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#### Research Paper

## Traditional Beverages, Cultural Identity, and Gastronomic Tourism: The Case of Tuak and Arak Bali

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#### ABSTRACT

This study aims to examine the role of tuak and arak Bali across cultural, economic, and tourism dimensions, and to identify key challenges and opportunities for their sustainable development. This research employs a qualitative approach using in-depth interviews, observations, and document analysis involving traditional producers, community leaders, government representatives, and hospitality practitioners in Bali. Data were analyzed using thematic analysis. The findings indicate that tuak and arak Bali function as expressions of local knowledge and cultural identity, while also supporting rural livelihoods. Despite their potential in gastronomic tourism, their broader utilization is limited by inconsistent product quality, weak value chain integration, and limited collaboration among stakeholders. By shedding light on the ways traditional alcoholic beverages can pass through the process of commercialization while retaining their cultural integrity, this study contributes to the development of the discipline of gastronomy and hospitality. Nevertheless, the conclusions drawn stress the importance of striking a balance between maintaining cultural heritage and serving high-quality products that comply with hygiene, quality assurance, consistency of product type, and responsible governance. Although these conclusions may contribute to the development of sustainable beverage-driven tourism, the qualitative nature of the research implies that the findings are valid only for the specific cultural background of Bali.

**Keywords:** *Traditional beverages, Arak Bali, Tuak, Gastronomic tourism, Sustainable hospitality.*

*Declaration of Conflict of Interest:* The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## 1. INTRODUCTION

Bali has a well-known culinary culture and making gastronomy one of the ways to reignite tourism interest and attract visitors. Cultural practices in Balinese society ranging from religious systems and performing arts to culinary traditions constitute an integral part of both social identity and tourism attractiveness. Pulled by the high demand for genuine culinary and beverage experiences, traditional food and beverages are not merely consumable goods but also embody symbolic, social, and economic values that contribute to the sustainability of local communities and tourism experiences (Brooks et al., 2023; Pranskūnienė & Zabulionienė, 2023; Shinde & Olsen, 2022). Among these traditional products, tuak and arak Bali represent indigenous fermented and distilled beverages that have been produced and consumed for generations. Bali has invested its key culinary assets, namely tuak and arak Bali, combining the cultural legacy with authentic production knowledge and community traditions (Wibawa et al., 2022; Wijaya et al., 2024). Tuak is a naturally fermented beverage derived from palm sap, including coconut (*Cocos nucifera*), sugar palm (*Arenga pinnata*), and lontar (*Borassus flabellifer*). Due to its high sugar content, palm sap undergoes spontaneous fermentation, typically resulting in an alcohol content of around 4% (Zulmi et al., 2024). Similar beverages are found globally under different names such as toddy or palm wine, reflecting a shared tradition of palm-based fermentation across regions (Cantadori et al., 2022).

The fermentation process of tuak involves diverse indigenous microorganisms, including yeasts such as *Saccharomyces cerevisiae*, *Saccharomyces chevalieri*, and *Candida tropicalis*, which play a crucial role in converting sugars into ethanol while producing distinct aromatic compounds. Recent studies highlight that traditional fermented beverages contain not only ethanol but also various bioactive compounds, including phenolics, flavonoids, and organic acids, which contribute to their sensory characteristics and potential functional properties (Byaruhanga & Isgren, 2023; Cantadori et al., 2022; Ottaviani et al., 2023). These findings indicate that tuak is not only a cultural product but also a subject of scientific interest in food microbiology and fermentation technology. Beyond its biochemical properties, tuak and arak Bali hold significant socio-cultural roles within the local society.

Bali's culinary heritage is marketed as a competitive advantage for tourism, aimed at the need for real food and beverage experiences. For example, Balinese drinks tuak and arak reflect the local culture as well as provide opportunities for hospitality and gastronomic tourism development. Their use reinforces social cohesion and reflects the interconnection between cultural traditions, religious values, and community life. Such cultural embedded positions tuak and arak as intangible cultural heritage elements that contribute to cultural continuity and identity preservation (Wijaya et al., 2024). From an economic perspective, the production of tuak and arak plays an important role in supporting rural livelihoods, particularly in regions with limited agricultural resources. For many households in North and East Bali, palm sap tapping and traditional distillation constitute primary or supplementary sources of income (Wibawa et al., 2022).

In recent years, the Balinese government has recognized the potential of traditional beverages as part of the creative economy and cultural tourism development (Stella et al., 2022). This is reflected in regional policies such as Governor Regulation No. 1 of 2020, which aims to regulate, protect, and promote traditional fermented and distilled beverages, including arak Bali. The policy emphasizes not only cultural preservation but also quality standardization, distribution management, and market expansion, indicating a shift toward formalizing traditional products within modern economic systems (Setiawan & Samsithawrati, 2023).

Within the tourism sector, arak Bali has increasingly gained attention as a potential component of gastronomic tourism. The growing demand for authentic and local experiences among tourists has encouraged the integration of traditional products into hospitality services. Arak Bali has begun to be introduced in hotels, restaurants, and bars, both as a traditional beverage and as a base ingredient in innovative cocktails (Karta et al., 2026).

This trend aligns with global developments in food tourism, where local food and beverages are central to enhancing destination competitiveness and visitor experience (Pruksa et al., 2022). Despite its potential, the development of tuak and arak Bali faces several structural challenges. The culinary heritage of Bali is promoted as a competitive advantage for tourism, satisfying the demand for real food and drink experiences. For instance, Balinese beverages tuak and arak epitomize local culture and create opportunities for the growth of hospitality and gastronomic tourism. Additionally, limitations in distribution systems, product standardization, and market positioning hinder the competitiveness of these traditional beverages in broader markets, particularly within the formal hospitality industry (Semuel et al., 2022).

Moreover, supportive policies have been established, their implementation within the tourism and hospitality sectors is not yet fully optimized. The integration between traditional producers, government initiatives, and industry stakeholders remains fragmented, creating a gap between cultural value, economic potential, and practical utilization. This indicates the need for a more comprehensive and collaborative approach to developing tuak and arak Bali as sustainable cultural and economic assets. Previous studies on tuak and arak Bali have predominantly focused on microbiological characteristics, fermentation processes, and chemical compositions. However, research that integrates cultural, economic, and tourism dimensions remains limited. At the same time, the evolving policy landscape and increasing interest in gastronomic tourism highlight the transformation of these traditional beverages from cultural artifacts into potential economic commodities within the tourism industry (Esau & Senese, 2022).

This study investigates how tuak and arak Bali can change from being community-based cultural drinks into original gastronomic tourism products. It analyzes the interrelationship between heritage, traditional production, local economy systems, and hospitality needs, contributing to the advancement of food studies and hospitality by showing how authenticity, quality, governance, and service innovations can ensure the sustainable commercialization of indigenous drinks without hurting their cultural significance. Seeks to analyze their production systems, socio-cultural significance, economic roles, and potential integration into the hospitality industry, while identifying key challenges and opportunities for sustainable development (Figueiredo et al., 2022; ).

## 2. LITERATURE REVIEW

### 2.1. Traditional Beverages as Cultural Heritage

Traditional food and beverages are increasingly recognized as forms of intangible cultural heritage, reflecting the identity, history, and social practices of local communities. In many regions, fermented and distilled beverages are not only products of consumption but also represent inherited knowledge systems, ritual practices, and community values (Hu et al., 2023). Recent studies emphasize that traditional fermentation processes embody local wisdom, including the use of indigenous microorganisms and environmentally adapted techniques (Asrani et al., 2019; Xia et al., 2023b).

In the context of tourism, cultural heritage-based food products serve as important elements of destination identity. Gastronomy is no longer perceived solely as sustenance but as a medium through which cultural narratives are communicated to visitors. This aligns with the growing recognition of gastronomy as a key component of cultural tourism and heritage preservation (Richards, 2014). Consequently, traditional beverages such as tuak and arak Bali can be positioned as cultural assets that contribute to both heritage continuity and tourism attractiveness. However, previous studies have largely examined traditional beverages from microbiological and technological perspectives, with limited attention to their broader socio-cultural roles (Ojeda-Linares et al., 2020; Cantadori et al., 2022; Yu et al., 2023; Teferi et al., 2026). This creates a gap in understanding how such products function simultaneously as cultural heritage and economic resources within tourism systems.

## *2.2. Local Economic Practices and Community-Based Production*

Production of beverages in tradition is an economic system that is based in the community and connects the indigenous knowledge with tourism (Giampiccoli & Kalis, 2012). Although traditional producers bring forth the authenticity making gastronomic destinations distinctive, they can earn more from their activities, but due to weak bargaining power, poor market access and little cooperation with hospitality industry their economic gains are minimal. Thus, sustainable development calls for introducing a more integrated form of value chain governance (Seyitoğlu & Ivanov, 2020; Dwivedi et al., 2021; Karta et al., 2026). Beverage production is closely linked to local economic practices, particularly in rural communities where livelihoods depend on natural resource utilization. Local beverages community-based production systems often rely on small-scale, family-based operations that utilize inherited knowledge and locally available materials. These systems contribute to income generation, employment, and economic resilience, especially in areas with limited alternative economic opportunities.

Recent literature highlights that local food, and beverage industries play a crucial role in inclusive and sustainable economic development, particularly when integrated into hospitality value chains (Langgat, et al., 2023). Gastronomic products can generate multiplier effects by connecting agriculture, production, distribution, and hospitality sectors (Kandampully et al., 2022). Nevertheless, challenges remain in terms of value chain efficiency, market access, and producer bargaining power. Studies indicate that traditional producers often face structural constraints, including dependence on intermediaries, limited access to formal markets, and lack of standardization (Xue et al., 2023). These limitations reduce the economic value captured by local communities and hinder the scalability of traditional products. In the case of tuak and arak Bali, this issue is particularly relevant, as production remains largely informal and fragmented (Wibawa et al., 2022). Therefore, it is important to better understanding the intersection between traditional beverages production systems and modern economic structures is essential for enhancing local economic empowerment (Mariana et al., 2025).

## *2.3. Gastronomic Tourism and Destination Competitiveness*

Bibliometric analyses reveal key research clusters in gastronomic tourism, including authenticity, cultural heritage, sustainability, and destination marketing (Dordai et al., 2026). Gastronomic tourism is becoming more extensive in scope and new areas, and offers more experiences related to beverages, where the old alcoholic beverages are an important part of gastronomy tourism and local culture as well (Harrington, 2005). Activities such as visiting the distilleries, being present at tastings and mixology shows, and storytelling allow travelers to gain authentic hospitality experiences. A recent study shows that gastronomic experiences significantly influence tourist satisfaction, destination image, loyalty, and behavioral intentions (Hossain et al., 2024). Similarly, other studies highlight that culinary experiences contribute to emotional engagement, place attachment, and overall travel experience quality. This indicates that food and beverages are not only peripheral elements but central components of tourism value creation but also plays a strategic role in destination differentiation and branding (Bisai et al., 2023). Destinations increasingly utilize local culinary products to create unique identities and competitive advantages in the global tourism market (Dai et al., 2022).

Tuak and arak Bali have good potential for the promotion of gastronomic tourism industry, it is defined as tourism motivated by the desire to experience local food, beverages, and culinary traditions as part of cultural exploration (Wijaya et al., 2024; Sadguna & Arikusuma, 2025). For Bali, which is already a globally recognized tourism destination, integrating local beverages such as arak into the tourism experience offers an opportunity to diversify tourism products and strengthen cultural authenticity.

#### *2.4. Sustainability in Gastronomic Tourism*

Sustainability has become a central theme in contemporary tourism research, including in the field of gastronomic tourism. Sustainable gastronomy emphasizes the integration of environmental responsibility, cultural preservation, and economic viability within food-related tourism activities (Chen et al., 2022). Recent literatures indicate that gastronomic tourism contributes to sustainability in several ways such as preserving traditional knowledge, recipes, and practices (Dordai et al., 2026). Moreover, gastronomic tourism supporting local producers, communities, and environmental sustainability by promoting local sourcing and reducing supply chain impacts (Baysal & Bilici, 2024). However, literatures also highlight significant challenges, including the lack of standardized sustainability indicators, inconsistent product quality, and weak integration between stakeholders, these issues limit the ability of destinations to fully leverage gastronomic tourism as a sustainable development strategy (Kaur et al., 2025). In the context of traditional alcoholic beverages, sustainability is further complicated by regulatory frameworks, health concerns, and the need for quality assurance (Sawadogo-Lingani et al., 2021). This creates a complex dynamic between preserving authenticity and ensuring compliance with modern industry standards (Harutyunyan & Malfeito-Ferreira, 2022).

#### *2.5. Integration of Traditional Beverages into the Hospitality Industry*

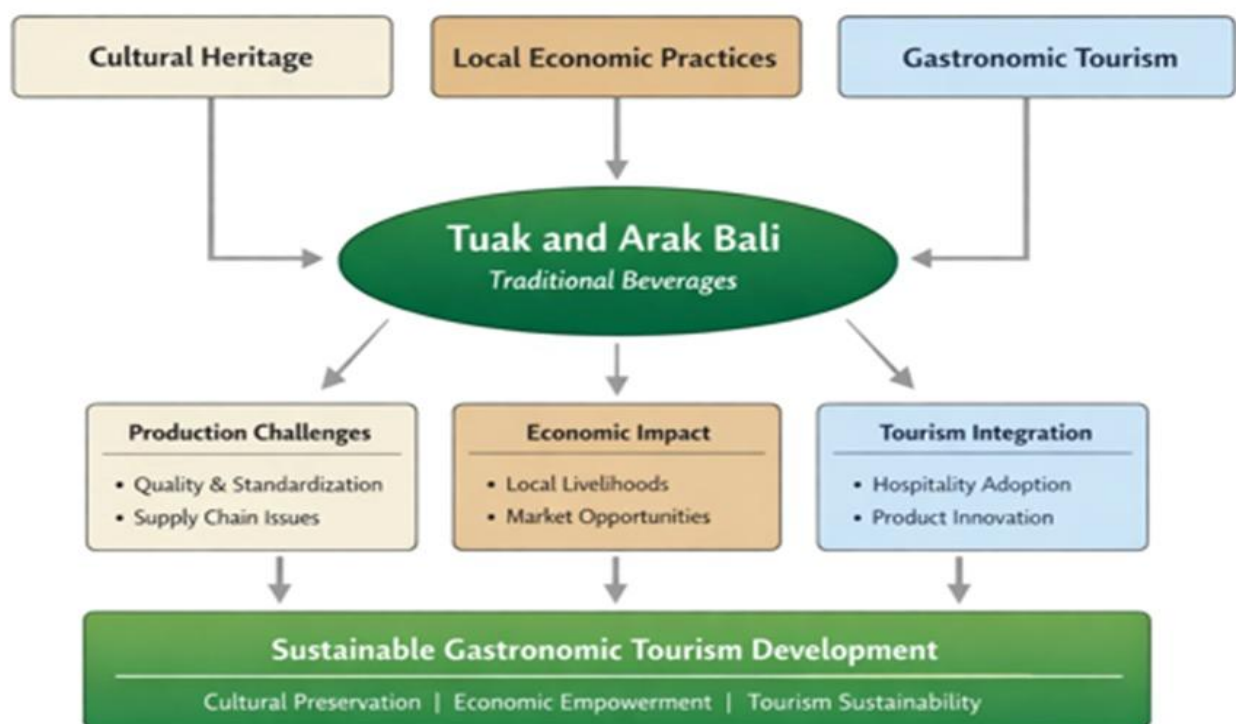
The integration of local food and beverages into the hospitality sector is increasingly recognized as a key strategy for enhancing tourism experiences. Hotels, restaurants, and bars play a critical role in transforming traditional products into marketable tourism offerings through innovation, branding, and service delivery (Nistor & Dezsi, 2022). Previous research shows that innovation and creativity in gastronomic tourism such as the development of local-based cocktails can enhance destination attractiveness and competitiveness (Shomler, 2023; Fusté-Forné, 2025). This aligns with global trends where traditional ingredients are reinterpreted within modern culinary contexts (Mo et al., 2022). However, successful integration requires consistent product quality, reliable supply chains, effective branding and storytelling, and collaboration between producers and industry stakeholders (Hasanah et al., 2023). For arak Bali, while there has been increasing adoption in cocktail culture, its utilization remains limited due to issues related to standardization, perception, and distribution. This indicates a gap between production practices and industry requirements

#### *2.6. Research Gap and Conceptual Positioning*

Based on the reviewed literature, several critical research gaps can be identified. First, existing studies on traditional beverages tend to adopt a fragmented approach, focusing on isolated perspectives such as microbiological characteristics, cultural significance, or tourism potential, with limited efforts to provide an integrated analysis that connects these dimensions. Second, compared to the extensive body of research on traditional food products, traditional alcoholic beverages remain underexplored within the context of gastronomic tourism, resulting in a lack of comprehensive understanding of their role in shaping tourist experiences and destination identity. Third, the relationship between local producers and the tourism industry is insufficiently examined, particularly in terms of how small-scale, community-based producers can be effectively integrated into tourism value chains to enhance economic benefits and sustainability. Finally, issues related to sustainability and governance remain inadequately addressed, especially concerning the interaction between policy frameworks, community practices, and industry implementation (Ottaviani et al., 2023). This gap highlights the need for more holistic and interdisciplinary research that examines not only the cultural and economic dimensions of traditional beverages but also the institutional and governance mechanisms that influence their development within the tourism sector.



This research seeks to fill the gaps by placing tuak and arak Bali into a unified gastronomy and hospitality approach and demonstrating how factors such as cultural authenticity, community-based production, quality assurance, and incorporated hospitality contribute to creating indigenous beverages of both commercial value and gastronomic tourism products. Through this approach, research contributes to the development of both gastronomy and hospitality fields. By integrating these perspectives, the study moves beyond fragmented approaches and offers a comprehensive understanding of the role of traditional beverages within broader socio-economic and tourism contexts (Pranskūnienė & Zabulionienė, 2023). In doing so, the study not only highlights the potential of tuak and arak Bali within the tourism sector but also identifies key challenges and opportunities associated with their transformation, including issues of standardization, market integration, and stakeholder collaboration (Salman et al., 2022). Therefore, it contributes to existing literature by examining the processes through which traditional, community-based cultural products can transition into sustainable tourism commodities.



**Figure 1.** Research Framework  
 Source: Authors elaboration, 2026

### 3. METHODOLOGY

#### 3.1. Research design

This study adopts a qualitative research design to explore the cultural, economic, and tourism-related dimensions of tuak and arak Bali. A qualitative approach is considered appropriate as the research aims to develop an in-depth understanding of social practices, meanings, and interactions associated with traditional beverage production and its integration into the tourism sector (Li & Yu, 2023). The study is grounded in an interpretivist paradigm, which emphasizes the exploration of participants' perspectives within their socio-cultural context. This approach allows for a holistic interpretation of how traditional knowledge, cultural values, and local economic practices intersect and evolve within contemporary tourism dynamics (Esau & Senese, 2022).

The study took place at targeted regions of Bali known for their major tuak and arak production centers and the development of gastronomical tourism locations. The regions were chosen because they incorporate traditional production models, massive attachment of local community to local indigenous drink heritage, and the growing convergence of the communities into hospitality and tourism sector in order to provide the best environment for finding the links of preservation of culture with local incomes and development of sustainable tourism (Mas et al., 2022). These locations were deliberately selected as they represent active sites of traditional production as well as emerging points of interaction with the tourism and hospitality industries (Kandampully et al., 2022). In addition, data collection extended to hospitality settings, including hotels, restaurants, and bars, where arak Bali has begun to be incorporated into gastronomic offerings.

This multi-sited research design enables a comprehensive understanding of the value chain, encompassing production, distribution, and consumption within tourism contexts (Brooks et al., 2023). Participants in this study were selected using a purposive sampling strategy to ensure the inclusion of individuals with direct knowledge and experience related to the research topic (López, 2022). This approach was complemented by snowball sampling, allowing the researcher to identify additional relevant informants through participant recommendations (Babashahi et al., 2022). The selection criteria focused on individuals who are actively involved in tuak and arak production, local governance or policy making related to traditional beverages, cultural leadership within the community, and the hospitality industry, particularly those utilizing arak Bali in beverage services. In total, the study involved approximately 15 to 25 participants, including traditional producers, village government representatives, community leaders, bartenders, and hotel managers.

### *3.2. Population and sample*

The sample size was not fixed ahead of time because it was based on thematic saturation. During the data collection, interviews were coded in a process that was iterative. When the last couple of interviews revealed no new themes, the notion of saturation was achieved. After a few extra interviews were conducted, they indicated that the existing framework of themes remained unaffected. Data was collected through multiple qualitative methods to ensure depth and richness of information (Vicente, 2023).

In-depth semi-structured interviews were conducted using an interview guide designed to explore key aspects such as production processes, cultural and ritual significance, economic roles, tourism potential, and challenges related to standardization and market integration (Reeves et al., 2023). Each interview lasted between 45 and 90 minutes and was conducted in Bahasa Indonesia or local dialects, then transcribed and translated into English for analysis. In addition to interviews, participant observation was carried out at production sites, including sap tapping, fermentation, and distillation processes, as well as in hospitality venues where arak and tuak Bali is utilized.

These observations provided contextual insights into production techniques, social interactions, and the practical application of traditional beverages in tourism settings. Furthermore, document analysis was employed to complement primary data, including government regulations, local administrative records, and relevant academic and industry literature (Hughes et al., 2021). In qualitative research, the researcher serves as the primary instrument of data collection and interpretation (Frank & Marken, 2021). This study was supported by research instruments such as semi-structured interview guides, observation checklists, and field notes to ensure systematic data gathering (Bouncken et al., 2021). The interview guide was developed based on research objectives and existing literature and was reviewed by experts to ensure its relevance and clarity.

### 3.3. Measurement and instruments

This qualitative study, the data were collected from semi-structured, in-depth interviews and from direct observations and document reviews. An interview protocol was developed based on the objectives of the study and was informed by the literature on cultural heritage preservation, food tourism, local economic prosperity, and sustainable hospitality (Brooks et al., 2023; Esau & Senese, 2022; Hu et al., 2023; Langgat et al., 2023). The interview guide comprised five thematic sections: (1) cultural and historical importance of tuak and arak Bali; (2) traditional methods of production and ways in which knowledge is passed down; (3) economic contributions of these beverages to the communities; (4) integration of the beverages within the tourism and hospitality sectors; and (5) opportunities and challenges associated with sustainable tourism development.

The study used open-ended questions to help the participants communicate their own experiences, perceptions and interpretations. Fieldwork was conducted in March 2026 by the research team. Participants were selected using a purposive sampling method to collect rich and relevant information on the production, distribution, cultural importance and consumption of the tuak and arak Bali by tourists. The participants in this study were traditional producers, community leaders, village representatives, traders, government officials and hospitality practitioners. Data triangulation by means of interview data, field observation data, and supporting documentation was used to provide credibility and reliability to the research findings (Hammerton & Munafò, 2021). With participant consent, all interviews were audio-recorded, then transcribed word for word, and then were thematically analysed to discover any trends and themes that emerged in relation to the influence tuak and arak Bali have on preserving cultural heritage, developing local economies, and supporting sustainable tourism.

### 3.4. Data collection procedure

Data were collected at numerous traditional tuak and arak Bali production sites located within three different regencies of Bali (Karangasem, Buleleng, and Badung). They were purposively selected because they have an ongoing tradition of producing tuak & arak Bali in addition to a strong connection with local communities, culture, and tourism. Purposive sampling methods were employed to select participants who had knowledge and experience related to the production, distribution, and cultural significance of tuak & arak Bali (Poole et al., 2021). Participants included tuak & arak Bali producers, village leaders (Perbekel), traders, government officials, and hospitality professionals. Data collection continued until the researcher had reached thematic saturation; thus, producing no new information related to the study (Brooks et al., 2023).

Primary data were collected using semi-structured interviews along with observations and document reviews (Hyun & Lee, 2022). Before conducting the interviews, participants were provided with details of the purpose of the study and informed participation of their choice. Informed consent was obtained from all participants, and confidentiality was maintained throughout the research process. Interviews took place face-to-face at the production sites as well as at their respective village offices or other places relevant to the research with an approximate timeframe of 45-90 minutes in length per interview. Interview recordings were made with participants' approval and supplemented with field notes (Giliberto & Labadi, 2023). To enhance the trustworthiness of this study, researchers utilized data triangulation; they compared findings between observational sources, interview data and documentary sources. Member checking was also conducted with approved members to confirm their interpretations of the data and to solidify the study.



### 3.5 Data analysis techniques

In this study thematic analysis was used to analyse the data, the analysis began with an understanding of the data through repeated reviews of the interview transcripts and fieldnotes during the familiarisation process (Lochmiller, 2021). NVivo qualitative data analysis software was used to do the coding and facilitated analytical rigour and transparent organisation and management of all data. Data units were coded through an analysis of NVivo's coding and query functions, allocating them to meaningful categories, with these categories being allocated to broader themes.

The themes were then subject to continuous review, refinement and interpretation to ensure consistency with the research objectives. NVivo coding enabled researchers to conduct systematic and iterative analyses, leading to the identification of inductively emerging themes and deductively emerging themes based on existing literature. Using this method, robust findings were produced to provide information on the socio-cultural significance of tuak and arak Bali, their contribution to the local economy and their potential to support sustainable tourism development (Lochmiller, 2021).

Multiple validation techniques were used to validate the study to ensure that it is rigorous and trustworthy. Improving the credibility of the study via the triangulation of data through comparing multiple sources of data (interviews, observations, and documents) as well as using member checks in which select participants were asked to confirm if they agree with the analysis of their data (Campbell et al., 2020). Transferability was enhanced by providing thick, descriptive detail about the context of the research and of the participants there by allowing the reader to be able to make their own judgements about the transferability of the findings of this study to other similar contexts.

Dependability was ensured through documentation of a systematic approach to the research procedures, and confirmability was established through a commitment to being reflexive and to reducing researcher bias through constant verification of the data and analysis of the data (Yadav, 2021). There were considerable ethical considerations included in the research process. Informed consent was obtained from all participants before data was collected. Confidential and Anonymous information were maintained for all participants (Hosseini et al., 2022). Participation was voluntary and all participants were informed of their right to withdraw from the study at any time. The researchers implemented these ethical measures to ensure adherence to both established academic and professional research standards.

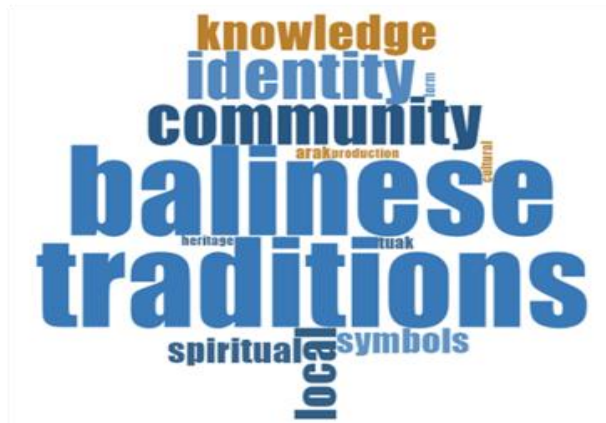
## 4. RESULT

According to the interviews, participants considered tuak and arak Bali beverages culturally significant due to the meanings they have created from these drinks. A beverage producer explained: *"For us, the act of producing arak is not about producing a beverage but continuing our ancestors' work and preserving the identity of our village."*

Likewise, practitioners in the hospitality sector saw a chance to introduce the two drinks to visitors as a way of conveying Balinese culture through storytelling. The findings above demonstrate that tuak and arak Bali serve as part of intangible cultural heritage. According to these facts, participants view tuak and arak Bali as not only traditional drinks but also historical alcohol beverages that reflect memories connected to cultural identity, spiritual beliefs, and ancestral wisdom of Balinese people. One traditional producer said: *"Arak is not just a drink; it has to be used in our rituals because it associates us with our ancestors"*. The village chief also said: *"Tuak is used by us whenever we celebrate our traditions, as it stands for unity and reminds people of our tradition."*

The examples show that tuak and arak Bali are basically the forms of intangible Balinese culture that preserve ethnicity of local people and promote interaction between them. In addition, the association

of these beverages with religious rituals and customary ceremonies highlights their role as spiritual and symbolic elements of Balinese culture. These findings support the view that tuak and arak Bali function as important forms of intangible cultural heritage that contribute to cultural preservation and the continuity of community values. The findings demonstrate that the production of tuak and arak plays a significant role in supporting local economic development, particularly at the household and community levels (Wibawa et al., 2022).



**Figure 2.** Tuak and Arak as cultural heritage  
 Source: Research Data, 2026

From Figure 2 it can be highlights dominant themes such as household income, community-based activities, economic benefits, local resources, sustainability, and traditional knowledge. These findings suggest that tuak and arak production serves as an important livelihood strategy for many rural households can generating income while strengthening community-based economic practices.



**Figure 3.** Contribution to local economy  
 Source: Research Data 2026

The production process relies heavily on locally available natural resources and traditional knowledge, creating economic opportunities that remain closely connected to local cultural traditions (Brooks et al., 2023). Furthermore, the prominence of sustainability-related themes indicates that informants perceive the utilization of local resources as a means of supporting long-term community welfare and economic resilience (see Figure 3). As a result, tuak and arak are viewed not only as traditional beverages but also as valuable economic assets that contribute to household prosperity, community development, and sustainable local livelihoods (Sayuti, 2023).

The tourism appeal of tuak and arak Bali is not based on the beverages alone but rather on the experiences that the beverages bring regarding their production and consumption. Informants linked

this authenticity to the traditional methods of fermentation and distillation used, materials sourced locally, and generations of artisan skills. They also pointed out that production demonstrations, tasting of the drinks, and cultural stories connected with the beverages made the experience gastronomically immersive and bolstered the destination identity while at the same time safeguarding the Balinese culture. The prominence of these terms suggests that informants perceive traditional beverages not merely as consumable products but as cultural assets capable of enriching visitor experiences through meaningful interactions with local traditions and heritage.



**Figure 4.** Gastronomic tourism potentials  
Source: Research Data, 2026

From figure 4 results suggest that tuak and arak Bali possess significant potential as components of gastronomic tourism potential, offering visitors authentic, culturally rich, and distinctive experiences that enhance destination attractiveness while supporting the preservation of local heritage and traditions. The findings indicate that tuak and arak Bali offer opportunities to create authentic tourism experiences that connect visitors with the distinctive cultural identity of Bali (Đurkin Badurina et al., 2023). Through traditional production processes, local ingredients, and cultural narratives embedded within the beverages, tourists gain access to experiences that extend beyond consumption and foster a deeper understanding of Balinese culture. The recurring presence of the terms stories and cultural further emphasizes the importance of storytelling as a mechanism for transforming traditional beverages into memorable tourism experiences (Esau & Senese, 2022).

The most notable challenges in the process of adapting tuak and arak Bali into hospitality products are quality assurance, standardization, and others. Respondents noted that there were some differences in production methods, hygiene and alcohol content which are important deterrents, since hotels follow strict food safety and service regulations. In addition, respondents called for better hygiene, consistency in products, alcohol content regulation and responsible service to gain trust and market acceptance. Nonetheless, it is necessary to ensure that innovations do not replace traditional production or jeopardize cultural heritage and authenticity. Other frequently occurring terms, including raw materials, production, cleanliness, techniques, product, and environment, further indicate that product consistency is strongly influenced by variations in production practices and operating conditions. These findings suggest that maintaining uniform quality remains one of the most critical issues limiting the broader commercialization and market acceptance of traditional beverages.

The results reveal that differences in raw materials, traditional production techniques, and environmental conditions contribute to variations in product characteristics. Informants frequently associated these factors with inconsistencies in taste, alcohol content, and overall product quality (see

Figure 5). In addition, concerns related to cleanliness and production hygiene emerged as important considerations, particularly in the context of expanding market access and meeting the expectations of modern consumers and hospitality businesses.



**Figure 5.** Obstacles found  
 Source: Research Data 2026



**Figure 6.** Government role themes  
 Source: Research Data 2026

The findings indicate that effective governance contributes to heritage preservation and at the same time assists arab Bali in its commercial integration into the hospitality industry (Figure 6). The prominence of these terms suggests that stakeholders perceive government intervention as a crucial mechanism for transforming arab Bali from a traditional community product into a recognized cultural and economic asset.

Based on government role themes it appears that the involvement of the government in the sustainable integration of arab Bali into the hospitality and tourism perspective is determined by governance and not by promotion alone. The informants emphasized the importance of regulatory frameworks relating to licensing, quality assurance, hygiene, and alcohol safety in addition to capacity-building initiatives which were directed at production, food safety, branding, and market readiness.

The findings also indicate that policy initiatives are primarily directed toward protecting the cultural identity of arab Bali while simultaneously enhancing its economic and tourism potential (Olagoke et al., 2026). The dominance of the term protecting reflects a strong emphasis on safeguarding

arak Bali as part of Balinese cultural heritage. Informants frequently associated government policies with efforts to preserve traditional production practices, support local producers, and maintain the authenticity of tuak and arak as a culturally significant product. This protective role is viewed as essential for ensuring that commercialization and tourism development remain aligned with cultural preservation objectives (Sahoo et al., 2024).

The findings further reveal that legalization has emerged as a critical policy instrument in supporting the formal recognition of arak Bali. The legalization process has created new opportunities for producers to participate in formal markets, expand distribution channels, and increase product legitimacy. Informants emphasized that legal recognition provides greater certainty for producers and facilitates broader acceptance of arak within the hospitality and tourism industries (Karta et al., 2024).

## 5. DISCUSSION

The practice of making tuak and arak Bali is an integral part of Balinese culture and society today, contributing not merely to economic life but also functioning as an aspect of local knowledge that has been passed down from generation to generation (Wu et al., 2022). The process of tapping palm sap, fermenting tuak, and distilling arak is largely conducted using traditional techniques that have been transmitted across generations. This intergenerational transfer of knowledge reflects what is widely recognized in the literature as intangible cultural heritage, where traditional food and beverage practices embody collective identity and cultural continuity (Bell & Pham, 2020). In this regard, the findings support previous studies emphasizing that traditional fermentation practices are not merely technical processes but are socially constructed systems of knowledge shaped by local environmental and cultural contexts (Bell & Pham, 2020). In contrast to earlier works concentrating on the microbiology, chemistry, or technology involved in tuak and arak Bali, this research takes the approach of gastronomy and hospitality, it showed that the value of these traditional drinks results from cultural heritage, indigenous production knowledge, participatory approaches of communities, and the utilization of real hospitality practices (Bunce, 2021).

In addition to their cultural significance, the findings indicate that tuak and arak production play an important role in sustaining local livelihoods, particularly in rural areas with limited economic alternatives. Many producers rely on palm sap tapping and traditional distillation as primary or supplementary sources of income. This aligns with existing studies suggesting that local food and beverage production can serve as a foundation for community-based economic development, particularly when linked to tourism value chains (Lu et al., 2022).

However, the present study reveals a persistent structural limitation in the form of unequal value distribution, where producers often depend on intermediaries for market access. This reduces their bargaining power and limits income generation, a finding that is consistent with broader discussions on the marginalization of small-scale producers in traditional food systems (Zárate-Altamirano et al., 2022). Compared to previous studies, this research provides a more nuanced understanding of how economic benefits are constrained not only by production capacity but also by systemic issues within distribution networks and market structures (Dwivedi et al., 2021).

An important problem faced during the commercialization of arak Bali in the tourism sector is the uneven quality of this drink due to different production processes, raw materials, cleanliness, and alcohol content. Law regulations provide certain limitations on the use of arak in the hospitality sector, which demands reliability and safety of the produced food products. As noted by respondents, the improvement of the cleanliness regarding the production process and the control over the alcohol content is vital for gaining consumer trust. Yet, they underline that standardization must go in line with traditional innovation techniques as preserving the unique aspects of arak Bali is important (Díaz et al.,



2022). This finding corroborates previous research on traditional fermented beverages, which highlights the challenges of maintaining quality consistency in artisanal production systems.

From a tourism and hospitality perspective, such inconsistencies pose significant challenges, as the industry requires standardized products to ensure safety and customer satisfaction (Xia et al., 2023a). Unlike prior studies that treat quality issues primarily as technical concerns, this study situates standardization within a broader socio-economic context, demonstrating that improving quality is not only a matter of technology but also of capacity building, knowledge transfer, and institutional support (Giotis & Papadionysiou, 2022).

Furthermore, the findings indicate that arak Bali holds considerable potential as a component of gastronomic tourism, particularly within the hospitality industry. The increasing use of arak as a base ingredient in cocktails reflects a growing trend toward the incorporation of local products into tourism experiences. This aligns with global developments in gastronomic tourism, where authenticity and locality are key drivers of tourist satisfaction and destination competitiveness (Dai et al., 2022). The results indicate that the development of arak Bali is shifting from being a traditional drink to a unique gastronomic experience. Bartenders use local ingredients together with innovative mixology methods that enable them to create enticing cocktails. On their part, hospitality professionals are improving the position of arak Bali through cultural storytelling, menu planning, and guided tastings. All these activities provide visitors with an opportunity to appreciate the drink from sensory and cultural perspectives.

The research indicates that the innovation of arak Bali is located not only on the product side but also on the co-creation of memorable hospitality experiences (Díaz et al., 2022). However, the study also finds that the adoption of arak in the hospitality sector remains limited, primarily due to concerns regarding supply consistency, product quality, and branding. This suggests that while demand for authentic local experiences is increasing, the readiness of traditional products to meet industry standards remains a critical issue (Xia et al., 2023b).

Another important finding relates to the role of policy and governance in shaping the development of tuak and arak Bali. The introduction of regulatory frameworks, such as Bali Governor Regulation No. 1 of 2020, reflects a growing recognition of traditional beverages as economic assets within the creative economy. However, the study reveals that the implementation of such policies has not yet fully translated into effective integration between producers and the tourism industry (Bosone & Nocca, 2022). This finding highlights a gap between policy intentions and practical outcomes, which is also noted in recent tourism and development literature emphasizing the importance of stakeholder collaboration and governance alignment in achieving sustainable tourism development. Compared to previous studies, this research contributes by illustrating how policy frameworks interact with local practices and market realities, thereby influencing the trajectory of traditional product development (Roberts et al., 2022).

From a sustainability perspective, the findings suggest that tuak and arak Bali embody the three pillars of sustainable gastronomic tourism: cultural preservation, economic empowerment, and tourism development (Pruksa et al., 2022). Culturally, these beverages contribute to the preservation of traditional knowledge and practices; economically, they provide income opportunities for rural communities; and within tourism, they offer unique and authentic experiences for visitors. This aligns with recent studies that position local food and beverages as key elements of sustainable tourism strategies (Thananusak & Suriyankietkaew, 2023). However, the study also underscores that sustainability is not automatically achieved through the existence of traditional products. Instead, it requires deliberate efforts to address challenges related to standardization, distribution, and market integration (Nistor & Dezs, 2022). In this sense, the findings extend existing literature by emphasizing

the need for a systemic approach that connects cultural heritage with economic and institutional frameworks (Ottaviani et al., 2023).

This study indicates that tuak and arak Bali play an important role in the relationship between the locals' culture, livelihood, and tourism. The cultural heritage of tuak and arak Bali in their production allows for the development of gastronomy tourism; however, the sustainability of the production process requires a careful balance of cultural integrity, quality and safety regulations, commercialization practices, and fair income distribution to local producers. While previous research has often examined these dimensions separately, the present study provides an integrated perspective that highlights both the opportunities and challenges associated with transforming traditional beverages into sustainable tourism commodities (Trigo & Silva, 2022). The findings suggest that the successful development of arak Bali within the gastronomic tourism sector depends on the alignment of multiple factors, including production quality, market access, policy support, and industry collaboration. This integrative approach offers a more comprehensive understanding of how traditional products can contribute to sustainable tourism development, particularly in culturally rich destinations such as Bali (Mudana et al., 2025).

## 6. CONCLUSIONS

This study demonstrates that tuak and arak Bali are not merely traditional beverages but represent complex socio-cultural and economic systems that are deeply embedded in the daily lives of Balinese communities. As forms of intangible cultural heritage, these beverages reflect inherited knowledge, ritual practices, and collective identity that have been sustained across generations. The findings confirm that the production processes of tuak and arak are closely tied to local wisdom and environmental adaptation, reinforcing their significance beyond functional consumption (Nugroho et al., 2023).

From an economic perspective, the study highlights the important role of tuak and arak production in supporting rural livelihoods, particularly in areas with limited access to alternative income sources. However, despite their economic potential, the benefits for local producers remain constrained by structural challenges, including limited bargaining power, dependence on intermediaries, and underdeveloped distribution systems (Karta et al., 2026). These findings indicate that the transformation of traditional beverages into competitive economic commodities requires not only increased production capacity but also improvements in market structures and value chain integration (Wang, 2023).

In the context of tourism, the study reveals that arak Bali possesses considerable potential as a component of gastronomic tourism, particularly within the hospitality industry. The increasing interest in authentic and locally sourced experiences provides opportunities for integrating traditional beverages into tourism offerings, thereby enhancing destination identity and competitiveness (Lasisi et al., 2023). Nevertheless, the study identifies several critical barriers to this integration, including inconsistent product quality, lack of standardization, and limited branding strategies. These challenges highlight the need for systematic efforts to align traditional production practices with the requirements of modern tourism markets (Achmad et al., 2023).

This research contributes to the existing literature by providing an integrated perspective that connects cultural heritage, local economic practices, and tourism development within a single analytical framework. While previous studies have tended to examine these dimensions separately, this study demonstrates how they interact dynamically in shaping the development of traditional beverages (Jia

et al., 2022). In doing so, it offers a more comprehensive understanding of how cultural products can be transformed into sustainable economic and tourism assets.

The study also underscores the importance of collaborative governance in supporting the sustainable development of tuak and arak Bali. Effective integration into the tourism industry requires coordinated efforts among local producers, government institutions, and hospitality stakeholders. Policy frameworks that promote standardization, capacity building, and market access are essential to ensuring that traditional beverages can compete in broader markets while maintaining their cultural authenticity (Cruz et al., 2023). In conclusion, the sustainable development of tuak and arak Bali depends on the ability to balance cultural preservation with economic innovation and tourism integration. By addressing existing challenges and strengthening stakeholder collaboration, these traditional beverages have the potential to become key components of Bali's gastronomic tourism and contribute to broader goals of cultural sustainability and community empowerment.

There are several limitations to this study. Being a qualitative study, the outcomes provide localized insights but not necessarily statistical generalizations. The research was conducted in Bali, so the information obtained pertains only to Bali because of its unique culture, institutions, and tourism circumstances and must be interpreted cautiously in other contexts. Other researchers should carry out comparative, mixed-methods or quantitative studies in different localities to verify the findings and further investigate consumer attitudes, governance, value chain development and hospitality market integration of indigenous drinks.

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## AUTHOR CONTRIBUTIONS (CRediT)

**Nonot Yuliantoro:** Writing -Original Draft, Conceptualizing, Validation, Data analysis, Visualisation, Writing -Review & Editing

**Anwari Masatip:** Conceptualizing, Writing -Original Draft, Supervised

**Amelda Pramezwary:** Methodology and Data Curation, Validation, Writing -Review & Editing

**Yosep Dudedes Timba:** Performed the Investigation, Validation, Data Analysis, Writing -Review & Editing

All authors contributed substantially to the conception and design of this study, reviewed the manuscript for intellectual content, approved the final version for publication, are accountable for all aspects of the work.

## CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest related to this article, and have also disclosed: there are no financial, professional, or personal interests that would affect their findings as presented in the current study.

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