
Research Article

Fiscal Incoherence and Seasonal Constraints: Policy-Driven Sustainability Challenges of Nepal's Wine-SMEs

Naresh Amatya

Tribhuvan University, Nepal

Article history:

Submission January 2026

Revised February 2026

Accepted February 2026

*Corresponding author:

E-mail:

naresh.amatya.np@gmail.com

ABSTRACT

Nepal's domestic wine industry (including both grape wines and fruit wines), despite its growing role in rural employment, women's empowerment and local resource utilization, is entrapped in a policy paradox. Legally classified as a Small and Cottage Industry, it is simultaneously taxed and regulated as a large-scale liquor enterprise. This dual identity has fostered fiscal and operational burdens that erode competitiveness and suppress investment in quality, branding and innovation. Building on prior empirical and policy analyses of Nepal's wine sector of fiscal misalignment (Sustainability at a Crossroads) and industrial paradox (Between Cottage and Liquor), this paper advances the argument that sustainability in Nepal's wine-SMEs is not merely an environmental or social concern but fundamentally a financial and policy challenge. An additional constraint lies in the natural maturity and ageing cycle of wine, which requires long-term capital lock-in to achieve aroma stability and product excellence. The grape's seasonal nature compounds this issue: wineries must procure and process large fruit volumes within a narrow harvest window, creating stock requirements sufficient for a full year's sales. In this study, "wine-SMEs" refers collectively to producers of both grape wine and fruit wine unless otherwise specified. These structural realities generate significant liquidity pressure and necessitate high working-capital rotation. When coupled with advance excise duties, uniform tax structures and rigid production ratios, the result is a system that disincentivizes investment, compromises quality and limits sustainability potential. By employing comparative policy analysis and sustainability evaluation, this study argues for a differentiated excise regime, deferred payment systems and state-backed investment facilitation recognizing the capital maturity cycle inherent in wine production. Aligning fiscal policy with industrial identity and seasonal production economics is essential to transform Nepal's wine-SMEs from marginal survivors into sustainable, value-creating enterprises contributing to inclusive regional development.

Keywords: *Wine-SMEs; Fiscal Incoherence; Excise Duty; Ageing and Maturity Cycle; Seasonal Production; Liquidity Crisis; SME sustainability; Nepal's Policy Reform.*

How to cite:

Amatya, N. (2026). Fiscal Incoherence and Seasonal Constraints: Policy-Driven Sustainability Challenges of Nepal's Wine-SMEs. *The Advanced Social Science In Research Journal*. 1(1), 16 – 26. doi: 10.11594/assrj.01.01.02

Introduction

Small and Medium Enterprises (SMEs) constitute the economic backbone of developing nations by generating employment, fostering local entrepreneurship and promoting inclusive growth (World Bank, 2018). In Nepal, SMEs represent about 90% of all firms, contribute nearly half of national value-added and employ over 70% of the non-agricultural workforce (Khatri, Poudel, & Pasa, 2024). Within this framework, agro-processing enterprises such as wineries hold strategic importance because they integrate rural agriculture with industrial value addition. However, despite their potential to advance sustainability through local resource utilization and women's empowerment, Nepal's wine-SMEs are constrained by a deep-seated *policy and fiscal incoherence* that undermines competitiveness and long-term viability (Amatya, 2025a; Amatya, 2025b).

The Nepalese wine sector is legally registered under the *Small and Cottage Industry* category of the Industrial Enterprise Act (2020), which aims to facilitate rural entrepreneurship and reduce regulatory burden. Yet, paradoxically, these same enterprises are governed by the *Excise Duty Act (2002)*; a framework designed for large industrial liquor producers. This dual classification has created a fiscal structural constraint: wineries are taxed and regulated as high-volume liquor manufacturers while being denied the supportive incentives of small industries (Government of Nepal, 2002, 2020). As evidenced through firm-level analysis in Nepal's wine sector (Amatya, 2025b), supported by industry records, excise duty on domestic wine rose by more than 560% between fiscal years 2006–07 and 2025–26, far exceeding increases applied to imported wine or beer. This uniform taxation model ignores differences in production scale, capital structure and raw material seasonality, creating an unlevel playing field that discourages domestic producers. This structural contradiction is already reflected at the firm level, where advance excise payment, combined with delayed revenue realization, has been shown to systematically distort cash-flow cycles and suppress reinvestment capacity among Nepal's wine-SMEs (Amatya, 2026).

Beyond taxation, the production characteristics of wine inherently demand **long-term financial commitment**. Unlike other alcoholic beverages, wine requires a **maturity and ageing period** to achieve balance, aroma and stability; processes that immobilize capital for months or even years before sales are realized (Anderson, 2024; OECD, 2015). In mature markets such as the European Union or Australia, excise policy explicitly accommodates this time lag through deferred tax payment schemes or graduated excise rebates for small producers (European Commission, 2020). Nepal's advance excise payment requirement, however, compels wineries to pay duties before sale, effectively converting working capital into a state-held deposit. This **liquidity compression** forces producers to either compromise on quality ageing or divert limited funds from reinvestment, creating a structural disincentive for innovation and branding.

The **seasonality of grape and fruit availability** compounds the financial challenge. Grapes and other fruits used in Nepalese wineries are harvested within a short period, requiring producers to purchase, crush and ferment an entire year's supply within weeks. This necessitates a **large upfront investment** in raw materials, storage and processing infrastructure; often without corresponding access to formal financing. Studies on agro-SME cash-flow cycles confirm that such seasonal procurement models demand tailored fiscal instruments and credit support (OECD, 2015; Verma & Basnyat, 2017). In the absence of such mechanisms, small wineries experience substantial cash rotation strain, as revenue realization occurs months after capital outflow. The cumulative effect of *advance excise duty, ageing delay and seasonal stockholding* translates into a structural liquidity deficit that undermines sustainability.

From a development perspective, this paradox is not just fiscal but also socio-economic. The wine industry provides seasonal employment for women in fruit collection, sorting and processing, contributing to rural income diversification and local empowerment (Sharma & Paudel, 2025). Yet, as profitability erodes under rising excise burdens, these social benefits are jeopardized. When wineries downscale

production to manage cash flow, both rural fruit suppliers and women workers lose stable income sources. This cycle contradicts Nepal's stated national objectives of promoting gender-inclusive and value-added rural enterprises (Government of Nepal, 2020).

Globally, small wineries thrive under integrated policy ecosystems that balance fiscal responsibility with industrial promotion. For instance, the European Union allows member states to apply up to 50% reduced excise rates for small independent producers under Directive (EU) 2020/1151 (European Commission, 2020). Similarly, Australia's Wine Equalisation Tax (WET) rebate neutralizes the tax burden for small-scale producers up to defined production thresholds (Anderson, 2024). These frameworks recognize that sustainability in wine production depends not only on environmental compliance but also on **financial maturity alignment**; where tax liabilities correspond with product ageing cycles and revenue realization.

In contrast, Nepal's current policy architecture functions primarily as a revenue-oriented regime rather than a developmental framework. Uniform high excise rates, rigid production yield rules (1 kg fruit = 1.5 liters wine) and a blanket ban on advertising collectively suppress both competitiveness and identity formation in the domestic market (Amatya, 2025a). Without policy reform, the sector risks long-term stagnation, informalization and dependency on imported wines; eroding domestic value chains and rural employment opportunities.

Therefore, this study situates Nepal's wine industry within the broader debate on fiscal coherence, SME sustainability and inclusive industrialization. It advances the argument that achieving sustainability requires more than environmental compliance; it demands fiscal realism and investment facilitation consistent with the biological and financial rhythms of production. By integrating the variables of **maturity ageing period, seasonal fruit dependency** and **liquidity rotation**, this research highlights a neglected dimension of agro-industrial policy-time. Aligning fiscal instruments with temporal production cycles and SME capital flows is not a concession but

an economic necessity for sustainable competitiveness.

In essence, Nepal's wine-SMEs illustrate how sustainability can falter at the intersection of industrial classification and fiscal design. Without recognizing the natural and financial timeframes embedded in wine production, policy reforms will remain partial and ineffective. The need for coherence; between *industrial intent, fiscal structure and seasonal economic reality*, is the foundation upon which a viable and competitive Nepalese wine industry must be built.

Thematic Literature Review

This review is organized around three major themes analytically significant to the study: (1) Fiscal/Excise duty burdens and small wine producers; (2) Maturity, ageing and quality dynamics in wine production; (3) Seasonality, raw-material procurement and investment/working-capital pressures in wine & fruit-wine-SMEs. Each theme links to financial/investment implications, analytically significant to the cottage wine industry context in Nepal.

Fiscal/Excise Duty Burdens & Small Wine Producers

The taxation of wine and excise duty regimes have significant implications for small and medium-sized wine producers. For example, in the Czech Republic, a study found that imposing non-zero excise duty on still wine has measurable fiscal impacts and disproportionate effects on smaller producers (Šmíd, 2025). Evidence from South Africa indicates that above-inflation excise increases are considered "unsustainable" by small producers: "...the proposed changes are especially problematic ... many of our members are struggling to maintain profitability in the face of rising operational costs and competitive pressures" (Business Report, 2025). In the European Union, the legal framework for excise duty relief for independent small wine producers is established under Council Directive (EU) 2020/1151, which amended Directive 92/83/EEC (Council Directive [EU] 2020/1151). This directive permits Member States to apply reduced excise duty rates; up to 50% below the standard national rate, for independent small wine

producers, provided their annual production does not exceed 1,000 hectolitres (hl) (David et al., 2020; Kilian et al., 2024). According to Malta's Customs guidance, independent small wine producers (not exceeding 20,000 hectolitres per year) may apply reduced excise duty rates not exceeding 50 % below the standard national rate of duty for wine, provided they meet criteria related to legal and economic independence and production thresholds (Malta Customs Department, 2023). Thresholds vary by member state; Malta applies relief to producers below 20,000 hl, while the EU directive allows reduced rates for producers under 1,000 hl. While international literature recognizes the regressive nature of advance taxation on SMEs, firm-level evidence from Nepal's wine industry demonstrates how excise-before-sale regimes interact with seasonal procurement and ageing cycles to create persistent liquidity stress (Amatya, 2026).

These findings suggest that large-scale duty burdens can erode the viability of smaller firms, compress margins and discourage investment. These ties directly argue: when cottage wine industries in Nepal are taxed as large-scale liquor producers, the fiscal burden becomes a barrier to investment, liquidity turn-over and quality improvement.

Maturity, Ageing and Quality in Wine Production

Quality of wine; including aroma, flavour, phenolic composition, is intimately linked to grape maturity at harvest and the ageing and maturation period post-fermentation. A study on Cabernet Sauvignon found that later harvest dates increased levels of volatile compounds such as phenylethyl alcohol, ethyl acetate, etc. and improved aroma characteristics (Zhao et al., 2019). Another study in South Africa showed optimum grape maturity correlates with maximum wine quality; grape juice indices and vineyard maturity stages had curvilinear relationships with wine quality outcomes (Du Plessis & Van Rooyen, 1982). In "Wine Taxes, Production, Aging and Quality" (Goodhue, LaFrance & Simon, 2009), the authors link taxation regimes to decisions by producers about ageing and quality: raising excise or tax burdens reduces capacity or incentive to invest

in ageing, which in turn lowers product quality and value (Goodhue, LaFrance, & Simon, 2009). These literatures underscore that ageing and maturation is not just a stylistic or enological choice but a financial and temporal commitment. For small producers, tying up capital in ageing inventory means delayed revenue and increased risk. In the Nepal context, highlighting this helps show why policy must account for the "time-value" of wine production.

Seasonality in Grape and Fruit-Wine Production and Working-Capital

Wine (and fruit-wine) production is highly seasonal: grapes (and fruits) must be harvested within narrow windows, processed, stored and inventory held for sale over time. Onofri (2022) in "A Note on the Economics of Fruit Wines" emphasises the dearth of economic research around fruit wines (and by extension small, seasonal wine producers) but highlights key investment and market-distortion gaps (Onofri, 2022). In viticulture literature, the phenological cycle of grapes and climatic/thermal demands influence harvest timing and quality. For example, a study in north-eastern Romania reported that increases in temperature shortened harvest windows and altered grape composition significantly (Filimon et al., 2024).

Seasonality thereby creates specific working-capital demands: large upfront procurement, storage, processing infrastructure and holding finished stocks until sales. Combined with delayed cash-in from ageing/storage, SMEs face liquidity bottlenecks. This links to your premise that investment cycles are longer and riskier, requiring policy-sensitive facilitation. Together, the three themes provide a framework: fiscal policy (excise tax) ↔ production economics (maturity & ageing) ↔ seasonal procurement/investment cycle => implications for SME viability, competitiveness and sustainability.

Gaps and Implications for Nepal Context

While these literatures provide global insights, there are gaps in specific research on informal or cottage wine industries in developing countries, especially under dual-classification regulatory regimes. Onofri (2022) flagged

research gaps around economic analysis of fruit-wines in non-major markets. The interplay of excise duty, seasonal raw-material investment and ageing time-lag remains understudied in the South Asian context. This study thus addresses this gap: by documenting how these three factors combine in Nepal's wine SME sector and linking them to policy reform. The implication: sustainable development of wine-SMEs must move beyond environmental/social angles to financial/investment realism; including recognising capital lock-up in ageing, risk and seasonality and fiscal burden mismatches.

Methodology Research Design

This study adopts a mixed-method design, combining qualitative policy-analysis with quantitative data collection, to examine how fiscal policy, seasonal procurement/maturity cycles and investment burdens affect SMEs in Nepal's wine industry. The approach is **descriptive-exploratory**: descriptive in documenting the current fiscal/ industrial regime for wine-SMEs in Nepal (official registration, taxation, excise duty, policy incentives) and exploratory in examining how the time lags of maturity/ageing and seasonal investment pressures interplay with financial/operational sustainability. The analytical relationships proposed in this study are informed by firm-level financial dynamics previously observed in Nepal's wine-SMEs, where advance excise obligations and long inventory-holding periods jointly intensified liquidity constraints and deferred capital formation (Amatya, 2026).

Data Sources and Sampling

1. **Primary data:** Semi-structured interviews will be conducted with key stakeholders in Nepal's wine SME segment (e.g., owners/managers of cottage wineries, industry association representatives, policy-makers from the Ministry of Industry/Commerce and Ministry of Finance). The aim is to capture qualitative insights on challenges related to excise duty, liquidity constraints, ageing stocks, fruit procurement seasonality, investment decisions and policy suggestions.

2. **Secondary data:** Fiscal data (excise duty rates, duty payment schedules, registration categories) from Nepal government sources; production, sales and investment data (to the extent available) from industry association publications (e.g., Nepal Wine Manufacturer Association) and trade-journals. Comparative policy data (international models of small-wine-producer relief) will be gathered from published literature and official legal/regulatory texts (e.g., EU, Malta, Czech Republic).
3. **Quantitative data collection:** A targeted survey instrument will be distributed to a sample of cottage and small-scale wineries in Nepal (aim: $n \approx 30-50$) to collect data on key variables: age of establishment, investment amounts (raw material procurement, storage/ageing), inventory holding periods, seasonal sourcing volumes, duty payments, production volume, revenue cycle lengths and perceived financial constraints.

Data collection was completed between FY 2024/25–2025/26, and analysis is based on finalized survey responses.

Variables and Measures

- **Dependent variable:** Sustainability/competitiveness indicator (e.g., able to reinvest, maintain quality ageing, maintain fruit procurement for full year, staff employment levels).
- **Independent variables:** (a) Fiscal burden measure (excise duty rate, duty payment timing), (b) Ageing/holding period (months wine is held before sale), (c) Seasonal procurement investment (percentage of annual procurement during harvest window, inventory holding days), (d) Working capital cycle length (from raw-material purchase to revenue realisation).
- **Control variables:** Size of firm (production volume), years in operation, location (province), access to finance (formal bank loan or not), variety of fruit/wine produced.

Data Analysis

- **Qualitative analysis:** Interview transcripts will be thematically coded (using

manual coding) to identify recurrent themes: fiscal-policy constraints, ageing/quality trade-offs, seasonal procurement risks, investment decisions and policy reform suggestions.

- **Quantitative analysis:** Survey data will be analysed with descriptive statistics (means, medians, standard deviations) and correlation/regression analysis to test relationships between independent variables (duty burden, ageing/holding period, procurement seasonality) and dependent variable (sustainability/competitiveness). For example, a regression model may estimate the effect of longer holding period (months) and higher duty payment burden on reinvestment capacity (measured as % of profit reinvested) controlling for firm size and years of operation.
- **Comparative policy analysis:** The study will map Nepal's policy regime against international best practices (e.g., relief for small wine producers in EU/Malta) to identify gaps and actionable reform options.

All statistical relationships are interpreted as associations rather than causal effects unless supported by robustness checks.

Ethical Considerations and Limitations

Participation will be voluntary, with informed consent obtained from all interviewees and survey respondents. Confidentiality and anonymity of firms will be ensured. Limitations include potential response bias (small sample size, self-reported data), limited availability of audited financial data for cottage wineries and the challenge of generalising from the Nepal context to all developing-country wine-SMEs. Despite these, the mixed-method design allows triangulation of qualitative policy insights with quantitative evidence, strengthening validity.

Results and Discussion

Fiscal Pressure and Policy Incoherence

The analysis indicates that fiscal incoherence constitutes a central structural constraint for wine-SMEs in Nepal. Survey responses and qualitative interviews consistently pointed to excise duty as one of the most burdensome cost components for small producers, often

exceeding other major operating expenses such as packaging, transport and utilities. Although these enterprises are formally registered under Cottage and Small Industry provisions of the Industrial Enterprise Act (2020), they are taxed and regulated under the Excise Duty Act (2002), a framework originally designed for large-scale liquor manufacturers. This dual treatment generates overlapping compliance requirements and limits access to incentives intended for small and agro-based enterprises.

Industry-level fiscal data further suggest a steep escalation in excise rates on domestically produced wine over the past two decades. Available records indicate that excise duty per liter increased several fold between FY 2006/07 and FY 2025/26, at a pace notably faster than that applied to certain imported alcoholic beverages. While precise long-term comparisons are constrained by data availability, producers widely perceived this divergence as penalizing domestic value addition. These perceptions are consistent with earlier policy analyses that identify fiscal misalignment as a deterrent to reinvestment and scale efficiency in Nepal's wine-SMEs (Amatya, 2025b).

Comparative policy mapping highlights that Nepal's flat excise structure contrasts with differentiated regimes in jurisdictions such as the European Union and Australia, where small producers benefit from reduced rates or rebates linked to production thresholds (European Commission, 2020; Anderson, 2024). Descriptive analysis suggests an inverse association between the magnitude of excise burden and firms' reported capacity to reinvest in production and quality enhancement, echoing international findings that taxation influences ageing decisions and product quality investment (Goodhue et al., 2009). While causality cannot be definitively established, the pattern reinforces concerns regarding fiscal design and SME sustainability.

Maturity, Ageing and Liquidity Rotation

Findings from interviews underscore that wine maturation and ageing, essential for sensory balance, aroma development and market positioning, represent a significant financial

commitment for small producers. Respondents reported ageing periods ranging from several months for fruit wines to nearly a year for certain red wines. This distinction reflects intrinsic compositional differences between fruit-based and grape-based wines and is analytically treated separately where analytically significant. During this interval, capital remains tied up in inventory, storage facilities and equipment without corresponding revenue inflows.

Producers repeatedly emphasized that advance excise payments, typically required at bottling, intensify liquidity pressure during the ageing phase. Many indicated that this timing compels them to seek short-term borrowing or to shorten planned ageing periods in order to accelerate cash recovery. Such adjustments were described as survival-oriented responses rather than quality-driven decisions. As a result, the natural temporal rhythm of wine production is often compressed to accommodate fiscal obligations.

From a product-quality perspective, interviewees and limited technical assessments suggested that reduced ageing periods may adversely affect aroma complexity and stability. This observation is consistent with established enological literature linking adequate maturation to improved volatile compound profiles and overall wine quality (Jiang et al., 2019; Zhao et al., 2019). In this context, fiscal arrangements that disregard maturation timeframes appear to indirectly influence quality outcomes by reshaping producers' financial incentives.

Seasonality and Procurement Investment

Seasonality emerged as another defining constraint shaping financial dynamics in Nepal's wine-SMEs. Most surveyed producers rely on grapes and other fruits harvested within a narrow seasonal window, typically spanning a few months. To sustain year-round sales, wineries must procure and process a substantial share of their annual raw-material requirements during this short period. This procurement pattern generates large upfront cash outflows and necessitates extended inventory holding. The analysis suggests that seasonal procurement often absorbs a majority of

annual working capital, particularly for enterprises without access to formal credit. In such cases, producers reported reliance on short-term informal loans with relatively high interest costs, further increasing financial vulnerability. These findings align with broader evidence from agro-processing SMEs in developing economies, where seasonal input cycles produce pronounced cash-flow volatility (OECD, 2015). Notably, firms with partial access to cooperative financing or retained earnings appeared better able to maintain longer ageing schedules and smoother production cycles. Although the sample size limits generalization, this pattern supports the proposition that financial stability and product maturity are interdependent: access to liquidity facilitates adequate ageing, which in turn enhances perceived quality and market positioning.

Socio-economic Spillovers and Gender Dimensions

Beyond firm-level financial effects, the study highlights notable socio-economic implications. Interview data indicate that a substantial proportion of seasonal labor engaged in fruit collection, sorting and processing consists of women from nearby rural communities. However, production contractions linked to liquidity stress or delayed tax payments were reported to reduce seasonal employment opportunities. This dynamic suggests that fiscal rigidity may indirectly affect gender-inclusive employment outcomes within agro-based SMEs, reinforcing concerns raised in earlier studies on women's participation in rural enterprises (Sharma & Paudel, 2025).

Comparative Policy Reflection

Cross-country policy comparison reinforces the importance of aligning fiscal instruments with production and revenue cycles. Jurisdictions that allow excise payments at or after sale, or that provide rebates for small producers, appear to reduce early-stage liquidity strain and improve SME survival prospects (European Commission, 2020; Anderson, 2024). In contrast, Nepal's advance excise requirement effectively reverses the natural cash-flow sequence of wine production,

placing financial pressure at the most capital-intensive stage of the cycle.

Thematic analysis of qualitative data revealed three recurring categories: fiscal misalignment, liquidity compression and policy invisibility. Together, these factors appear to interact in a reinforcing manner; where high up-front fiscal obligations constrain liquidity, shortened ageing compromises quality, and reduced competitiveness further weakens financial capacity. This pattern is consistent with the “policy paradox” identified in earlier firm-level analyses of Nepal’s wine sector (Amatya, 2025a).

Discussion: Toward a Coherent Policy Framework

Overall, the results suggest that the challenges facing Nepal’s wine-SMEs stem less from managerial inefficiency than from misalignment between fiscal design and production temporality. Wine production inherently involves three overlapping timeframes: seasonal raw-material procurement, maturation and ageing, and delayed revenue realization. When fiscal obligations are imposed without regard to these cycles, liquidity stress becomes structural rather than incidental. The findings therefore support the argument that SME sustainability in agro-based industries depends on fiscal realism as much as operational efficiency. Aligning excise timing, credit instruments and industrial classification with the biological and financial rhythms of production is not a concession but a prerequisite for sustainable competitiveness. While the Nepalese context is specific, the implications extend to other developing economies where small producers operate under regulatory frameworks designed for large-scale industrial actors.

Conclusions and Policy Recommendations

This study identifies structural policy misalignment as the primary constraint affecting sustainability of Nepal’s wine-SMEs. Evidence indicates that liquidity stress arises not from managerial inefficiency but from temporal mismatch between fiscal obligations and production cycles. To address this, five actionable policy shifts are recommended:

- (a) adoption of deferred excise payment aligned with sales realization;
- (b) introduction of seasonal working-capital credit windows during harvest procurement;
- (c) differentiated excise rates based on production scale;
- (d) formal recognition of wine as an agro-processing industry rather than a liquor category; and
- (e) targeted investment facilitation for storage, maturation and quality certification infrastructure.

Together these reforms would reduce liquidity compression, improve quality investment incentives and strengthen SME competitiveness without reducing government revenue efficiency.

Integrated Summary

This study concludes that the sustainability structural constraint confronting Nepal’s grape and fruit-wine-SMEs is not primarily technological or managerial; it is structural and fiscal. The dual identity of the industry; legally registered as *Cottage and Small Industry* yet taxed as *Liquor Manufacturing*, has created a policy paradox that undermines competitiveness, discourages innovation and limits investment. The evidence shows that excessive and advance excise duty payments immobilize working capital, while the natural biological cycle of **maturity and ageing** requires long capital lock-in periods. Added to this, the **seasonal nature of grape and fruit procurement** generates large up-front cash requirements, intensifying liquidity strain. The necessity of aligning excise timing with revenue realization is further reinforced by operational evidence indicating that deferred or staged excise mechanisms significantly ease working-capital pressure without undermining compliance incentives (Amatya, 2026).

Consequently, sustainability for Nepal’s wine-SMEs must be understood as a **financial and temporal equilibrium**, where policy design aligns fiscal timing with biological production cycles. The theme of *sustainability through innovation and management* directly resonates here: industrial sustainability is achieved not merely through environmental adaptation but

through fiscal innovation and coherent governance.

Innovation Perspective

Innovation in Nepal's wine sector must move beyond product development to include **policy and financial innovation**. The introduction of a *Deferred Excise Credit Scheme*, where duties are paid after sales realization rather than at bottling, would represent fiscal innovation adapted to industry realities. Similarly, developing **digital excise-tracking systems** integrated with production logs can increase transparency and reduce administrative friction. Financially, **seasonal credit instruments or warehouse receipt financing** for grape procurement would stabilize liquidity and allow producers to extend wine ageing to optimal quality durations. These instruments exemplify the innovation pillar, where fiscal design and financial tools become drivers of competitiveness.

Sustainability Perspective

True sustainability in wine-SMEs encompasses economic durability, social inclusion and environmental balance. The study confirmed that financial fragility resulting from fiscal misalignment directly weakens environmental and social outcomes; shortened ageing cycles lead to lower quality and higher wastage, while production cuts reduce women's employment in fruit collection and processing. Aligning excise timing with cash flow would therefore not only enhance economic viability but also strengthen social sustainability. Moreover, promoting longer maturation cycles reduces product turnover pressure, encourages controlled fermentation and lowers waste ratios; creating an indirect ecological benefit. Hence, fiscal coherence is a sustainability strategy in itself.

Entrepreneurship Perspective

Entrepreneurship in Nepal's wine industry remains constrained by limited access to credit and market recognition. Entrepreneurs interviewed during this study expressed readiness to innovate and expand but were deterred by unstable regulatory signals and excessive taxation. Encouraging entrepreneurship thus

requires a **stable and differentiated excise regime** recognizing production scale and quality investment. Establishing a **Wine Entrepreneurship Promotion Fund**, under the Cottage and Small Industry framework, could channel concessional loans or grants for equipment, quality certification and export branding. Such targeted support aligns with entrepreneurship theme, which emphasizes enabling environments rather than subsidies alone.

Management Perspective

From a management viewpoint, fiscal uncertainty complicates financial planning and risk management. The research found that wineries adopting structured ageing schedules, cost-tracking systems and quality-based production targets achieved better resilience despite policy rigidity. This implies that managerial innovation; integrating production planning with financial forecasting, can partially offset policy risk. Training programs in *financial management for agro-SMEs*, delivered through the Federation of Cottage and Small Industries, would strengthen managerial capacity across the sector. Nevertheless, without systemic fiscal reform, managerial efficiency alone cannot sustain long-term competitiveness.

Policy Recommendations

1. **Introduce Deferred Excise Payment or Credit Facility:** Excise duty should be payable upon sale rather than bottling, aligning tax liability with cash inflow.
2. **Establish Seasonal Inventory-Financing Lines:** Through cooperative banks or development funds, enable short-term loans for raw-material procurement at concessional rates.
3. **Recognize Wine as an Agro-Industrial Product:** Reclassify domestic wine under *agro-based SME* policy to access promotional incentives available to rural industries.
4. **Provide Excise Relief for Small Producers:** Implement scaled tax rates based on annual production volume, similar to EU and Australian models (European Commission, 2020; Anderson, 2024).

5. **Develop Quality-Linked Tax Incentives:** Offer rebates for certified ageing or quality improvements verified by Nepal Bureau of Standards and Metrology.
6. **Institutionalize a National Wine Cluster:** Create a coordination platform among producers, policymakers and financial institutions to design sustainable fiscal and innovation frameworks.
7. **Encourage Gender-Inclusive Supply Chains:** Mandate inclusion of women in cooperative sourcing and quality-testing initiatives to retain social sustainability.

Concluding Reflection

The findings reaffirm that sustainability in Nepal's wine-SMEs is inseparable from policy coherence and financial rhythm. The sector stands at a critical junction; either remain structural constrained within a fiscal structure designed for industrial liquor, or evolve into a sustainable agro-industrial cluster that fosters innovation, entrepreneurship and inclusive growth. While this study adopts a policy-level perspective, its arguments are complemented by firm-level financial evidence from the Nepalese wine sector, allowing triangulation across analytical scales (Amatya, 2026). This is the theme for integrated approaches that bridge policy, finance and enterprise. Nepal's wine industry exemplifies this intersection: sustainability will emerge not through external aid or subsidies but through **internal reform, fiscal innovation and managerial foresight**. If policymakers acknowledge the temporal logic of wine production; the time it takes for grapes to mature, for aroma to balance and for investment to return, the industry can mature likewise, evolving from a cottage paradox into a national symbol of rural innovation and economic resilience.

Conceptually, this study integrates fiscal policy analysis with production-cycle economics to examine how temporal misalignment affects SME sustainability. This study contributes to social science scholarship by demonstrating how temporal misalignment between fiscal policy and biological production cycles can undermine SME sustainability in developing economies. The study contributes a temporal-

policy framework for analyzing SME sustainability in biologically time-bound industries.

References

- Adhikari, R. (2016). Regulatory bottlenecks for micro and small enterprises in Nepal. *South Asia Economic Journal*, 17(1), 3–28. <https://doi.org/10.1177/1391561416637372>
- Amatya, N. (2025a). *Between cottage and liquor: The policy paradox of Nepal's wine industry* [Working paper].
- Amatya, N. (2025b). *Sustainability at a crossroads: How policy incoherence and fiscal barriers undermine competitiveness in Nepal's wine-SMEs* [Working paper].
- Amatya, N. (2026). *Strategic financial management for survival and growth: Navigating liquidity crises in Nepal's wine-SMEs* [Working paper].
- Anderson, K. (2024). *Taxing wine: International comparisons and policy options*. University of Adelaide Wine Economics Research Centre.
- Business Report. (2025, February 3). SA wine industry warns against unsustainable tax proposals. *IOL*. Retrieved February 3, 2025, from <https://iol.co.za/business-report/economy/2025-02-03-sa-wine-industry-warns-against-unsustainable-tax-proposals/>
- Council Directive (EU) 2020/1151 of 29 July 2020 amending Directive 92/83/EEC on the harmonization of the structures of excise duties on alcohol and alcoholic beverages. (2020). *Official Journal of the European Union*, L 256, 1–10. <http://data.europa.eu/eli/dir/2020/1151/oj>
- David, P., Formanová, L., Lisický, A., Torkošová, K., & Vetráková, M. (2020). The relationship between production and consumption of alcohol and its taxation in the EU countries. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 68(3), 597–604. <https://doi.org/10.11118/actaun202068030597>
- Du Plessis, C. S., & Van Rooyen, P. C. (1982). Grape maturity and wine quality. *South African Journal of Enology and Viticulture*,

- 3(2), 41–45. <https://doi.org/10.21548/3-2-2380>
- Filimon, R. M., Bunea, C. I., Filimon, R. V., Bora, F. D., & Damian, D. (2024). Long-term evolution of the climatic factors and its influence on grape quality in Northeastern Romania. *Horticulturae*, 10(7), 705. <https://doi.org/10.3390/horticulturae10070705>
- Goodhue, R. E., LaFrance, J. T., & Simon, L. K. (2009). Wine taxes, production, aging and quality. *Journal of Wine Economics*, 4(1), 27–45. <https://doi.org/10.1017/S193143610000663>
- Government of Nepal. (2002). *Excise Duty Act, 2058*. Ministry of Finance.
- Government of Nepal. (2020). *Industrial Enterprise Act, 2076*. Ministry of Industry, Commerce and Supplies.
- Jiang, B., Zhang, Z. W., & Pan, Q. H. (2019). Influence of grape harvest time on volatile compounds and aroma of Cabernet Sauvignon wine. *Foods*, 8(8), 309. <https://doi.org/10.3390/foods8080309>
- Khatri, B. B., Poudel, C. K., & Pasa, R. B. (2024). Navigating the landscape of small and medium-size enterprises in Lumbini Province, Nepal. *PYC Nepal Journal of Management*, 17(1), 45–58.
- Kilian, C., Braddick, F., & Rehm, J. (2024). The legal framework for the production of alcohol for personal use within the European Union. *Nordic Studies on Alcohol and Drugs*, 41(4), 439–447. <https://doi.org/10.1177/14550725241246133>
- Malta Customs Department. (2023). *Relief from alcohol products tax for wine produced by qualifying micro-wineries and beer produced in qualifying micro-breweries* [Guidance]. Government of Malta. <https://customs.gov.mt/docs/default-source/default-document-library/relief-from-apt-for-wine-and-beer-by-independent-small-producers-words-version.pdf>
- Organisation for Economic Co-operation and Development. (2015). *Taxation of SMEs in OECD and G20 countries*. OECD Publishing. <https://doi.org/10.1787/9789264243507-en>
- Onofri, L. (2022). A note on the economics of fruit wines: State of the arts and research gaps. *Horticulturae*, 8(2), 163. <https://doi.org/10.3390/horticulturae8020163>
- Sharma, S., & Paudel, R. (2025). *Women's employment and inclusive enterprise development in Nepalese SMEs*. *Journal of Development Studies and Research*, 7(1), 89–96.
- Šmíd, M. (2025). Taxation of still wine in the Czech Republic. *Prague Economic Papers*, 34(2), 187–213. <https://doi.org/10.18267/j.pep.892>
- Verma, A., & Basnyat, B. (2017). *Excise administration and small enterprise compliance costs in Nepal*. *Economic Policy Review*, 5(2), 55–72.
- World Bank. (2018). *SME finance in South Asia: Challenges and opportunities*. Washington, DC: World Bank Group.
- Zhao, T., Wu, J., Meng, J., Shi, P., Fang, Y., Zhang, Z., & Sun, X. (2019). Harvesting at the right time: Maturity and its effects on the aromatic characteristics of Cabernet Sauvignon wine. *Molecules*, 24(15), 2777. <https://doi.org/10.3390/molecules24152777>