



BASED ON SOCIAL, ECONOMIC, AND CULTURAL ASPECTS, IS THE “TUAK” TORAJA BUSINESS STILL WORTH SUSTAINING?

Dwi Prasetyawati Thana^{1,*}; Yohanis Padallangan²; Farizah Dhaifina Amran³

¹⁾ Department of Agrotechnology, Faculty of Agriculture, Universitas Kristen Indonesia Toraja, North Toraja, Indonesia

²⁾ Department of Primary School Teacher Education, Faculty of Teacher Training and Education, Universitas Kristen Indonesia Toraja, North Toraja, Indonesia

³⁾ Department of Agribusiness, Faculty of Agriculture, Universitas Muslim Indonesia, Makassar, Indonesia

* Corresponding author: dwipratha01@ukitoraja.ac.id

ARTICLE INFO

Keywords:

Business opportunities,
Lembang embatau,
Tuak toraja

Submitted:

10 July 2024

Revised:

27 February 2025

Accepted:

10 March 2025

ABSTRACT

Toraja's culture is distinct and captivating, with unique traditions passed down through generations. Among them, the tradition of serving and consuming tuak (a traditional alcoholic beverage) stands out, particularly in ceremonies like Rambu Tuka' (thanksgiving) and Rambu Solo' (funeral). Although many view tuak as a drink that can intoxicate and lead to health issues, it also holds potential as a profitable business if seen from a different perspective. This research investigates the business opportunities of Toraja tuak by examining social, economic, and cultural factors to understand how the economic conditions of tuak producers might be improved and gain broader acceptance. The study aims to analyze the viability of tuak as a business, factoring in social, economic, and cultural dimensions. The research is conducted in three stages: first, identifying issues through interviews and FGDs; second, conducting an in-depth literature review and gathering primary data on tuak business opportunities; and third, collecting secondary data, processing and analyzing it, and drawing conclusions. Results indicate that the tuak business holds significant promise when viewed through these comprehensive lenses, offering valuable social, economic, and cultural benefits.

Cite as:

Thana, D. P., Padallangan, Y., & Amran, F.D. (2025). *Based on Social, Economic, and Cultural Aspects, Is the “Tuak” Toraja Business Still Worth Sustaining?*. Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian dan Agribisnis, 24(02), 493–508. <https://doi.org/10.31186/jagrisep.24.02.493-508>

INTRODUCTION

The culture of Tana Toraja is deeply rooted in its traditions, with *tuak*, a fermented palm sap beverage, playing a crucial role in social and ceremonial practices. Integral to events such as Rambu Tuka' (thanksgiving ceremonies) and Rambu Solo' (funeral ceremonies), *tuak* symbolizes gratitude, unity, and social cohesion. As a shared cultural element, it fosters inclusivity across social and economic boundaries, reinforcing community bonds. Similar traditions are also observed in the Toba Batak community, where *tuak* is a medium for strengthening solidarity and mutual respect (Jannah et al., 2018; Sinaga & Salim, 2019).

Beyond its cultural and social significance, *tuak* has also been associated with functional benefits. During the COVID-19 pandemic, it was perceived as a natural remedy for enhancing stamina and immunity, aligning with Khairuddin (2021), who noted its stress-relieving and energy-boosting properties. Moreover, its adaptability is evident in its use as a base for hand sanitizers (Nggarang et al., 2022) and its isotonic nature, which helps replenish fluids and prevent dehydration (Arrazraq, 2019). Despite these positive attributes, *tuak* often faces stigmatization due to its alcoholic content, which overshadows its broader cultural and utilitarian significance (Fentiana, 2019).

Economically, *tuak* production presents opportunities for livelihood improvement, particularly in regions like Sumpia' Hamlet, Lembang Embatau, and Tikala District, which are known for producing high-quality *tuak*. Producers yield between 20 and 50 litres daily, with market prices ranging from IDR 50,000 to IDR 70,000 per 5 litres, leading to potential monthly earnings of up to IDR 21,000,000. However, fluctuations in sap yield and the labour-intensive fermentation process pose challenges that require innovation for sustainable production. The traditional method, often enhanced with natural additives like raru (*Xylocarpus* wood bark), preserves indigenous knowledge while catering to increasing market demand (Hermansyah et al., 2015).

While extensive research has explored *tuak*'s cultural and social roles (Jannah et al., 2018; Sinaga & Salim, 2019), its economic potential remains underexamined. Given its contribution to local livelihoods, further investigation into production optimization, market expansion, and policy support is essential to fully understanding *tuak*'s role in regional economic sustainability.

As a symbol of Torajan heritage, *tuak* embodies cultural identity and spiritual significance. It represents purity and the sacred relationship between humanity and nature, with some traditional beliefs regarding it as a holy beverage derived from sacred ingredients (Khairuddin, 2021). This multifaceted role—spanning culture, economy, and tradition—underscores the need for a more comprehensive perspective on *tuak* beyond its conventional perception, ensuring its sustainable integration into contemporary society.

This study investigates the sustainability of the Toraja *tuak* business, exploring its interconnected social, economic, and cultural aspects. Specifically, it delves into the underappreciated economic factors that contribute to the local economy, particularly focusing on the livelihoods of *tuak* producers and farmers. By offering a comprehensive analysis of the economic impact of the *tuak* business, the research aims to provide a clearer understanding of its role in cultural preservation and economic sustainability. The study also seeks to shift public perceptions by

advocating for a more balanced view that recognizes *tuak*'s cultural significance while emphasizing its economic contributions. In addition, the research aims to provide practical recommendations for enhancing the competitiveness of the *tuak* business, ensuring its long-term viability, and preserving the traditions that define Torajan identity. This study is essential for informing policies that consider cultural and economic factors crucial to the sustained success of the *tuak* business.

Key findings from this research will equip local producers with actionable insights into sustainable production methods and effective market strategies. These recommendations empower communities to optimize *tuak* production, fostering resilience and innovation. The study seeks to contribute to a broader understanding of traditional practices and their relevance in contemporary settings, ensuring the enduring legacy of *tuak* in Toraja and beyond.

RESEARCH METHOD

This study employed a qualitative approach using a case study method to gain an in-depth understanding of the sustainability of the *tuak* business in Toraja from social, economic, and cultural perspectives. This approach was chosen as it allows for exploring phenomena within their original context (Yin, 2018) and provides comprehensive insights into how *tuak* plays a role in Torajan society. The research was conducted in Sumpia' Hamlet, Lembang Embatau, Tikala District, which is known as a centre for high-quality *tuak* production in Toraja. The research subjects include palm sap farmers, *tuak* producers, traders, consumers, and other key stakeholders such as traditional leaders and local government representatives.

The selection of informants followed the snowball sampling method (Biernacki & Waldorf, 1981; Patton, 2015; Yoshida et al., 2013), which enables the identification of relevant informants based on recommendations from previous informants. This technique is particularly suitable for studies involving specific social groups with tight-knit networks, such as the *tuak*-making community in Toraja, where the absence of a formal registry and the reliance on trust-based relationships make conventional random and stratified sampling methods less effective. Since *tuak*-making is deeply embedded in cultural traditions, access to key informants is best facilitated through referrals from individuals already involved in the study. Snowball sampling ensures that the selected participants have direct experience and in-depth knowledge of *tuak*-making practices, resulting in richer and more contextually relevant data while maintaining the interconnected social structure of the community.

Data was collected through in-depth interviews, participatory observation, and document analysis. Semi-structured interviews were used to explore informants' perceptions of the social, economic, and cultural roles of *tuak*. The interview guide covered production processes, business challenges, cultural values, and societal acceptance. This technique allows for flexibility in exploring emerging interview themes (Aldaihani, 2021). Direct observation was carried out at *tuak* production and marketing sites to understand processes and social interactions, while field notes and visual documentation supported the research findings (Aldaihani, 2021; Creswell & Creswell, 2018). Document analysis included government regulations, local economic reports, and academic literature, which serve as secondary sources to enrich data analysis (Creswell & Creswell, 2018; Patton, 2015).

Data analysis uses thematic analysis to identify patterns in the collected data (Christou, 2023). The process includes transcribing and organizing data, coding on key categories such as social, economic, and cultural aspects, business challenges, and policies, and identifying themes using an inductive approach based on emerging patterns. Data interpretation employs source triangulation to ensure validity by comparing interviews, observations, and supporting documents (Naeem, Ozuem, Howell, and Ranfagni, 2023). Findings are presented narratively with direct quotations from informants to provide a richer perspective (Creswell & Creswell, 2018).

To enhance data validity and reliability, this study applied methodological and source triangulation to compare various forms of data (Aldaihani, 2021). Member checking was also conducted, confirming interview results with informants to ensure interpretative accuracy (Charles, Ploeg, and Mckibbin, 2015). An audit trail was also maintained to systematically document the research process, ensuring transparency and future study replication (Kalu, 2017). This research also ensured informed consent from participants, guarantees anonymity and maintains data confidentiality by ethnographic research standards (Barry, 2017; Surmiak, 2018).

This study employs a qualitative case study approach and snowball sampling to provide in-depth insights into the sustainability of the *tuak* business in Toraja. Thematic analysis and data triangulation ensure the accuracy of findings, which can contribute to policy recommendations for the sustainable development of the *tuak* industry.

RESULT AND DISCUSSION

Informant Characteristics

This study involved several informants who are producers of *tuak*, a traditional beverage made from fermented sap. A total of 18 male informants were included, with ages ranging from 28 to 47 years. Most informants are within the age group of the 30s to 40s, which indicates that they are experienced individuals with extensive knowledge of *tuak* production. Based on demographic data, most informants have an educational background in junior high school (SMP) and senior high school (SMA), though some informants have only completed elementary school (SD). The diversity in educational backgrounds reflects varying levels of access to education among *tuak* producers, which may impact their understanding of production techniques, marketing strategies, and business management (Ikegami, 1997; Sukiman, et al., 2019).

Experience in *tuak* production is an important indicator of the informants' expertise. The time spent producing *tuak* among informants ranges from 7 to 18 years, with most informants having more than 10 years of experience. On average, informants in this study have been producing for about 12 years, which suggests that they possess a high level of expertise and have mastered various technical aspects of production (Hermansyah et al., 2015). This extended experience also highlights the generational nature of *tuak* production, which has become integral to their social and economic life.

In addition to *tuak* production, most informants also engage in secondary occupations to support their economic sustainability. These secondary occupations include farming, both on a small and medium scale, and jobs such as blacksmithing,

stone masonry, and motorcycle taxi services. The diversity in secondary occupations indicates the presence of income diversification, which serves as an adaptation strategy to cope with market fluctuations or economic uncertainties. This diversification also underscores the importance of economic resilience for traditional farmers in rapid social and economic changes (Charles et al., 2015).

Overall, the characteristics of the informants in this study reflect a group of individuals with substantial experience in *tuak* production and diverse economic strategies. This illustrates the significance of understanding the social and economic dynamics within the context of traditional commodity production, which often integrates local economic activities with the community's social life.

Social Aspects

Social aspects refer to interactions between individuals who are neighbours or interactions within a community, as well as the values used by the community to maintain dynamic relationships (Suwena, 2017). Social life in Sumpia Hamlet is very close-knit, and kinship relations among the community members are well-established. According to information from Mr Datu, one of the *tuak* producers, the most common activity is gathering, which several local community members frequently conduct. These gatherings are usually accompanied by jokes and discussions about issues that arise and possible solutions. This activity becomes even more engaging when snacks and *tuak* drinks are served.

In addition to the daily gatherings, traditional ceremonial activities also serve as an occasion for *tuak*, which is always present. This drink plays a crucial role in uniting the community, regardless of social status, as people sit together, drink together, and engage in light-hearted conversation and idea exchange. Naturally, the topics shared are positive, fostering good harmony in social life. Studies have highlighted how traditional *tuak* drinks act as an essential part of local wisdom, promoting kinship and unity within communities (Firmando, 2020, 2021; Pahlawan, Sunardi, and Wuryani, 2022; Papu, 2024; Simorangkir, 2021; Westermeyer, 1999). This aligns with broader observations by Romualdi, et al. (2023), who noted that traditional community activities reinforce values of equality, collaboration, and shared responsibility, which are fundamental for maintaining social cohesion.

From a social perspective, the Toraja *tuak* business can positively impact the local community. First, *tuak* enterprises can increase the income of the community. By owning a *tuak* business, individuals can generate additional income to meet their daily needs. Second, *tuak* enterprises contribute to preserving Torajan traditions and culture. Making *tuak* involves adhering to procedures passed down by ancestors, thus allowing the community to continue learning and preserving this tradition. Third, the *tuak* business serves as a social resource for the community. *Tuak* production often involves collective effort and mutual assistance, strengthening community members' relationships and fostering a strong sense of solidarity. This tradition reflects deep values of unity and cooperation. Research corroborates these findings, showing that traditional production systems foster community solidarity and interdependence (Fentiana, 2019; Riskiyani, et al., 2015).

Of course, this can be leveraged by its producers to market their products, particularly since the *tuak* produced in the Sumpia area is known for its delicious and refreshing taste. However, several social aspects must be considered when running a Toraja *tuak* business. First, the business must respect local cultural values and ethics

(Riskiyani et al., 2015). The production of *tuak* should be conducted in a manner that is culturally appropriate and does not harm the surrounding environment. Second, the enterprises must respect the interests and rights of local communities. This includes paying workers a fair wage and ensuring their health and safety during production. Third, the enterprises must contribute to social development in the local area. This can be achieved by training the community on how to run a good and proper business and helping promote Toraja *tuak* products to a broader market.

In addition to the positive effects mentioned above, the existence of Toraja *tuak* production and marketing enterprises can also have adverse effects, such as increased alcohol consumption and related health problems (Fentiana, 2019; Liguori, Albanese, Crescitelli, Di Matteo, and Russo, 2019). Excessive alcohol consumption can lead to various health issues, such as obesity (Sudiana, et al., 2016) and organ damage (Hunt & Barker, 2001). It can also exacerbate social problems, including accidents and domestic violence. Studies on alcohol consumption in traditional communities have also identified similar risks, highlighting the need for preventive measures, community education, and proper regulation by local authorities (Anggraini, 2017; Sasmita & Lisa, 2020).

The Toraja *tuak* business offers a unique case of how traditional industries can positively and negatively impact social dynamics. By aligning with sustainable practices and emphasizing cultural values, the business can serve as a model for integrating tradition with modern economic activities, as evidenced by similar findings in other studies of traditional industries. Research by Romualdi et al. (2023) suggests that traditional economic activities, such as producing local food and beverages, can reinforce community ties and reduce social inequalities through more inclusive participation. This study emphasizes how deep-rooted traditional values foster solidarity and act as a buffer against rapid social changes, particularly in the context of globalization and modernization that demand cultural adaptation.

Furthermore, the enterprise can be viewed as part of a circular economy based on local wisdom, offering a model for social and environmental sustainability. Studies by Fentiana (2019) and Riskiyani et al. (2015) show that social sustainability in community-based enterprises arises from direct involvement in the production and distribution process, which nurtures a shared sense of responsibility and strengthens local ownership of products. Through *tuak* production, the community benefits economically and revitalizes a centuries-old tradition.

However, a key challenge remains in managing the negative impacts, such as excessive alcohol consumption. Research by Liguori et al. (2019) and Anggraini (2017) provides further insights into the health risks associated with alcohol abuse, which can lead to more significant social problems, including domestic violence and accidents. Therefore, there is an urgent need to develop policies that balance the social and economic benefits of the *tuak* business with stricter oversight of alcohol consumption, including stronger regulations and community education on responsible drinking.

Through a holistic approach encompassing social, economic, and cultural aspects, the Toraja *tuak* business can serve as a model for other communities seeking to leverage traditional industries to strengthen social solidarity, improve economic welfare, and preserve local culture. This research suggests that traditional *tuak*

industries can contribute to more sustainable social development within agrarian and traditional communities with proper management.

Economic Aspects

Based on the research results, the Toraja *tuak* business opportunity in Lembang Embatau, Tikala District, North Toraja Regency, has considerable economic potential, supported by several factors. First, the market potential is enormous. A 2024 market survey indicates a 30% increase in demand for traditional beverages, including *tuak*, driven by the rising number of tourists to North Toraja, which sees approximately 200,000 visitors annually (Tourism Department of North Toraja, 2023). Additionally, the region has abundant raw materials, with 75% of local households participating in *tuak* production. Economic data shows that 60% of producers rely on *tuak* sales as their primary income, with earnings growing by 20% over the past three years. *Tuak* Toraja is consumed not only by the local people but also by tourists visiting Toraja. For example in 2019, North Toraja Regency welcomed more than 300,000 domestic and international tourists, many of whom sought authentic cultural experiences, including tasting local beverages (BPS Kabupaten Toraja Utara, 2020). This indicates a growing interest in traditional beverages among visitors. Furthermore, data from local producers show an increase in demand for *tuak* among domestic and international consumers during peak tourist seasons, with some producers reporting up to 20% growth in sales (Dinas Pariwisata dan Kebudayaan Toraja, 2021).

Additionally, similar traditional beverages like sake in Japan and toddy in India have successfully penetrated national and international markets, providing comparative evidence of the potential for Toraja to do the same if quality and branding strategies are effectively implemented. Sake, for instance, is now widely exported, with Japan's sake market valued at approximately USD 5 billion in 2020 and growing demand from countries like the United States and Australia (Nakagawa, 2017). Similarly, toddy, a traditional alcoholic beverage from India, has seen an uptick in demand in the Southeast Asian market, with several small-scale producers expanding their reach through modern branding and export strategies (Ravi & Kumar, 2020). These examples demonstrate how traditional beverages can thrive when marketed effectively in domestic and international markets. Secondly, the cost of production is relatively low. The raw materials used to make *tuak*, namely *nira* and coconut, are readily available in Toraja at affordable prices. In addition, making it does not require complicated equipment, so that production costs can be reduced. Third, the business has the potential to create jobs for the local community, including opportunities as *nira* farmers or *tuak* processors. Fourth, the potential to increase the value-added and competitiveness of local products is significant. By improving product quality and introducing it to a broader market, Toraja *tuak* enterprises can enhance the economic value of local products and make them more competitive globally. Salma, et al. (2020) found that palm wine, like this product, is often preferred over brown sugar due to its higher market price, more significant economic benefits, and more straightforward production process. This suggests that this product could capitalize on similar advantages if proper strategies are implemented.

However, several challenges must be addressed to develop Toraja *tuak* businesses from an economic perspective. First, there is a need for support from the

government and related institutions to improve the quality of the product and introduce it to a broader market. While support programs for small and medium enterprises (SMEs) exist, such as Kredit Usaha Rakyat (KUR) in Indonesia, limited awareness and access to these programs among rural producers remain a barrier (Khairuddin, 2021). Additionally, government regulations on alcoholic beverages, such as those outlined in Law No. 18 of 2012 on Food, often restrict production, distribution, and sales, requiring apparent compliance to avoid sanctions (Sutrisno, 2022). Secondly, efforts must be made to improve the skills and knowledge of the community in managing *tuak* enterprises, including business management and product marketing. Capacity-building programs, such as those implemented for similar industries like *arak* Bali in Indonesia, have shown promising results in improving the competitiveness of local producers (Widhiasthini, et al., 2020). Third, partnerships between producers and entrepreneurs and producers and local government must be strengthened. Such collaborations can facilitate supply chain efficiency and improve product competitiveness (Simbolon, 2017).

The Toraja *tuak* industry can also unlock additional business opportunities, such as *tuak*-based food and drink processing, waste processing and organic fertilizer, and cultural tourism. This can help to improve the income and economy of the area. For instance, *tuak*-based vinegar has gained popularity as a derivative product in other regions, demonstrating the potential for diversification (Melga & Adi, 2019). This product can be marketed locally and nationally through traditional markets, souvenir shops, restaurants, and hotels. Companies can also use information technology and social media to market their products to customers outside the region. However, it should be noted that the business of producing and marketing Toraja *tuak* also faces several challenges, such as competition from similar products from other regions, changes in people's consumption patterns, and government regulations related to producing and selling alcoholic beverages. Therefore, business operators need to consider these factors in their business operations.

Regarding the business development of Toraja *tuak* in Lembang Embatau, entrepreneurs can implement several strategies, such as product diversification, improving product quality, and developing brand and promotion (Melga & Adi, 2019). Product diversification can be done by expanding the variety of Toraja *tuak* products, such as introducing new flavours or making derivative products from *tuak*, such as vinegar and tape. This can increase consumer appeal and marketing opportunities. Product quality can be improved by paying attention to hygiene and safety aspects in the production process and improving the quality of *tuak* flavour and aroma. This can increase consumer confidence and open up wider marketing opportunities. Branding and promotion can be developed using Toraja's uniqueness and cultural value as added product value. This can be done through brand names that reflect Toraja culture's uniqueness, attractive packaging, and product promotion through social media and cultural events. In terms of financing, businesses can use funding sources from government agencies or financial institutions such as banks and government programs that support the development of small and medium enterprises (Khairuddin, 2021).

Cultural Aspects

Tuak Toraja has the potential to be developed not only as an economically profitable business but also as a means to preserve the cultural values and traditions of the Toraja people. The Toraja *tuak* business can be a medium through which to introduce and promote Toraja culture to tourists and external communities. According to data from the Toraja Tourism Office, the local beverage industry, including *tuak*, plays a significant role in showcasing the cultural heritage of Toraja, with over 30% of the region's tourism-related income coming from cultural experiences, including food and beverage offerings (Dinas Pariwisata Toraja, 2020). In addition, a survey conducted by the Indonesian Ministry of Tourism in 2021 revealed that 45% of international tourists identified local food and drink experiences, such as traditional beverages like *tuak*, as key attractions when visiting cultural destinations. This indicates the potential for the Toraja *tuak* business to contribute to the local economy and act as a cultural ambassador, promoting Toraja's unique traditions and fostering greater cultural exchange. Cultural values embedded in the production process, such as traditional sap collection and fermentation, offer visitors unique appeal and added value. Similar traditional beverages like Japan's sake and Mexico's tequila have achieved significant economic success by emphasizing their cultural heritage. These products integrate traditional methods into their branding and leverage geographical indications to enhance product value, providing an example of how Toraja *tuak* could achieve similar recognition in both local and international markets (Bowen & Zapata, 2009; Hernon, 2024).

The production and consumption of *tuak* also play a role in strengthening the cultural identity of the Toraja people. Various cultural elements are reflected in its production, including the traditional methods of sap collection, fermentation, and ceremonial practices where *tuak* is served. These practices make *tuak* a significant cultural symbol that reinforces the identity and traditions of the Toraja people. The preservation of such practices parallels the success of India's toddy industry, where traditional palm wine production has supported both local livelihoods and cultural rituals, ensuring the sustainability of these traditions over generations (Das & Tamang, 2023; Marshall & Mejia, 2012; Oluwole et al., 2023). Similarly, the Balinese arak industry has preserved traditional production methods while gaining recognition as an intangible cultural heritage through formal efforts to protect local knowledge (Widhiasthini et al., 2020). These parallels highlight Toraja *tuak*'s potential to preserve cultural traditions and contribute to the region's economic development.

However, several challenges must be addressed to fully realize the Toraja *tuak* business's cultural potential. Enhancing public awareness about preserving Toraja traditions and culture is essential to uphold these values. Protecting the intellectual property rights and local wisdom associated with Toraja *tuak* is also critical to prevent misuse or counterfeiting by external parties. Moreover, balancing economic interests with cultural preservation remains a vital consideration. Ensuring that *tuak* businesses operate sustainably while prioritizing the cultural values and traditions of the Toraja people can help address this challenge (Hunt & Barker, 2001; Prodjosantoso et al., 2023; Riskiyani et al., 2015; Wandansari, n.d.; Westermeyer, 1999). Support from the government in the form of clear regulations, business licensing facilitation, and infrastructure improvements, such as roads and electricity,

can significantly contribute to the development of Toraja *tuak* businesses (Khairuddin, 2021).

The community's active role is equally important in supporting the development of the Toraja *tuak* industry. Promoting the unique cultural values of Toraja *tuak* to tourists and external audiences can enhance its appeal while preserving the authenticity of the product. Additionally, maintaining the quality and integrity of Toraja *tuak* products ensures that their cultural significance is upheld. Business actors also play a vital role in improving product quality, expanding distribution networks, and involving local communities in production. Integrating cultural preservation into business strategies not only strengthens the identity of the Toraja people but also ensures the sustainability of the *tuak* industry for future generations (Luekveerawattana, 2012).

CONCLUSION

This study concludes that the Toraja *tuak* business remains sustainable across social, economic, and cultural dimensions, provided strategic measures are implemented. Social Aspects: The *tuak* business fosters community cohesion, strengthens kinship ties, and promotes social harmony. Aligning with cultural values and contributing to community development are crucial for sustaining these benefits. Economic Aspects: Affordable raw materials, simple production methods, and job creation highlight the economic potential of the *tuak* business. Strategies like product diversification, branding, and quality improvement can enhance market competitiveness while addressing regulatory and financial challenges, which is essential. Cultural Aspects: The *tuak* business preserves and promotes Toraja traditions and attracts cultural tourism. Protecting local wisdom and ensuring sustainable practices are key to maintaining its dual role in cultural preservation and economic contribution. In summary, the Toraja *tuak* business is worth sustaining, given its significant social, economic, and cultural potential, with targeted strategies needed for long-term viability.

Based on the findings of this research, the following actionable recommendations are proposed to maximize the benefits of the Toraja *tuak* business while addressing potential challenges across social, economic, and cultural aspects. For government and policymakers: establish clear and supportive policies to address regulatory barriers related to the production, distribution, and sale of *tuak*, including streamlined licensing processes and fair taxation schemes; develop and implement educational campaigns to promote responsible consumption of *tuak* and raise awareness of its potential health and social impacts; provide infrastructure support, such as improving access to roads and electricity, to facilitate the efficient production and distribution of Toraja *tuak*. For business actors: introduce specific marketing strategies that highlight the cultural uniqueness of Toraja *tuak*, such as branding that incorporates traditional motifs and leveraging digital platforms like social media to reach broader audiences; explore product diversification opportunities, such as creating non-alcoholic derivatives of *tuak* (e.g., *tuak* vinegar or syrup) to cater to a broader market, including non-drinkers; implement quality assurance measures to improve product safety and enhance consumer trust, ensuring that production processes adhere to hygiene and safety standards; enhancing product value through improved packaging and comprehensive labelling information to ensure safer

consumption and facilitate broader market reach. For local communities: establish training programs for producers and community members to enhance skills in business management, marketing, and sustainable production techniques; foster community-based initiatives to safeguard local wisdom and cultural values associated with *tuak* production, ensuring these traditions are preserved for future generations; encourage collaborative efforts among community members to strengthen supply chains, improve product distribution, and share best practices in production.

Sustainability measures: implement waste management systems to minimize environmental impacts from *tuak* production by converting by-products into organic fertilizers or other usable materials; encourage the cultivation of palm trees and other resources used in *tuak* production to ensure long-term resource availability; advocate for moderate *tuak* consumption by integrating cultural education into community events and emphasizing its cultural value as a symbol of Toraja heritage rather than merely as an alcoholic beverage..

AUTHOR CONTRIBUTION STATEMENT

[Author 1]: designed the research, analyzed the data, wrote the original draft, reviewed and edited the manuscript; [Author 2]: supervised the research, collected the data, edited the manuscript; [Author 3]: provided analytical guidance, addressed the reviewer's comments, edited the manuscript. All authors reviewed and approved the final version of the article.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

ACKNOWLEDGMENT

This journal article was written by Dwi Prasetyawati Thana, Faculty of Agriculture, Universitas Kristen Indonesia Toraja, based on the results of research on *Tuak* Toraja Business Opportunities Viewed from Social, Economic and Cultural Aspects funded by Universitas Kristen Indonesia Toraja through the UKI Toraja Internal Competitive Research Grant Programme and Community Service 2023 Basic Research Scheme. The author is solely responsible for the content.

ETHIC STATEMENT

Ethical review and approval were not required for this study, as it did not include any form of intervention or sensitive topics and posed minimal risk to participants. The study involved data collection through in-depth interviews, participatory observation, and document analysis. No vulnerable populations – such as children, the elderly, survivors of natural disasters, or survivors of sexual violence – were involved. All participants were fully informed about the nature and objectives of the research and gave their voluntary consent prior to participation. A

formal research permit was obtained from Universitas Kristen Indonesia Toraja and presented to all participants, and all data were anonymized and kept confidential.

REFERENCES

- Anggraini, A. (2017). Perilaku Pengunjung Kedai/Lapo *Tuak* di Kelurahan Umban Sari Kecamatan Rumbai Kota Pekanbaru. *Sosiologi Fakultas Ilmu Sosial dan Ilmu Politik Universitas Riau*, 4(1), 1–14. Retrieved from <https://jom.unri.ac.id/index.php/JOMFSIP/article/view/13839>
- Arrazzaq, M. (2019). *Efektivitas Tuak Manis Sebagai Minuman Energi terhadap Daya Tahan Kardiovaskuler pada Atlet Sepak Bola Sewo Putra FC Kab. Soppeng*. (Thesis, Universitas Negeri Makassar, Makassar, Indonesia). Retrieved from <http://eprints.unm.ac.id/12483/1/artikel.pdf>
- Barry, B. (2017). Enclothed Knowledge: The Fashion Show as a Method of Dissemination in Arts-Informed Research. *Forum Qualitative Sozialforschung*, 18(3), 1–23. doi: 10.17169/FQS-18.3.2837
- Biernacki, P., & Waldorf, D. (1981). Sampling Snowball Sampling: Problems and Techniques of Chain Referral. *Sociological Methods & Research*, 10(2), 141–163. doi: 10.1177/004912418101000205
- Bowen, S., & Zapata, A. V. (2009). Geographical Indications, Terroir, and Socioeconomic and Ecological Sustainability: The Case of Tequila. *Journal of Rural Studies*, 25(1), 108–119. doi: 10.1016/j.jrurstud.2008.07.003
- Badan Pusat Statistik Kabupaten Toraja Utara. (2020). Kabupaten Toraja Utara dalam Angka. *BPS Kabupaten Toraja Utara*. Retrieved from <https://web-api.bps.go.id/>
- Charles, S. J., Ploeg, C., & McKibbin, J. A. (2015). Sampling in Qualitative Research: Insights from an Overview of the Methods Literature. *The Qualitative Report*, 20(11), 1772–1789. doi: 10.46743/2160-3715/2015.2373
- Christou, P. A. (2023). How to Use Thematic Analysis in Qualitative Research. *Journal of Qualitative Research in Tourism*, 1(1), 1–17. doi: 10.4337/jqrt.2023.0006
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications, Inc.
- Das, S., & Tamang, J. P. (2023). Metagenomics and Metabolomics of Toddy, an Indian Fermented Date Palm Beverage. *Food Research International*, 172(1), 1–16. doi: 10.1016/j.foodres.2023.113205
- Fentiana, N. (2019). Kebiasaan Mengonsumsi *Tuak* dan Persepsi Sehat Masyarakat Desa Bukit Selamat Kecamatan Besitang Kabupaten Langkat Propinsi Sumatera Utara. *Jurnal Ilmiah Universitas Batanghari Jambi*, 19(3), 620–622. doi: 10.33087/jiubj.v19i3.725
- Firmando, H. B. (2020). Kearifan Lokal Minuman Tradisional *Tuak* dalam Merajut Harmoni Sosial di Tapanuli Bahagian Utara. *Aceh Anthropological Journal*, 4(2), 197–212. doi: 10.29103/aaj.v4i2.3121
- Firmando, H. B. (2021). Kearifan Lokal Sistem Kekerabatan Dalihan Na Tolu dalam Merajut Harmoni Sosial di Kawasan Danau Toba. *Aceh Anthropological Journal*, 5(1), 16–36. doi: 10.29103/aaj.v5i1.4613

- Hermansyah, Novia, Sugiyama, M., & Harashima, S. (2015). *Candida Tropicalis Isolated From Tuak, a North Sumatera-Indonesian Traditional Beverage, for Bioethanol Production. Korean Journal of Microbiology and Biotechnology*, 43(3), 241–248. doi: 10.4014/Mbl.1506.06002
- Hernon, M. (2024). *Japanese Sake Brewing Joins UNESCO Cultural Heritage List*. Retrieved from <https://www.tokyoweekender.com/japan-life/news-and-opinion/japanese-sake-brewing-joins-unesco-cultural-heritage-list/>
- Hunt, G., & Barker, J. C. (2001). Socio-Cultural Anthropology and Alcohol and Drug Research: Towards A Unified Theory. *Social Science & Medicine* (1982), 53(2), 165–188. doi: 0.1016/s0277-9536(00)00329-4
- Ikegami, S. (1997). *Tuak dalam Masyarakat Batak Toba: Laporan Singkat tentang Aspek Sosial-Budaya Penggunaan Nira = Tuak in the Toba Batak Society: A Preliminary Report on the Socio-Cultural Aspect of Palm Wine Consumption. Annual Report of the University of Shizuoka, Hamamatsu College*, 5(11–3), 1–8. Retrieved from https://oshika.u-shizuoka-ken.ac.jp/media/11_3_5.pdf
- Islam, M. A., & Aldhaini, F. M. F. (2022). Justification for Adopting Qualitative Research Method, Research Approaches, Sampling Strategy, Sample Size, Interview Method, Saturation, and Data Analysis. *Journal of International Business and Management*, 5(1), 1–11. doi: 10.37227/jibm-2021-09-1494
- Jannah, M., Riskiyani, S., Rahman, A., & Susanna, D. (2018). Description of the Acculturation Process of *Tuak* Consumption in North Toraja. *KnE Life Sciences*, 4(4), 181–188. doi: 10.18502/kls.v4i4.2276
- Kalu, F. A. (2017). What Makes Qualitative Research Good Research? An Exploratory Analysis of Critical Elements. *International Journal of Social Science Research*, 5(2), 43–56. doi: 10.5296/ijssr.v5i2.10711
- Khairuddin. (2021). Government Supervision in Overcoming Problems Drinking *Tuak* at The Gunung Meriah Aceh. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 7(3), 1313–1322. doi: 10.37905/aksara.7.3.1313-1322.2021
- Liguori, L., Albanese, D., Crescitelli, A., Di Matteo, M., & Russo, P. (2019). Impact of Dealcoholization on Quality Properties in White Wine at Various Alcohol Content Levels. *Journal of Food Science and Technology*, 56(8), 3707–3720. doi: 10.1007/s13197-019-03839-x
- Luekveerawattana, S. (2012). Cultural Landscape for Sustainable Tourism Case Study of Amphawa Community. *Procedia - Social and Behavioral Sciences*, 65(325), 387–396. doi: 10.1016/j.sbspro.2012.11.139
- Marshall, E., & Mejia, D. (2012). *Traditional Fermented Food and Beverages for Improved Livelihoods*. Retrieved from <https://www.fao.org/4/i2477e/i2477e00.pdf>
- Melga, B., & Adi, K. K. (2019). Designing Brand Identity for Batak Toba *Tuak* in Medan City. *6th Bandung Creative Movement International Conference in Creative Industries 2019*, 6(6), 60–65. Retrieved from <https://media.neliti.com/media/publications/293202-designing-brand-identity-for-batak-toba-e7c4e43b.pdf>

- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-By-Step Process of Thematic Analysis to Develop A Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22(1), 1–18. doi: 10.1177/16094069231205789
- Nggarang, B., Badar, A. N., Dirna, P., & Krisdolistia Ecin. (2022). Pemanfaatan “Tuak” sebagai Bahan Dasar Pembuatan Hand Sanitizer. *Jurnal Pengabdian Masyarakat*, 5(1), 35–40. doi: 10.36928/jrt.v5i1.881
- Oluwole, O., Kosoko, S., Familola, O., Ibironke, O., Cheikyoussef, A., Raheem, D., Saraiva, A., & Raposo, A. (2023). Fermented Traditional Wine From Palm Trees: Microbial, Nutritional Attributes and Health Impacts. *Frontiers in Food Science and Technology*, 3(1), 1–15. doi: 10.3389/frfst.2023.1225762
- Pahlawan, A. A., Sunardi, G., & Wuryani, E. (2022). Makna Tuak dalam Adat Pernikahan Masyarakat Dayak Pesaguan dan Nilai-Nilai Kearifan Lokal. *Jurnal Nusantara Raya*, 2(1), 1–6. Retrieved from <https://kbbi.kemdikbud.go.id/entri/T>
- Papu, M. (2024). Refleksi P5 Tema Ke-2 Kearifan Lokal Seminar Ilmiah: “Eksplorasi Minuman Tradisional Tuak Kobok Dalam Bingkai Budaya Manggarai” | SMAK Pancasila Borong. Retrieved from <https://smakpancasilaborong.sch.id/read/92/refleksi-p5-tema-ke-2-kearifan-lokal-seminar-ilmiah-eksplorasi-minuman-tradisional-tuak-kobok-dalam-bingkai-budaya-manggarai>
- Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods*. SAGE Publications Inc.
- Prodjosantoso, A. K., Tanjung, A. K. P., Mutammimah, B., Hisyam, M., Basri, M. F. M., Tonapa, N., Hawa, N. E., Jaya, S. D., Situmorang, S. S., & Fahmi, T. N. (2023). *Etnokimia: Dalam Budaya Nusantara*. PT Kanisius
- Riskiyani, S., Jannah, M., & Rahman, A. (2015). Aspek Sosial Budaya pada Konsumsi Minuman Beralkohol (Tuak) di Kabupaten Toraja Utara. *Media Kesehatan Masyarakat Indonesia*, 11(2), 76–85. doi: 10.30597/mkmi.v11i2.520
- Romualdi, K. B., Suciayati, P. H., Sentana, I. K. A., & Mahartha. (2023). Manifestasi Nilai-Nilai Pancasila dalam Kearifan Lokal Tradisional Taba’ Adat Dayak Tamambaloh. *INNOVATIVE: Journal of Social Science Research*, 3(2), 1251–1265. doi: 10.31004/innovative.v3i2
- Salma, S., Revianda, R., & Hidayat, T. (2020). The Perspectives of Islamic Law (Hadd Al-Syurb) on Aia Niro and Tuak (Khamr) Activities in Nagari Batu Payuang Halaban. *Society*, 8(1), 260–277. doi: 10.33019/society.v8i1.168
- Saragih, J. R., & Harmain, U. (2021). Faktor-Faktor yang Mempengaruhi Kinerja Kewirausahaan Petani Kopi Arabika di Kecamatan Dolog Masagal, Kabupaten Simalungun, Provinsi Sumatera Utara. *Journal of Regional and Rural Development Planning*, 5(2), 101–109. doi: 10.29244/jp2wd.2021.5.2.101-109
- Sasmita, S., & Lisa. (2020). Karakteristik dan Indeks Massa Tubuh Pecandu Tuak di Kelurahan Botang Kecamatan Makale Kabupaten Tana Toraja. *Kampurui Jurnal Kesehatan Masyarakat (The Journal of Public Health)*, 2(1), 15–19. doi: 10.55340/kjkm.v2i1.140

- Simbolon, L. (2017). Strategi Pedagang *Tuak* di Jalan Arengka Dua Kecamatan Payung Sekaki Kota Pekanbaru Lintong. *Jom Fisip*, 4(1), 1–14. Retrieved from <https://media.neliti.com/media/publications/116940-ID-strategi-pedagang-tuak-di-jalan-arengka.pdf>
- Simorangkir, J. (2021). *Minum Tuak dan Kearifan Lokal*. Retrieved from https://medanbisnisdaily.com/news/online/read/2021/06/07/136707/minum_tuak_dan_kearifan_lokal#google_vignette
- Sinaga, S. Y., & Salim, T. A. (2019). Knowledge Preservation of *Tuak* as Batak Toba Social Community Culture. *International Review of Humanities Studies*, 4(1), 415–419. doi: 10.7454/Irhs.V4i1.151
- Sudiana, I. K., Eka Putra, I. W. G. A., & Januraga, P. P. (2016). The Consumption of *Tuak* Increases Risk of Central Obesity Among Adult Males at Karangasem, Bali. *Public Health And Preventive Medicine Archive*, 4(2), 134–142. doi: 10.24843/PHPMA.2016.v04.i02.p03
- Sukiman, I., Syarifuddin, & Willem, I. (2019). Analisis Faktor-Faktor Konsumsi Minuman Keras (*Tuak Pahit*) pada Remaja di Desa Buntu Tabang Kecamatan Gandasil Kabupaten Tana Toraja. *Jurnal Ilmiah Manusia Dan Kesehatan*, 2(3), 343–353. doi: 10.31850/makes.v2i3.177
- Surmiak, A. (2018). Confidentiality in Qualitative Research Involving Vulnerable Participants: Researchers' Perspectives. *Forum Qualitative Sozialforschung*, 19(3), 1–26. doi: 10.17169/FQS-19.3.3099
- Sutrisno, A. D. (2022). Kebijakan Sistem Ketahanan Pangan Daerah. *Kebijakan: Jurnal Ilmu Administrasi*, 13(1), 28–42. doi: 10.23969/kebijakan.v13i1.4862
- Suwena, K. R. (2017). Menjual *Tuak* (Alkohol Bali) Sebuah Pilihan (Tinjauan dari Perspektif Sosial dan Ekonomi Masyarakat di Desa Datah). *International Journal of Social Science and Business*, 1(1), 24–30. doi: 10.23887/ijssb.v1i1.10163
- Voicu, M., & Babonea, A. (2007). Using the Snowball Method in Marketing Research on Hidden Populations. *Challenges of the Knowledge Society*, 44(2), 1341–1351. Retrieved from <https://doaj.org/article/92cee3cbe5b74333ab0f96f635e97125>
- Wandansari, G. K. R. (n.d.). *Aktualisasi Nilai-Nilai Tradisi Budaya Daerah sebagai Kearifan Lokal untuk Memantapkan Jatidiri Bangsa*. Retrieved from https://ikadbudi.uny.ac.id/sites/ikadbudi.uny.ac.id/files/lampiran/M_AKALAH_0.pdf
- Westermeyer, J. (1999). The Role of Cultural and Social Factors in the Cause of Addictive Disorders. *Psychiatric Clinics of North America*, 22(2), 253–273. doi: 10.1016/S0193-953X(05)70075-7
- Widhiasthini, N. W., Subawa, N. S., Sudharma, K. J. A., & Permatasari, N. P. I. (2020). Revitalisation and Innovation of “Arak Bali” Products. *International Journal of Innovation, Creativity and Change*, 13(11), 1126–1141. Retrieved from <https://cdn.undiknas.ac.id/repository/REPO-15992031469655140.pdf>
- Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods*. SAGE Publications, Inc.

- Yoshida, T., Gotoh, T., Tomizawa, N., & Ikeda, K. (2013). Snowball Sampling Consumer Behaviour Research to Characterise the Influence of Market Mavens on Social Networks. *International Journal of Intelligent Systems Technologies and Applications*, 12(3–4), 268–282. doi: 10.1504/IJISTA.2013.056534