great opportunity in obtaining the success of the business or activities it does. Once on the farmer as a business, the phases of self-actualization can be seen from various points of view.

Based on the analysis and research on the motivation of farmer in fulfillment were the dimension of fundamental needs, social needs and actualization needs. Then it can be said that generally farmers in the city of Makassar have a high motivation in carrying out its activities both to meet basic needs, social needs and self-actualisation needs.
Based on the respondents scoring percentage of perceptions, it showed that the communication indicators carried out by the farmer with various parties showed the highest ratings with a score percent value of 79.10% compared with various other indicators in measuring the motivation variable (X1) of agriculture farmer in city of Makassar. On the development of self-potential indicators shows the lowest score percentage value of 70.69% in the motivation variable measurement. Thus it can be stated that the motivation of farmers in entrepreneurial farming is essentially to establish cooperation with other parties both with fellow farmers, extension and other parties with the aim of improving the welfare of farmers and their families.

B. Variable Creativity description

The second independent variable in this study is creativity. Entrepreneurial farmer as part of business activities demands the creativity of farmers to be able to maintain its business existence especially in urban areas that have a high level of competition with the high variety of agricultural commodities marketed in the region. Variable creativity is measured through several indicators namely intelligence thinking and flexibility in conducting entrepreneurial activities.

The results showed that in general the agriculture farmer in Makassar city was able to increase its creativity among others because of the driving factor both internally and externally to be able to adjust to the influence of surrounding environment that is always changing very quickly. In order to survive the ever-changing conditions, farmers are required to be flexible and adapt. Thus, knowledge and skills can always be increased because to be able to adapt to the necessary change of information and knowledge is even better than the others.

The measurement of the variable creativity based on the analysis of the three indicators of the establishment showed that flexibility is the most important factor in shaping the creativity of agriculture farmers in Makassar, which results in a scoring percentage of 79.32%. Changing the condition of urban environment that is always changing very quickly is an important factor that makes up the creativity of farmers because it can withstand the changing environmental conditions that are ever changing in urban areas along with the advancement and development of technology.

C. Description of agriculture-entrepreneurial variables

Innovation is essentially the development of ideas or creative ideas against the utilization of opportunities to add added value to resource utilization. Changing consumer demand demands manufacturers to be able to provide products that comply with consumer demand. This requires innovation so that the resulting product has a difference with a pre-existing product. Based on the analysis of the innovation variables on the indicator of process innovation, product innovation and marketing innovation, the results were obtained that as many as 74.86% of respondents had the highest ability to innovate the process through sustainable land utilization by striving to preserve the environment. This is a prominent aspect of farming done in urban areas because farmers in the urban area are required to be able to produce maximum production on limited agricultural land conditions. By this it takes farmers’ skills to be able to make good creations in order to be able to utilize limited land sustainably.

The testing of the structural model of the study consisted of an exogenous latent variable (exogenous variable) and an endogenous latent variable (endogenous variable). An exogenous variable is a variable whose value is specified outside the model, while the endogenous variable is a variable whose value is determined through the equation or model formed.

The exogenous latent variables include motivational variables (X1) consisting of three indicators of welfare (X11), communication (X12) and potential development (X13); and latent variables creativity (X2) which consists of three indicators namely decision making (X21), Utilization of Opportunities (X22) and flexibility (X23). As for the endogenous latent variables include the latent variable innovation (Y) with three indicators consisting of process innovations (Y1), product innovation (Y2), Innovation Distribution (Y3).

The results of the test model motivation and creativity with innovation gave R-square value of 0.697. It can then be interpreted that the variable innovations that can be explained by motivational and creative variables of 69.7% are remaining 30.3% described by other variables outside the researched variables.

Based on the test results of the model coefficient of parameters between motivation and innovation of 0.264 which means there is a positive relationship between motivation and innovation. The communication indicator (X12) generates the highest value compared to other indicators of 0.844. Then further testing of the hypothesis model of the influence of creativity on entrepreneurial innovation is the magnitude of the parameter coefficient between creativity and innovation of 0623 which means there is a positive relationship between creativity and innovation. Based on the testing of indicators the flexibility indicator (X23) generates the highest parameter coefficient of 0.824 compared to other indicators.
V. Conclusion

1. The motivation of the agriculture farmers influence positive and significant to the innovation of entrepreneurial in the city of Makassar especially on the fulfillment of social needs which is the main motivation of farmers in the city of Makassar in carrying out its activities to be able to produce quality vegetable products.

2. The creativity of agriculture farmers has positive and significant effect on entrepreneurial innovation in the city of Makassar which is heavily influenced by its ability to adapt and act rapidly against the changing conditions of urban environment that is very dynamic in urban areas.

References


