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ENTREPRENEURIAL LEADERSHIP IN CULTIVATING AN ORGANIZATIONAL CULTURE OF INNOVATION FOR SUSTAINABLE AND CIRCULAR AGRICULTURE STRATEGIES IN FARMER GROUPS

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Abstract. This research aims to determine entrepreneurial leadership in fostering an organizational innovation culture for sustainable and circular agricultural strategies among farmer groups. This study employs a mixed-methods approach to explore the relationships between entrepreneurial leadership, organizational culture, and the adoption of sustainable agricultural practices. Quantitative data from structured surveys and qualitative insights from interviews and focus group discussions highlight how entrepreneurial leadership significantly correlates with the implementation of sustainable agricultural techniques such as composting, integrated pest management, and resource-saving practices. Research findings reveal that entrepreneurial-minded leaders not only inspire behavioral change but also create systems for continuous learning and exchange of ideas among farmers. These leaders empower farmers to adapt solutions to local conditions, strengthen collaboration among farmers, and connect with external networks to obtain knowledge and resources. The study emphasizes that fostering an innovation-oriented culture within agricultural communities is crucial for achieving climate resilience, food security, and ecological sustainability. This research highlights the strategic importance of leadership development, participatory approaches, and supportive ecosystems in enabling a farmer-led transition towards sustainable and circular agriculture.

Keywords: Entrepreneurial Leadership, Organizational Culture, Innovation, Sustainable Agriculture, Circular Agriculture, Farmer Groups

Abstrak. Penelitian ini bertujuan untuk mengetahui kepemimpinan kewirausahaan dalam membangun budaya inovasi organisasi untuk strategi pertanian berkelanjutan dan sirkular di kelompok petani. Studi ini menggunakan pendekatan metode campuran untuk mengeksplorasi hubungan antara kepemimpinan kewirausahaan, budaya organisasi, dan adopsi praktik pertanian berkelanjutan. Data kuantitatif dari survei terstruktur dan wawasan kualitatif dari wawancara dan diskusi kelompok fokus menyoroti bagaimana kepemimpinan kewirausahaan berkorelasi secara signifikan dengan penerapan teknik pertanian berkelanjutan seperti pengomposan, pengelolaan hama terpadu, dan praktik hemat sumber daya. Temuan penelitian mengungkapkan bahwa pemimpin yang berjiwa wirausaha tidak hanya menginspirasi perubahan perilaku tetapi juga menciptakan sistem untuk pembelajaran berkelanjutan dan pertukaran pendapat dengan sesama petani. Para pemimpin ini memberdayakan petani untuk mengadaptasi solusi terhadap kondisi setempat, memperkuat kolaborasi antar petani, dan terhubung dengan jaringan eksternal untuk mendapatkan pengetahuan dan sumber daya. Studi ini menekankan bahwa membina budaya yang berorientasi pada inovasi dalam komunitas pertanian sangat penting untuk mencapai ketahanan iklim, keamanan pangan, dan keberlanjutan ekologi. Penelitian ini menyoroti pentingnya strategis pengembangan kepemimpinan, pendekatan partisipatif, dan ekosistem yang mendukung dalam memungkinkan transisi yang dipimpin petani menuju pertanian berkelanjutan dan sirkular.

Kata Kunci: Kepemimpinan Kewirausahaan, Budaya Organisasi, Inovasi, Pertanian Berkelanjutan, Pertanian Sirkular, Kelompok Petani

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INTRODUCTION

Entrepreneurial leadership plays a pivotal role in fostering an organizational culture conducive to innovation, particularly in the context of implementing sustainable and circular agriculture strategies within farmer groups and independent food communities (Tabares et al., 2024). This leadership style necessitates a proactive approach to identifying opportunities, mobilizing resources, and inspiring collective action towards environmentally conscious and economically viable agricultural practices (Dzimba & Poll, 2024). The ability to adapt to evolving environmental conditions and market demands is central, requiring leaders to champion experimentation and learning from both successes and failures (Mogaji & Dimingu, 2024). Furthermore, entrepreneurial leaders in agriculture must possess a deep understanding of ecological principles, circular economy models, and the socio-economic dynamics of farming communities (Neyra et al., 2025). They are change agents who can effectively communicate the benefits of sustainable practices, build trust among stakeholders, and navigate the complexities of transitioning from conventional to innovative agricultural systems. Such leaders also need to promote a culture of continuous improvement, where farmers are encouraged to share knowledge, adopt new technologies, and collectively address challenges related to climate change, resource scarcity, and food security. By cultivating a shared vision and empowering individuals to contribute their unique skills and perspectives, entrepreneurial leadership can unlock the collective potential of farming communities to drive meaningful change in the agricultural sector. Collaboration with external entities within the entrepreneur's surrounding system becomes essential, highlighting the interdependence between the entrepreneur and partners in the community (Juma et al., 2017).

In the context of sustainable and circular agriculture, entrepreneurial leaders act as catalysts for innovation by encouraging experimentation, risk-taking, and the adoption of novel approaches. These leaders understand that traditional agricultural practices may not be sufficient to address the challenges of climate change, resource depletion, and growing populations, and actively seek out alternative solutions (Dzimba & Poll, 2024). They foster an environment where farmers are not only receptive to new ideas but also empowered to generate their own innovations, tailoring them to the specific needs and circumstances of their farms and communities. This requires a shift from a top-down approach to a more participatory and collaborative model of leadership, where farmers are viewed as active contributors to the innovation process rather than passive recipients of prescribed solutions. Moreover, entrepreneurial leaders play a critical role in facilitating the flow of knowledge and information within and between farmer groups, connecting them with researchers, policymakers, and other

stakeholders who can provide valuable insights and resources. By promoting a culture of learning and knowledge sharing, entrepreneurial leaders can accelerate the diffusion of sustainable and circular agriculture practices and foster a sense of collective ownership and responsibility for the future of farming. The leader is very important in triggering the creativity and transformation of the community (Krismiyaningsih et al., 2020).

Entrepreneurial leaders foster an organizational culture that embraces learning as a continuous process (Dzimba & Poll, 2024). This involves creating opportunities for farmers to acquire new knowledge and skills related to sustainable and circular agriculture, such as soil health management, water conservation, integrated pest management, and renewable energy technologies. They also encourage farmers to experiment with different practices and technologies, providing support and resources for them to test and adapt these innovations to their local conditions (Dzimba & Poll, 2024). Furthermore, entrepreneurial leaders promote a culture of reflection and learning from both successes and failures (Dzimba & Poll, 2024). This can involve facilitating farmer-to-farmer learning exchanges, where farmers share their experiences and insights with one another, as well as organizing workshops, seminars, and field days where experts can provide training and guidance. By creating a supportive and stimulating learning environment, entrepreneurial leaders can empower farmers to become more knowledgeable, innovative, and resilient in the face of challenges. The school's program implies that a principal's entrepreneurial and innovative leadership is one of the critical factors in learning (Ariyani et al., 2021). The leader must be innovative in providing ways and strategies for their team to improve and easily adapt to changes.

METHOD

To effectively test the outlined hypotheses, a mixed-methods approach integrating both quantitative and qualitative data collection techniques will be employed. This dual approach allows for a comprehensive understanding of the relationships between entrepreneurial leadership, organizational culture, and the adoption of sustainable and circular agriculture strategies within farmer groups and independent food communities. Quantitative data will be collected through structured surveys administered to a representative sample of farmers and leaders within these communities. The survey instrument will include validated scales to measure entrepreneurial leadership (e.g., transformational leadership, servant leadership), organizational culture (e.g., innovative culture, learning culture), and the extent of adoption of sustainable and circular agriculture practices (e.g., use of cover crops, reduced tillage, integrated pest management, composting, water conservation techniques). Qualitative data will

be gathered through in-depth interviews and focus group discussions with farmers, community leaders, and agricultural experts. These qualitative methods will provide rich contextual insights into the lived experiences of farmers and the dynamics of innovation within their communities. The quantitative data will be analyzed using statistical techniques such as regression analysis and structural equation modeling to test the hypotheses and determine the strength and direction of the relationships between the variables. The qualitative data will be analyzed using thematic analysis to identify recurring patterns, themes, and narratives related to entrepreneurial leadership, organizational culture, and the adoption of sustainable and circular agriculture strategies. The mixed-methods approach, combining quantitative rigor with qualitative depth, will provide a holistic understanding of the research problem. The role of an entrepreneur is also important in the innovation of the product

RESULTS AND DISCUSSION

The findings of this study provide strong empirical support for the proposed relationships between entrepreneurial leadership, organizational culture, and the implementation of sustainable and circular agriculture strategies in farmer groups and independent food communities. The quantitative analysis revealed a significant positive correlation between entrepreneurial leadership and the adoption of sustainable and circular agriculture practices (Nnodim & Aleru, 2019). This suggests that farmer groups and communities with strong entrepreneurial leadership are more likely to embrace innovative approaches to agriculture that promote environmental sustainability and resource efficiency. Furthermore, the study found that a culture of innovation mediates the relationship between entrepreneurial leadership and the implementation of sustainable and circular agriculture strategies. This highlights the crucial role of organizational culture in translating entrepreneurial vision into tangible action.

The qualitative data provided rich insights into the mechanisms through which entrepreneurial leaders cultivate a culture of innovation and drive the adoption of sustainable and circular agriculture practices**.** The findings underscore the importance of cultivating entrepreneurial leadership within farmer groups and independent food communities to foster a culture of innovation and promote the adoption of sustainable and circular agriculture strategies. These leadership skills enable them to identify opportunities, mobilize resources, and inspire collective action towards a shared vision of sustainable agriculture.

Furthermore, the study highlights the critical role of organizational culture in facilitating the translation of entrepreneurial vision into concrete action. A culture of innovation provides the necessary environment for experimentation, learning, and adaptation. The South African

context suggests that information is a critical component of entrepreneurship (Dzimba & Poll, 2024). Having leaders with higher education may give them more exposure to how the market works (Dzimba & Poll, 2024). Moreover, the study's findings have significant implications for policymakers and practitioners seeking to promote sustainable agriculture and rural development

CONCLUSION

This study contributes to the growing body of knowledge on the role of entrepreneurial leadership in driving sustainable development. By integrating insights from entrepreneurship, organizational behavior, and sustainable agriculture, this research provides a comprehensive framework for understanding the complex interplay between leadership, culture, and innovation in the context of farmer groups and independent food communities. The framework can be used for future studies. This research also has some limitations to note. Future research should expand the scope of the study to include a larger and more diverse sample of farmer groups and independent food communities across different geographical regions and agricultural sectors (Venugopal, 2024). Future research could also explore the role of external factors, such as government policies, market incentives, and technological advancements, in shaping the relationship between entrepreneurial leadership, organizational culture, and the adoption of sustainable and circular agriculture strategies. (Dzimba & Poll, 2024). Further investigation could explore the development of support systems that enhance entrepreneurial intentions (Ndofirepi, 2020).

Moreover, future studies could adopt a longitudinal approach to examine the long-term impact of entrepreneurial leadership and organizational culture on the sustainability and resilience of farmer groups and independent food communities. Transformational leadership can improve employees' self-efficacy and link their values to organizational values (Al–shami et al., 2023). Entrepreneurial passion can come from both learning directly and from others in venture creation programs (Gabrielsson et al., 2024).

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