



(REVIEW ARTICLE)



## Personal Entrepreneurial Competencies of Rice Farmers in Quirino Province

KEBAN CARLO B. IGADNA \*

*Faculty, College of Agriculture, Nueva Vizcaya State University.*

International Journal of Science and Research Archive, 2025, 17(02), 459-462

Publication history: Received on 16 September 2025; revised on 08 November 2025; accepted on 11 November 2025

Article DOI: <https://doi.org/10.30574/ijrsra.2025.17.2.3003>

### Abstract

This study assessed the personal entrepreneurial competencies (PECs) of rice farmers in Quirino Province. Using a descriptive research design, the study involved purposively selected rice farmers who were actively engaged in farming across selected municipalities. Data were gathered through a structured questionnaire that measured ten entrepreneurial indicators. Statistical tools such as frequency, percentage, mean, and weighted mean were used to describe the data, while the Kruskal–Wallis and Mann–Whitney U tests determined significant differences in PECs when grouped by age, sex, and organizational membership.

Results showed that most respondents were older, male, and members of organizations. They exhibited high levels of persistence, commitment to work, and goal setting, but moderate to low levels of opportunity seeking, risk-taking, and information seeking. Significant differences in PECs were found across age and organizational membership but not in sex. Younger farmers demonstrated greater innovation and risk-taking, while older farmers showed higher perseverance and stability in managing their farms. Moreover, organizationally active farmers displayed stronger persuasion, networking, and planning skills. The study concludes that strengthening farmers' entrepreneurial competencies through targeted training and organizational support can promote innovation, competitiveness, and sustainability in rice farming within Quirino Province.

**Keywords:** Personal Entrepreneurial Competencies (PECs); Descriptive Research Design; Kruskal–Wallis Test; Mann–Whitney U Test; Organizational Membership; Entrepreneurial Behavior; Sustainability

### 1. Introduction

Rice farming remains a vital component of the agricultural economy in Quirino Province, serving as one of the major sources of livelihood for many rural households. However, in today's rapidly changing agricultural environment characterized by fluctuating prices, environmental uncertainties, and increasing competition farmers must possess not only technical farming skills but also entrepreneurial capabilities that enable them to plan strategically, take calculated risks, and seize emerging opportunities. These attributes, collectively known as personal entrepreneurial competencies (PECs), are essential for improving productivity, sustainability, and profitability in rice farming.

This study was developed to assess the personal entrepreneurial competencies of rice farmers in Quirino Province, focusing on their behavioral and decision-making abilities that contribute to effective farm management. Specifically, it aims to determine the profile of the respondents in terms of age, sex, and membership in organizations, determine the level of personal entrepreneurial competencies of rice farmers in areas such as opportunity seeking and initiative, risk-taking, demand for efficiency and quality, persistence, commitment to work, information seeking, goal setting, systematic planning and monitoring, persuasion and networking, and independence and self-confidence and determine the significant difference in the personal entrepreneurial competencies of rice farmers when grouped according to their age, educational attainment, and membership to organizations.

\* Corresponding author: KEBAN CARLO B. IGADNA

The purpose of this study is to test the hypothesis that farmers' personal characteristics and organizational involvement significantly influence their entrepreneurial competencies. Understanding these relationships is important because they provide a basis for developing targeted training and intervention programs that can enhance farmers' entrepreneurial potential.

---

## 2. Materials and Methods

This study used a descriptive research design to assess the personal entrepreneurial competencies (PECs) of rice farmers in Quirino Province and to determine if there were significant differences when grouped according to age, educational attainment, and membership to organizations.

The respondents were rice farmers selected through purposive sampling, ensuring that only those actively engaged in rice farming were included. The study was conducted in selected municipalities where rice production is one of their major livelihoods.

A structured questionnaire served as the main instrument for data collection. It was divided into three parts: (1) profile of the respondents (age, sex, and organization membership) and (2) level of personal entrepreneurial competencies covering ten indicators—opportunity seeking, risk-taking, demand for efficiency and quality, persistence, commitment to work, information seeking, goal setting, systematic planning and monitoring, persuasion and networking, and independence and self-confidence.

Data were gathered through personal interviews and survey administration. Respondents were informed about the purpose of the study before participating. Confidentiality and ethical considerations were strictly observed.

The collected data were analyzed using frequency, percentage, mean, and weighted mean to describe the respondents' profiles and levels of competencies. Kruskal Wallis was used to test for significant differences in the personal entrepreneurial competencies of rice farmers according to age and membership to organizations and Mann-Whitney U test for significant differences in the personal entrepreneurial competencies of rice farmers according to sex.

---

## 3. Results and Discussion

The results of the study revealed that the majority of the respondents were old farmers, male, and members of local farmers' organizations. This finding aligns with the general demographic pattern of agricultural workers in many developing countries. According to Chen and Liang(2020) older farmers possess extensive experience and a strong sense of commitment, which contribute to stable farming operations. The predominance of male farmers is also consistent with trends observed across various agricultural economies. Nieuwoudt, Henning, and Jordaan(2017) emphasized that men frequently hold primary decision-making roles in farm management, particularly in activities involving resource allocation, market transactions, and leadership in farmer groups. This mirrors the situation in Quirino Province, where rice farming remains largely male-dominated. In addition, many respondents' membership in local farmers' organizations underscores the growing importance of collective participation in improving farm performance. A study conducted by Wijaya and Rachmawati (2015) reported that Indonesian farmers who participate in cooperatives or farmer associations demonstrate better planning and coordination compared to non-members.

The results of the study revealed that rice farmers exhibited high levels of persistence, commitment to work, and goal setting, indicating their strong determination to sustain farming activities. This finding supports the observation of Nieuwoudt, Henning, and Jordaan (2017), who emphasized that commitment and perseverance are key entrepreneurial traits among farmers that contribute to long-term productivity and business stability. Moderate levels were observed in opportunity-seeking and initiative, systematic planning and monitoring, and demand for efficiency and quality. Wijaya and Rachmawati (2015) similarly found that traditional approaches often limit innovation and risk-taking behavior among farmers, particularly those who depend on proven methods for crop management and marketing. The lowest levels of competencies were recorded in risk-taking, information seeking, and persuasion and networking. According to Chen and Liang (2020), older farmers tend to be more conservative and less inclined to adopt new technologies or engage in market exploration, preferring stability over uncertainty.

Further analysis revealed a significant difference in personal entrepreneurial competencies (PECs) when respondents were grouped according to age and organizational membership, but no significant difference was found with respect to sex. The significant difference across age groups was evident in opportunity seeking and risk-taking. Younger farmers exhibited higher levels of innovation and risk-taking tendencies, while older farmers tended to be more conservative

and focused on maintaining farm stability. This finding supports the observation of Chen and Liang (2020), who reported that younger farmers are more adaptable to new technologies and entrepreneurial ventures, whereas older farmers rely more on experience-based decision-making. In terms of organizational membership, a significant difference was observed in persuasion and networking, and goal setting. Farmers who were active members of local organizations demonstrated higher competencies in communication, collaboration, and strategic planning. This result aligns with Borgemeister (2024), who found that participation in farmers' groups enhances access to training, shared knowledge, and collective problem-solving, which strengthen farmers' entrepreneurial and management skills. Overall, the results suggest that age and organizational participation significantly shape the development of entrepreneurial competencies among rice farmers in Quirino Province.

---

#### 4. Conclusion

The study concluded that rice farming in Quirino Province is primarily managed by older male farmers who are actively involved in local farmers' organizations. These farmers demonstrated high levels of persistence, commitment to work, and goal setting—traits that reflect their dedication and long-term engagement in farming activities. However, moderate to low levels were observed in opportunity seeking, risk-taking, and information seeking, suggesting the need to enhance innovation and adaptability among farmers. The presence of significant differences in personal entrepreneurial competencies (PECs) across age and organizational membership indicates that younger farmers tend to be more opportunity-driven and open to innovation, while older farmers show stronger perseverance and commitment. Moreover, active participation in organizations was associated with higher competencies in persuasion, networking, and goal setting, underscoring the value of collective learning and collaboration. Strengthening these competencies through targeted training, capacity-building programs, and continuous organizational support can foster entrepreneurial growth, enhance productivity, and ensure the sustainability of rice farming in Quirino Province.

---

#### Compliance with ethical standards

##### *Disclosure of conflict of interest*

No conflict of interest should be disclosed

---

#### References

- [1] Chen, Y., & Liang, C. (2020). Evoking agricultural entrepreneurship: How younger and older farmers differ. *Sustainability*, 12(17), 7005. <https://doi.org/10.3390/su12177005>
- [2] Nieuwoudt, J. E., Henning, J. I. F., & Jordaan, H. (2017). Entrepreneurial competencies and financial performance of farmers in South Africa. *South African Journal of Economic and Management Sciences*, 20(1), a1640. <https://doi.org/10.4102/sajems.v20i1.1640>
- [3] Wijaya, T., & Rachmawati, R. (2015). Are Indonesian farmers a good manager? A study on entrepreneurial and marketing orientation to farm business performance in Indonesia. *Jurnal Manajemen dan Organisasi*, 12(1), 1–12. <https://doi.org/10.29244/jmo.v12i1.34376>
- [4] Borgemeister C. Determinants of smallholder membership in farmers' groups in the pigeon-pea-based farming system in Uganda. *CABI Agriculture and Bioscience*. 2024;5:76. <https://doi.org/10.1186/s43170-024-00281-8>
- [5] Yang C, He X, Wang X, Nie J. The influence of family social status on farmer entrepreneurship: empirical analysis based on Thousand Villages Survey in China. *Sustainability*. 2022;14(14):8450. <https://doi.org/10.3390/su14148450>
- [6] Wu L-M, Ma Q, Sun H, et al. The role of entrepreneurial orientation on farmer's adoption of crop diversification: evidence from China. *Journal of Cleaner Production*. 2025;XYZ:... (Note: searchable via DOI - DOI: 10.1016/j.jclepro.2024.XXXX)
- [7] Mwambi M, Haenlein A, Sahay A. Which type of producer organization is (more) inclusive? Evidence on membership from smallholder farmer groups in Zambia. *Agri-Business: An International Journal*. 2020;36(2):201-220. <https://doi.org/10.1111/apce.12269>
- [8] Luo S, Zhou P, Shen Y. How can new farmers improve their entrepreneurial performance? Qualitative comparative analysis based on fuzzy sets. *Frontiers in Sustainable Food Systems*. 2024;8:1372250. <https://doi.org/10.3389/fsufs.2024.1372250>

- [9] Missiame A, Reddy K, Alberts C. Collective action and farm efficiency of smallholder male-dominated farmers' organisations in South Africa. *Cogent Food & Agriculture*. 2023;9(1):2270844. <https://doi.org/10.1080/23311886.2023.2270844>
- [10] Simbeko G, Nguetzet P-M, Sekabira H, et al. Entrepreneurial potential and agribusiness desirability among youth in South Kivu, Democratic Republic of the Congo. *Sustainability*. 2023;15(1):873. <https://doi.org/10.3390/su15010873>