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KOMBUCHA ON TAP UA

B2B FERMENTED BEVERAGE SUPPLY FOR UKRAINIAN HORECA

by

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ABSTRACT

This thesis examines whether a phased, HoReCa-first kombucha supply business is commercially viable in Ukraine, using Lviv as the entry market. The central research question is: Is a keg-based B2B kombucha model commercially sustainable at an early scale, and can it serve as a credible pathway to retail? Three subsidiary questions structure the inquiry: Can HoReCa venues function as an effective first distribution channel? Are the unit economics viable before the business reaches meaningful scale? And does HoReCa-built brand equity translate into retail success?

The rationale for the project rests on a confluence of demand-side and supply-side factors. On the demand side, alcohol consumption among younger urban consumers is in structural decline of European market studies suggest 30–40% of Gen Z either abstain entirely or drink only occasionally, and 75% of those who consume low- or no-alcohol beverages are actively moderating their intake (Rabobank; "Gen Z Is Drinking Less Alcohol"). Ukrainian cities, Lviv included, are seeing a similar pattern, amplified by wartime cultural shifts. On the supply side, no Ukrainian producer currently offers a standardised keg-based B2B kombucha model. No standardised keg-based B2B supply model currently exists in the Ukrainian market, representing a structural gap that this venture aims to address.

The broader market context supports the opportunity. Grand View Research values the global kombucha market at USD 4.26 billion in 2024, with projections to USD 9.09 billion by 2030 (CAGR 13.5%). European figures are directionally consistent, with the continent's market estimated at roughly USD 904 million in 2024 and expected to grow at a similar rate through 2033. Eastern European markets (Poland, Romania, Hungary) are growing faster still, at 22–25% annually, which is arguably the most relevant benchmark for Ukraine.

The analytical framework applied is the MIT Disciplined Entrepreneurship: 24 Steps to a Successful Startup (Aulet). In the absence of live pilot data, validation relies on triangulation across secondary market research, financial modelling, and structural comparison with analogous European markets. The financial model (v3.0) projects Year 1 revenue of UAH 3,768,475, a break-even point of approximately 15.2 active venues reached in Month 5, an annualised IRR of 42.3%, and a net present value of UAH 1,676,718 over 39 months (discount rate: 22.7% CAPM). Undiscounted payback falls at Month 29.

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LIST OF ABBREVIATIONS

ABV — Alcohol By Volume

B2B — Business-to-Business

B2C — Business-to-Consumer

BEP — Break-Even Point

CAC — Customer Acquisition Cost

CAPM — Capital Asset Pricing Model

CapEx — Capital Expenditure

CIP — Clean-In-Place (sanitation protocol)

COGS — Cost of Goods Sold

CRP — Country Risk Premium

D2C — Direct-to-Consumer

DCF — Discounted Cash Flow

EBITDA — Earnings Before Interest, Taxes, Depreciation and Amortisation

ERP — Equity Risk Premium

EV — Enterprise Value

FCF — Free Cash Flow

FOP — Фізична Особа-Підприємець (Sole Trader, Ukraine)

HACCP — Hazard Analysis and Critical Control Points

HoReCa — Hotels, Restaurants and Cafes (hospitality sector)

IRR — Internal Rate of Return

KVED — Класифікатор Видів Економічної Діяльності (Ukrainian activity classifier)

LTV — Lifetime Value

MIT DE — MIT Disciplined Entrepreneurship (24-step framework)

NPS — Net Promoter Score

NOPAT — Net Operating Profit After Tax

NPV — Net Present Value

NWC — Net Working Capital

OpEx — Operating Expenditure

OTIF — On-Time-In-Full (delivery KPI)

RTD — Ready-To-Drink

SAM — Serviceable Addressable Market

SCOBY — Symbiotic Culture of Bacteria and Yeast

SKU — Stock Keeping Unit

SOM — Serviceable Obtainable Market

TAM — Total Addressable Market

TOV — Товариство з Обмеженою Відповідальністю (LLC, Ukraine)

UAH — Ukrainian Hryvnia

USD — United States Dollar

USC / ЄCB — Unified Social Contribution (Ukraine)

WACC — Weighted Average Cost of Capital

CHAPTER 1. IDEA DEVELOPMENT AND ENTREPRENEURIAL LOGIC OF THE BUSINESS PROJECT

1.1. ORIGIN OF THE BUSINESS IDEA AND ITS RELEVANCE

The idea emerged from a specific and recurring observation: in Lviv's bars and cafes, a growing share of people are not drinking alcohol. Not occasionally, but structurally. And yet the non-alcoholic options available to them remain uninspiring: cola, packaged juice, tea. Nothing that matches the ritual or visual complexity of a draft beer or a craft cocktail.

The market has started to respond. Non-alcoholic beer, craft lemonades, and in isolated venues kombucha have begun to appear. But the response remains uneven. These alternatives are rarely integrated into draft systems, and even where bottled kombucha exists in retail, there is no Lviv-based producer that coherently links HoReCa supply with retail distribution under a single brand identity. The two channels operate in parallel, without connection.

A secondary observation reinforced the initial one. The founder's parents began producing kombucha at home, which created an opportunity to observe both the fermentation process and how people reacted to the product in social settings. Kombucha was received not just as a health product but as something genuinely enjoyable, something people reached for gatherings not because they felt they had to, but because they wanted to. That distinction matters commercially.

The quantitative picture is consistent with these observations. The global kombucha market stood at USD 4.26 billion in 2024 and is forecast to nearly double by 2030 (CAGR 13.5%). Among Gen Z specifically, 41% reported consuming kombucha in the past three months, and 65% said they are open to replacing alcohol with non-alcoholic alternatives in social settings. In Ukraine, 11–15 domestic brands are active, yet most focus exclusively on B2C retail bottles no one has built a HoReCa-first keg model with a deliberate path to retail. That is the gap this project aims to fill.

1.2. ENTREPRENEURIAL OPPORTUNITY IDENTIFICATION

The opportunity here is not simply a product. It is a sequencing logic, a phased entry strategy that uses each stage to build the conditions for the next. MIT DE Steps 1–3 ask where unmet demand exists and whether there is a market gap that a new entrant can credibly occupy. The answer, in this case, involves mapping documented consumer behaviour shifts against a structural gap in B2B supply infrastructure.

Table 1.1. Three-phase market entry strategy.

Phase	Period	Format → Channel	Strategic Objective
Phase 1	Years 1–2	Keg → HoReCa	Validate demand, build operational model, establish brand equity. Keg format requires no capital investment from the venue.
Phase 2	Years 2–3	Bottle → HoReCa	Expand per-client revenue, test flavour formats, build brand visibility on tables and in menus.
Phase 3	Years 3–4	Bottle → Retail	Scale volume through retail chains. HoReCa-built recognition reduces marketing spend and lowers shelf-failure risk.

Source: Author's own elaboration based on European market benchmarks (NielsenIQ; Good Culture Ingredients).

The European evidence supports this sequencing. HoReCa accounts for 60.8% of European kombucha distribution as of 2024. More telling: European supermarket sales surged +35% in 2023, but that growth came after HoReCa had established category credibility. Brands that tried to enter retail directly have consistently underperformed relative to those that built HoReCa presence first. The keg, in this context, is not a niche product; it is the mechanism by which retail scale becomes achievable.

Why start with keg specifically? Three reasons. First, capital efficiency: a keg-based Phase 1 does not require a bottling line, labelling machine, or retail placement fees. The estimated Phase 1 CapEx of UAH 4,345,000 is lower than what a simultaneous retail launch would require. Second, demand intelligence: HoReCa venues generate real-time, high-frequency feedback on flavours, volumes, and price sensitivity precisely the data needed before committing to bottle SKUs for retail. Third, brand positioning: a consumer who first encounters the brand on tap in a well-regarded

Lviv cafe is more likely to choose it in a supermarket. That effect is well-documented in the European market.

On the demand side, the structural shifts are real and measurable. European foodservice alcohol consumption fell -6% in 2025 (Circana). Non-alcoholic retail sales grew +5.5% in value. Among Gen Z, 65% say they are open to switching from alcohol in social settings; 58% of Millennials share that view; 55% of European consumers now expect bars to offer non-alcoholic options as a matter of course (Suzy). These are not marginal shifts.

The barriers are also real and should not be understated. Phase 1 keg logistics costs are estimated at 15–25% of revenue at early scale a figure that must be explicitly modelled rather than assumed away. Phase 2 requires capital investment in bottling equipment, food safety certification, and potentially co-packing arrangements. Phase 3 introduces retail listing fees, minimum order volumes, and 30–60 day payment deferrals that significantly increase working capital requirements. Additional risks include the 0.5–2% ABV content in kombucha (which creates labelling ambiguity under Ukrainian law), power grid instability affecting cold-chain logistics, and the shrinkage of urban consumer bases due to wartime displacement, estimated at 6–8 million Ukrainians internally or abroad since 2022.

1.3. METHODOLOGICAL APPROACHES TO BUSINESS IDEA DEVELOPMENT

Three frameworks are commonly applied to early-stage venture analysis: Lean Startup, Design Thinking, and MIT Disciplined Entrepreneurship. Each has genuine strengths, and the choice between them is not arbitrary it depends on what the project actually needs to prove.

The Lean Startup methodology (Ries) is well-suited to iterative, low-capital experiments where the cost of a pivot is low. Phase 1 of this project does resemble a build-measure-learn cycle in some respects. However, two constraints limit its applicability here: this is a physical food production venture subject to food safety regulation and upfront infrastructure investment, and this thesis operates without live pilot data. Lean Startup is a useful operational lens for Phase 1 execution, but it cannot serve as the primary analytical framework for evaluating commercial viability across three phases.

Design Thinking offers a different angle — human-centred problem identification, empathy, and reframing. Its influence is visible in the project's origin: the initial observation of consumer frustration with non-alcoholic options is a classic Design Thinking entry point. But the methodology lacks the rigour needed for unit economics analysis, competitive positioning, and multi-phase financial modelling. It is a useful complement, not a substitute.

The MIT Disciplined Entrepreneurship framework (Aulet) is the most appropriate primary tool for this analysis. Its 24 sequential steps require evidence-based evaluation of each assumption without needing live market experiments, which is exactly the constraint this thesis operates under. The steps applied here include: Steps 1–3 (market segmentation and beachhead selection); Steps 4–6 (end-user profiling); Steps 9–10 (value proposition design); Step 11 (competitive positioning); and Steps 17–18 (unit economics and pricing model).

Validation Logic. Since no live pilot was conducted, the conclusions of this thesis rest on triangulation across four independent sources of evidence: secondary market data from named research organisations (Grand View Research, NielsenIQ, Circana); structural comparison with analogous Eastern European markets (Poland, Romania, Hungary); an financial model calibrated to the specific production setup and venue ramp-up assumptions; and expert logic applied to the

Ukrainian HoReCa context. No single source is treated as definitive; the strength of the conclusions depends on their convergence.

1.4. ROLE OF IDEA DEVELOPMENT IN BUSINESS PROJECT FORMATION

Idea development does more than generate the initial concept but rather it determines the logical architecture within which all subsequent analysis operates. In this thesis, the idea development stage is treated as a structured process: transforming an informal observation about consumer behaviour into a testable, three-phase business concept with explicit assumptions at each stage.

The first function of that process is to establish the core business logic. The sequence — keg to HoReCa, bottle to HoReCa, bottle to retail is not arbitrary. It mirrors the trajectory of European market leaders (Remedy, GT's, Equinox), all of whom built HoReCa presence before scaling retail. The logic is grounded in European distribution data, not just intuition.

The second function is to make the key assumptions explicit so they can be tested. Phase 1 rests on two assumptions: that Lviv HoReCa venues will adopt keg kombucha when operational and economic benefits are demonstrated, and that unit economics remain viable after logistics costs. Phase 2 assumes that the same venues will accept a bottled format and that per-client order volumes grow sufficiently to justify bottling investment. Phase 3 assumes that HoReCa-built brand awareness translates into retail shelf preference, and that major chains will accept placement at commercially viable terms. These assumptions are mapped to specific MIT DE steps and addressed in subsequent chapters.

The third function, perhaps less obvious, is methodological consistency. By selecting the MIT 24 Steps framework at this stage, the project ensures that conclusions drawn in one chapter directly inform the analysis in the next. Phase 1 segmentation shapes Phase 2 value proposition design; Phase 2 value proposition design informs Phase 3 unit economics. The architecture holds together precisely because the analytical choices were made at the beginning, not retrofitted. The results of Chapter 1 provide the foundation for the market analysis in Chapter 2.

CHAPTER 2. MARKET AND VALUE PROPOSITION ANALYSIS

2.1. MARKET ANALYSIS OF FUNCTIONAL AND NON-ALCOHOLIC BEVERAGES

2.1.1. Global Kombucha Market

Situating the venture in a credible market is not just a formality, it is a precondition for every subsequent financial and strategic assumption. The figures below are drawn from named, independent market research organisations. Where estimates diverge, the range is reported rather than smoothed over.

Table 2.1. Global kombucha market size estimates by source.

Source	2024 Value	CAGR	Forecast
Grand View Research	USD 4.26B	13.5% (2025–2030)	USD 9.09B by 2030
Polaris Market Research	USD 4.87B	7.5% (2025–2034)	USD 16.77B by 2034
Credence Research	USD 3.47B (2023)	15% (2024–2032)	USD 12.21B by 2032
EIN Presswire	USD 3.4B (2026)	19.6% (2026–2033)	USD 11.9B by 2033
Mordor Intelligence	USD 3.25B (2025)	~16%	USD 7.01B by 2030

Source: Grand View Research; Polaris Market Research; Credence Research; EIN Presswire; Mordor Intelligence.

The range across sources is meaningful — USD 3.25 billion to USD 4.87 billion in 2024 — and reflects differences in scope, methodology, and definitions of what counts as kombucha versus

adjacent fermented beverages. Setting that aside, the directional signal is consistent: even the most conservative estimate (GVR at 13.5% CAGR) implies the market roughly doubles over six years. That is a reasonable basis for long-term production investment across all three phases.

One regional distinction is worth highlighting. North America accounts for 44.1% of global revenue and operates a retail-first model. Europe, at 21.2%, is HoReCa-first. That contrast is not incidental — it directly supports the phasing logic of this project. If the European distribution architecture validates Phase 1 (HoReCa keg) as the appropriate market entry point, it also suggests that Phase 3 (retail) is reachable from there, not before it.

2.1.2. Key Global Demand Drivers

Four structural forces drive the growth trajectory, and they are likely to persist. The gut health trend has moved from niche wellness into mainstream consumer behaviour: 66% of kombucha consumers report probiotic benefits as their primary reason for purchasing (Grand View Research). This supports premium pricing across all three phases, provided product quality is consistent.

Alcohol displacement is the more immediately relevant driver for this project. European foodservice alcohol volumes fell -6% in 2025 (Circana). In the US, the non-alcoholic beverage category grew +20% in 2023, adding an estimated 37 million new no-alcohol and 4 million new low-alcohol consumers between 2022 and 2024 (NielsenIQ). Among Gen Z, 65% express openness to replacing alcohol in social settings, 41% consumed functional beverages like kombucha in the past three months, and 25% drink non-alcoholic alternatives at least weekly. Among Millennials, 58% share that same openness to alcohol substitution (Suzy).

A less-discussed but strategically relevant factor is the hard kombucha gateway. Hard kombucha (3–8% ABV) is growing at 18% CAGR globally and at 40–45% annually in Europe — Germany alone reached approximately EUR 55 million in 2025. Consumers who discover kombucha through the alcoholic variant tend to transition to regular kombucha for everyday occasions. That pattern expands the addressable retail market that Phase 3 depends on.

2.1.3. European Market — The Three-Phase Benchmark

The European market is the most directly relevant precedent for this project, both in structural terms and in the sequencing of channel development. The market is estimated at approximately USD 1 billion in 2025, growing at 14–15% annually. Projections converge on a range of USD 3–5 billion by 2033, though the wide spread reflects genuine uncertainty about penetration rates in Eastern European markets still in early adoption stages.

What is better documented is the channel structure. As of 2024, 59% of global kombucha revenue flows through HoReCa or on-trade channels; in Europe specifically, cafes and hospitality account for 60.8% of kombucha distribution. Crucially, mainstream European supermarket sales grew +35% in 2023 — but that growth followed, rather than preceded, HoReCa credibility-building. Brands that attempted retail entry without prior HoReCa presence have consistently struggled to build traction. The pattern is clear enough to be treated as a structural feature, not an anomaly.

Eastern Europe offers the most directly applicable growth reference. Poland, Romania, and Hungary are growing at 22–25% CAGR, meaningfully faster than Western European markets. Ukraine's structural similarities to these markets — income levels, urbanisation patterns, proximity to

early adoption suggest the upside is real, even if the wartime context adds uncertainty that the benchmark data cannot fully capture.

2.1.4. Ukrainian Market

A note on data quality upfront: no single authoritative published figure exists for the Ukrainian kombucha market in isolation. The estimates below rely on benchmark adjustment rather than primary Ukrainian market research, and should be read with that caveat in mind.

What can be stated with reasonable confidence: the market is in a pre-mainstream, craft/artisan phase. Mass retail penetration is underway — Silpo, Novus, Fora, Wine Time, Epicenter, Kolo, and MauDau all carry kombucha, but saturation is not yet in sight. Between 11 and 15 active domestic brands operate at scales ranging from micro-craft to semi-industrial. The farmgate price stands at UAH 203,519/tonne (~USD 4.89/kg) as of January 2025, versus European on-trade prices of EUR 4.00–5.00 per bottle. That gap implies meaningful margin room at current production and pricing levels.

The benchmark-adjusted TAM estimate applies European per capita consumption (~USD 2.22/year) against three adjustment coefficients: income (0.35), market maturity (0.45), and urban concentration (0.65). The resulting figure is approximately USD 8 million per year. At a 12–13% CAGR consistent with the Eastern European reference, this could reach USD 15–18 million by 2030 across HoReCa and retail combined. These numbers are speculative by design — they indicate order of magnitude, not precision.

Interpretation. The market data, read together, suggests kombucha is not a niche product in terminal growth, it is a category in transition, moving toward mainstream status at different speeds

across different markets. For Ukraine, Phase 1 entry through Lviv HoReCa is well-positioned relative to where the market is now and where it is likely to go.

2.2. TARGET MARKET SEGMENTATION AND BEACHHEAD MARKET SELECTION

MIT DE Steps 1–3 require narrowing from TAM to a specific, countable beachhead — one segment where first traction is achievable and meaningful. The beachhead for this project is Phase 1: keg supply to Lviv HoReCa venues. Phases 2 and 3 expand from that foundation once it is proven (see Table 2.2).

Table 2.2. Market segmentation by phase.

Phase	Channel	Format	Customer	Geography	Timeline
Phase 1 (Beachhead)	HoReCa	Keg (on-tap)	Specialty cafes and craft bars with existing draft infrastructure	Central Lviv	Year 1–2
Phase 2 (Expansion)	HoReCa	Bottled	Existing Phase 1 partners + new venues without keg infra	Lviv + nearby cities	Year 2–3
Phase 3 (Scale)	Retail (B2C)	Bottled	End consumers via supermarkets and specialty stores	Lviv → Ukraine	Year 3–4

Source: Author's own elaboration.

The Phase 1 beachhead is defined narrowly. Qualifying venues are specialty coffee shops and craft beer bars in central Lviv with existing keg draft infrastructure, serving urban professionals and students aged 18–35. The estimated qualifying pool is 40–80 venues — a number that is

countable and reachable with a direct sales model. Market size estimates by TAM/SAM/SOM are presented in Table 2.3 (see Table 2.3).

Table 2.3. TAM/SAM/SOM estimates by phase.

Level	Scope	Estimated Size	Basis
TAM	Total Ukrainian kombucha market (all channels)	~USD 8M/year	Benchmark-adjusted per capita; see 2.1.4
SAM — Phase 1	Lviv HoReCa venues with keg draft infrastructure	~USD 320–600K/year	80–150 qualifying venues × avg. ~USD 4K annual kombucha spend
SAM — Phase 2	Lviv + regional HoReCa venues (bottled)	~USD 600K–1.2M/year	Expanded pool including non-keg venues
SAM — Phase 3	Ukrainian retail B2C market (bottled)	~USD 5–6M/year	~65% of estimated USD 8M TAM in retail channel
SOM — Phase 1	~20–30 Lviv venues, Year 1–2	~USD 80–160K/year	~25% SAM penetration, consistent with early B2B benchmarks

Source: Author's own calculations based on European benchmark data. Figures are indicative.

2.3. FORMATION OF THE PRODUCT VALUE PROPOSITION

MIT DE Steps 9–10 require articulating the value proposition around documented customer pain points, rather than assumed ones. The propositions differ across phases because the customer, the format, and the commercial context are different at each stage.

Phase 1 Keg for HoReCa. The pain points for a Lviv specialty cafe or craft bar are specific: low margins on bottled non-alcoholic drinks (which rarely exceed 40–50% venue margin), storage constraints in compact historical buildings, spoilage risk on bottles with short shelf lives, and an

inability to serve non-alcoholic beverages with the same visual ritual as draft beer. The keg format addresses each of these directly. It eliminates per-unit packaging cost, reduces storage footprint, lowers spoilage risk, and integrates into existing draft infrastructure with no capital expenditure from the venue. The per-litre procurement cost from keg wholesale is lower than Ukrainian retail prices for bottled kombucha (52–82 UAH/0.33L), while enabling venue menu prices of 95–150 UAH per serving — margins of roughly 50–60%, comparable to craft beer.

Phase 2 **Bottle for HoReCa**. Once the brand has built credibility through keg presence, the bottled format extends the relationship with existing partners and opens access to venues that lack keg infrastructure — coffee shops, fitness studios, health food stores, hotels. The bottle also functions as a visible brand asset: it sits on tables, in display fridges, in takeaway bags. This creates consumer awareness that the keg alone cannot generate. Wholesale pricing: 55–75 UAH per 0.33L and 75–100 UAH per 0.5L, with venue menu prices typically at 1.8–2.5x wholesale.

Phase 3 **Bottle for Retail (B2C)**. The retail proposition is built on HoReCa-accumulated brand equity. A consumer who encounters the brand on tap in a well-regarded Lviv venue is, in principle, more likely to recognise and choose it at the supermarket shelf — this is the mechanism documented in the European market, where supermarket growth of +35% in 2023 followed HoReCa credibility-building. Ukrainian retail prices for 0.33L kombucha range from 29 UAH (Yo) to 82 UAH (Sachi), with premium formats reaching 149–300 UAH. At EUR/UAH ~45 in early 2026, even the premium end (EUR 1.82 per standard bottle) remains well below European on-trade pricing of EUR 4.00–5.00, confirming margin room at realistic domestic retail prices.

2.4. COMPETITIVE ENVIRONMENT ANALYSIS

MIT DE Step 11 requires an honest map of the competitive landscape, including threats that may not be visible yet. The analysis covers Ukrainian producers, European brands expanding eastward, and adjacent beverage categories.

The core competitive observation: every documented Ukrainian producer operates in bottled B2C format. No Ukrainian brand offers a standardised, scalable keg-based B2B supply model. None has articulated a deliberate three-phase HoReCa → retail sequencing strategy. Table 2.4 summarises the competitive set (see Table 2.4).

Table 2.4. Ukrainian kombucha producers — competitive set.

Brand	HoReCa Keg B2B	Bottled HoReCa	Retail	Price (0.33L)	Note
Spraga (Kyiv, ~2022)	Selective	No (informal)	Yes — major chains	~52 UAH	HACCP-certified; UK distribution launched Jan 2026
Wild Kombucha (Kyiv, 2020)	~400 venues	No	Yes — 7 chains	53 UAH	World Kombucha Awards 2025 winner
JIVA (Kyiv, ~2015)	Limited	No	Yes	48–54 UAH	Primarily B2C-focused
KUMA Kombucha (Kyiv, ~2019)	Festival events only	No	Limited	60 UAH	Strong direct-to-consumer channel
Boim (Lviv, ~2020)	Limited, local	No	Limited	75 UAH	Only confirmed Lviv-based producer
Sachi (Kyiv)	HoReCa (Kyiv only)	Yes (bottled)	No	82 UAH	HoReCa-focused but bottled-only format

Source: *bzh.life*; *tridge.com*; author's own market research.

The most immediate competitive threat in Phase 1 is Wild Kombucha, which already supplies approximately 400 HoReCa venues — though through bottled format, not keg. If Wild Kombucha or Spraga decides to enter keg B2B once the model is validated, they would have production capacity and brand recognition as starting advantages. The timeframe available to establish anchor venue relationships and build keg logistics infrastructure ahead of potential competitive entry is finite and warrants early action.

On the international side, brands like Remedy (Australia), Humm (USA), VIGO (Poland), and GT's (USA/global) do not yet have meaningful Eastern European presence. Their Phase 3 relevance is real but likely 3–5 years away at scale. Real Kombucha (UK), which operates an on-trade focused model, is the most instructive precedent for Phase 1–2 execution.

Adjacent categories — non-alcoholic beer (USD 22.1B globally, 7.9% CAGR), craft soda (USD 17.5B, 7.0% CAGR), RTD tea (USD 34B, 5.8% CAGR) — represent indirect competition in HoReCa tap systems and on retail shelves. Functional beverages broadly (USD 166–226B, 6.4–9.4% CAGR) define the wider category in which kombucha competes for consumer attention and positioning. The venture's primary competitive advantage is not product differentiation per se, but the sequencing of channel entry — and that advantage is time-bound. The analysis in Chapter 2 directly informs the business model design and GTM strategy presented in Chapter 3.

CHAPTER 2.5. PRIMARY MARKET RESEARCH: QUALITATIVE INTERVIEWS WITH LVIV HORECA OPERATORS

2.5.1. Research Design and Methodology

To complement the secondary market data presented in Chapter 2 and validate the key demand-side assumptions underpinning the financial model, a series of informal qualitative interviews were conducted with managers and owners of Lviv’s hospitality establishments. The primary research aimed to answer three questions that secondary data cannot resolve: whether Lviv HoReCa operators would adopt a keg-based kombucha supply model; at what price point procurement would be commercially acceptable; and what share of current beverage sales is already non-alcoholic — providing a direct baseline for demand estimation.

Six establishments were interviewed: DAKh and Dzyga (both part of the FEST Group — Lviv’s leading hospitality network), as well as Choven bar, Fatsent, Inshi bar, and Plav. The sample was purposively selected to represent a range of venue formats: multi-tap craft bars with existing keg draft infrastructure (Choven, Fatsent, Dzyga, Plav), a cultural art-bar format (DAKh), and an independent concept bar (Inshi bar). All six venues are located in central Lviv and serve the 18–35 urban professional and student demographic identified as the primary target in Section 2.2. Interviews were conducted informally with venue managers or owners, covering current beverage sales volumes, the non-alcoholic share of total sales, keg infrastructure availability, and willingness to pay for a keg-based kombucha supply.

The qualitative nature of the interviews reflects the early-stage character of the research: the goal was not statistical representativeness but directional validation of the assumptions embedded in the financial model — specifically the 70% pilot conversion rate, the pricing range of UAH 100–150 per litre, and the premise that non-alcoholic demand is structurally growing among Lviv

HoReCa venues. The findings are presented below, followed by an assessment of which model assumptions they support and which require further validation.

2.5.2. Key Findings by Venue

The most significant data point from the interview series came from DAKh (FEST Group). The venue reports that non-alcoholic beverages account for 42% of total drink orders during the summer season, with approximately 16,000 drinks sold in the peak summer period. This figure is substantially higher than the European benchmark of 30–40% non-alcoholic share among Gen Z consumers (Section 2.1.2) and is directionally consistent with the structural demand shift described in the secondary research, though the sample size limits statistical inference. For a high-volume cultural venue of DAKh's profile, kombucha on tap would address a well-documented gap in the premium non-alcoholic segment: the absence of a draft format with the visual and ritual appeal of craft beer.

Choven bar reports a non-alcoholic share of 18% of total monthly sales, with average monthly volume of approximately 8,000 drinks. While the non-alcoholic share is lower than at DAKh, the absolute volume provides a commercially meaningful baseline: 18% of 8,000 drinks per month represents approximately 1,440 non-alcoholic orders, which at an average of 0.33L per serving equates to roughly 475 litres of non-alcoholic beverages monthly. Even a partial capture of this volume by kombucha on tap would represent meaningful recurring revenue. Importantly, Choven already operates keg draft infrastructure, which eliminates one of the primary operational barriers to Phase 1 adoption.

Plav reports monthly sales of 6,000–7,000 drinks, with 22% of those being non-alcoholic. This yields an estimated 1,320–1,540 non-alcoholic orders per month, or approximately 436–508 litres — a volume broadly consistent with Choven and sufficient to support a weekly keg delivery cadence under the Phase 1 logistics model. Plav also has existing keg infrastructure, further reducing the switching cost for adoption. Dzyga (FEST Group) and Fatsent similarly reported

operating keg tap systems, making them immediately eligible for Phase 1 supply without capital investment on their side. Inshi bar’s infrastructure was not verified in detail but the manager expressed openness to a trial arrangement.

Table 2.5. Primary research summary — Lviv HoReCa operator interviews.

Venue	Monthly drinks (approx.)	Non-alcoholic share	Keg infra available	Est. non-alc. volume (L/month)	Adoption stance
DAKh (FEST Group)	~16,000 (summer peak)	42%	Confirmed	~2,200 (summer est.)	Open, subject to pilot keg trial
Dzyga (FEST Group)	N/A	N/A	Confirmed	—	Open, subject to pilot keg trial
Choven bar	~8,000	18%	Confirmed	~475	Open, subject to pilot keg trial
Fatsentr	N/A	N/A	Confirmed	—	Open, subject to pilot keg trial
Inshi bar	N/A	N/A	Not confirmed	—	Open to trial arrangement
Plav	6,000–7,000	22%	Confirmed	~436–508	Open, subject to pilot keg trial

Source: Author’s own primary research. Interviews conducted informally with venue managers/owners, Lviv, 2024–2025. Volume estimates based on reported drink counts at 0.33L average serving size.

2.5.3. Pricing Validation and Hypothesis Assessment

On pricing, the interviews produced a consistent and directly actionable finding: across all six venues, managers indicated a willingness to pay up to UAH 125 per litre for keg kombucha on a wholesale basis. This figure sits within — and validates — the financial model’s base-case assumption of UAH 110 per litre, confirming that the modelled price is conservative rather than optimistic. The UAH 125/L ceiling corresponds to UAH 3,750 per 30L keg, which falls precisely within the model’s projected pricing range of UAH 3,000–4,500 per keg (see Table 3.1). At UAH 125/L wholesale, venues can achieve menu prices of UAH 95–150 per 0.33L serving at gross

margins of 50–60%, comparable to craft beer — which is the commercial benchmark most relevant to their purchasing decision.

Three of the four original hypotheses are supported by the interview findings. The hypothesis that non-alcoholic demand is growing is directionally supported by the volume data: across three venues with quantified data (DAKh, Choven, Plav), the non-alcoholic share ranges from 18% to 42%, with a weighted average of approximately 27% — consistent with, and in some cases exceeding, European benchmarks. The hypothesis that keg infrastructure is already present is supported for four of six venues (Choven, Fatsent, Dzyga, Plav), which means Phase 1 adoption for these venues would require no capital investment on either side. The pricing hypothesis — willingness to pay UAH 100–150 per litre — is directionally validated by the UAH 125/L figure reported across all six interviews.

The fourth hypothesis — that a free pilot keg is required before a commercial commitment — is also supported by the interview findings, and should be read as a standard commercial condition rather than a signal of scepticism. All venues indicated openness to adoption contingent on a trial arrangement, which is consistent with the GTM strategy outlined in Section 3.3.1: the structured five-week pilot mechanism was designed precisely to meet this expectation. The pilot conversion rate of 70% assumed in the financial model is therefore not undermined by this finding — it is calibrated to it.

2.5.4. Implications for the Financial Model and Market Assumptions

The primary research findings have three direct implications for the financial model. First, the validated UAH 125/L price point supports the model’s base case and suggests the optimistic scenario (UAH 150/L) is achievable at venues with stronger premium positioning — notably the FEST Group properties, where brand equity and consumer profile support higher price tolerance. Second, the reported keg infrastructure at four of six venues, if verified during pilot installation, would reduce the customer acquisition cost (CAC) for these specific accounts: no equipment

negotiation is required, which shortens the pilot-to-contract cycle and reduces the time component of the UAH 4,000 estimated CAC. Third, the non-alcoholic volume data from Choven and Plav (approximately 475 and 436–508 litres/month respectively) provides a direct calibration for the baseline order assumption of one 30L keg per week per venue (approximately 120–130 litres/month). Even assuming kombucha captures only 25–30% of each venue’s non-alcoholic volume, the one-keg-per-week baseline is conservative and achievable.

The FEST Group connection merits separate strategic note. DAKh and Dzyga are part of Lviv’s most recognisable hospitality network, with strong brand association among the target demographic. Securing both venues as anchor partners in Phase 1 would serve a function beyond revenue: it establishes the brand’s credibility in the Lviv market in a way that smaller independent venues cannot replicate. A kombucha seen on tap at a FEST venue is a category signal, not merely a product placement. This effect is consistent with the GTM logic in Section 3.3.1, which identifies anchor venue selection as the most consequential operational decision in the first six months. The primary research effectively identifies the FEST Group as the highest-priority anchor target in Phase 1.

CHAPTER 3. BUSINESS MODEL AND GO-TO-MARKET STRATEGY

3.1. BUSINESS MODEL JUSTIFICATION

3.1.1. Revenue Architecture by Phase (MIT DE Step 12)

The revenue model is built on sequential rather than simultaneous monetisation. Each phase adds a new revenue stream without shutting down the previous one, which limits execution risk while gradually diversifying income sources.

Phase 1 (Years 1–2) generates revenue exclusively from B2B keg wholesale. The financial model (v3.0) projects Year 1 total revenue of UAH 3,768,475 — rising from UAH 50,046 in Month 1 (5 active venues, April) to UAH 343,174 by Month 12 (32 venues, March of Year 2). The seasonal variation is significant: July (Month 4) shows demand coefficient of 1.50 versus January's 0.70, which means production and logistics planning must account for roughly a 2x swing between peak and trough. Year 2 revenue (Months 13–24) is projected at UAH 7,438,288, reflecting both venue expansion to 52 and the introduction of Phase 2 bottle format. Revenue parameters are summarised in Table 3.1 (see Table 3.1).

Table 3.1. Phase 1 revenue parameters.

Parameter	Minimum	Base Case (Model)	Maximum
Price per litre (UAH)	100	~110	150
Price per 30L keg (UAH)	3,000	~3,300	4,500
Venues at Month 12	20	32	35

Parameter	Minimum	Base Case (Model)	Maximum
Year 1 Revenue (UAH)	~2,600,000	3,768,475	~5,616,000
Year 2 Revenue (UAH)	Not modelled	7,438,288	Not modelled

Source: Investor-grade financial model — Revenue & Demand sheet, Cash Flow & DCF sheet.

Phase 2 (Years 2–3) introduces bottled format at 55–75 UAH per 0.33L and 75–100 UAH per 0.5L wholesale. Phase 3 (Years 3–4) enters retail chains at ~55–80 UAH per 0.33L producer price, after accounting for chain margins of 30–40%. The substantial working capital required by 30–60 day retail payment deferrals is one of the primary reasons Phase 3 is sequenced last.

3.1.2. Pricing Strategy and Justification (MIT DE Step 13)

Pricing follows a value-based logic rather than cost-plus. The key reference point for HoReCa venues is what draft kombucha actually delivers relative to alternatives. Table 3.2 compares margins across beverage formats at the venue level (see Table 3.2).

Table 3.2. Venue margin comparison across beverage formats.

Parameter	Kombucha (keg)	Kombucha (bottle)	Craft beer (keg)	Lemonade (bottle)
Purchase cost per 0.33L serving	~50–66 UAH	55–75 UAH	~35–50 UAH	~15–25 UAH
Selling price at venue	95–150 UAH	85–130 UAH	75–120 UAH	45–65 UAH
Venue margin, %	~50–60%	~40–50%	~45–55%	~50–60%

Source: Author's own calculations based on Lviv HoReCa market research.

Draft kombucha delivers venue margins comparable to craft beer — typically 50–60% — while occupying a category (premium non-alcoholic) that craft beer does not. That is a meaningful commercial proposition for a venue trying to differentiate its menu. The model also incorporates a returnable keg deposit system (500–800 UAH per keg), which functions simultaneously as a container return mechanism, a zero-interest financing instrument for the producer, and a logistics incentive. Industry standard practice for craft beverage B2B; relatively straightforward to implement.

3.1.3. Customer Acquisition Cost and Payback Period (MIT DE Step 14)

The financial model applies UAH 4,000 per venue as the standard CAC. The cost structure: free pilot keg (UAH 2,000–2,500), sales manager time for pitch and negotiation (~5 hours, UAH 800–1,200), branded materials (UAH 300–500), and pilot logistics (UAH 200–300). Total: UAH 3,300–4,500 per venue, depending on how smoothly the pilot converts.

At a gross margin of 83–92% per the model, one venue ordering 1 keg/week generates CAC payback within approximately 1.5–2 months. LTV over an 18–24 month average partnership: UAH 37,800–63,000. LTV/CAC ratio: 8.4x (conservative) to 19.1x (optimistic). Both figures exceed the commonly cited 3x minimum threshold by a substantial margin. The implication is that Phase 1 customer economics are robust — the risk is on the operational side (quality, logistics, churn), not the unit economics.

3.1.4. Decision Justification

The keg-first model is optimal under the specific constraints of this project: limited starting capital (UAH 4,345,000 Phase 1 CapEx), no prior market presence, and the need to validate demand before committing to bottling infrastructure. It is also the model that the European market has validated repeatedly — HoReCa presence first, retail at scale second. The selected business model is optimal under constraints of capital efficiency, risk minimisation, and market validation sequence. Alternatives (direct retail launch, simultaneous keg and bottle) are not unworkable, but they require either significantly more capital or a tolerance for risk that the current funding structure does not support.

3.2. DISTRIBUTION AND SALES CHANNELS (MIT DE STEP 15)

Phase 1 uses a fully direct model — no intermediaries, full control over service quality, direct client feedback. The channel structure is: production facility (Lviv, ~400 m²) → company-owned refrigerated van (+2...+6°C) → HoReCa venue → end consumer. Delivery once per week per venue. Initial geographic coverage: central Lviv (Old Town, Rynok Square, Virnenska, Doroshenko, Katedralna streets), expanding outward as venue count grows. Keg pool: 60–80 units of 30L, each tracked individually.

KPI targets for Phase 1 channel performance are set out in Table 3.3 (see Table 3.3). The churn rate target of <15% at Month 12 and <10% at Month 18 is ambitious but necessary — high churn would undermine the LTV/CAC economics and slow the referral-based growth model.

Table 3.3. Phase 1 channel KPI targets.

KPI	Target (Month 12)	Target (Month 18)
Active venues	32	40
Average order (kegs/week per venue)	1.0	1.0–1.5
On-Time-In-Full delivery rate	$\geq 95\%$	$\geq 98\%$
Keg return rate (on schedule)	$\geq 90\%$	$\geq 95\%$
Venue churn rate	$< 15\%$	$< 10\%$
Partner venue NPS	≥ 40	≥ 50

Source: Author's own elaboration based on B2B craft beverage industry benchmarks.

Phase 2 expands to bottled format (0.33L and 0.5L), reaching venue types that lack keg infrastructure. An optional regional distributor (15–20% margin) is considered from Month 18–24 onward, but only after the Lviv direct channel achieves OTIF $\geq 98\%$ and churn $< 10\%$ — premature distributor engagement would risk quality control and brand consistency. Phase 3 retail entry targets chains in priority order: Silpo (premium, audience fit), Novus (broad coverage, dedicated health food section), MauDau/Kolo (specialised healthy/local), Fora (mass market, later stage), and Wine Time (beverage-focused). A D2C channel via branded webshop and Glovo/Bolt Food is planned for Phase 3 at an estimated 5–10% of total sales.

3.3. GO-TO-MARKET STRATEGY (MIT DE STEP 16)

3.3.1. GTM Phase 1 — Anchor → Network

The Phase 1 GTM logic is sequenced: establish a small number of high-quality anchor partnerships, then let those relationships generate referrals. The first 5–10 venues matter disproportionately — they are proof points, not just revenue sources. Venue selection criteria:

existing keg draft infrastructure; target demographic aged 18–35; management openness to menu innovation; location in central Lviv; craft or health-forward menu positioning; active social media presence. Typical candidates include multi-tap bars (Pravda, Lem Station), coworking spaces with bar areas, healthy food restaurants, and food halls with tap systems.

The entry mechanism is a structured free pilot. Week 0: product presentation and tasting of 3–4 flavour variants. Weeks 1–2: keg installed at no charge, branded materials in place. Weeks 3–4: sales volume tracking, bartender and consumer feedback collection. Week 5: results review and proposal of a commercial contract. The target conversion rate from pilot to commercial contract is $\geq 70\%$ — below that threshold, pricing or product adjustments are warranted before scaling. Table 3.4 maps the progression (see Table 3.4).

Table 3.4. Phase 1 GTM progression timeline.

Period	Calendar Month	Activity	Target (venues)	Volume (L/week)
Month 1–3	Apr–Jun	Selection + pilots	5–10	150–300
Month 4–9	Jul–Dec	Conversion + expansion	17–30	450–900
Month 10–12	Jan–Mar Y2	Scaling to target	30–32	900–1,040

Source: Investor-grade financial model — Assumptions sheet C (venue ramp-up schedule).

3.3.2. GTM Phase 2 — Bottle as Extension

Phase 2 is not a separate launch — it is a product line extension for an existing client base. The prerequisites before initiating Phase 2 are: Phase 1 break-even achieved; at least 20 stable venue partners; 6 months of keg sales history from which to identify top-performing flavours; and

available capital for bottling line investment (USD 25,000–40,000). The sequencing delivers three practical advantages: flavour risk is eliminated (the best keg flavours become the first bottle SKUs); the client base is ready (existing partners are the first bottle buyers); and the venue types accessible expand significantly (anything without a keg tap becomes a potential customer).

3.3.3. GTM Phase 3 — Brand from HoReCa to Retail

The retail entry strategy rests on one central asset: by the time negotiations begin with chains, the brand will have 2–3 years of Lviv HoReCa presence behind it. That matters in chain negotiations — HoReCa sales data and HACCP certification are meaningful in commercial discussions with Silpo or Novus in ways that a brand-new producer simply cannot replicate.

Entry proceeds in three steps. First (Month 24–30): independent stores and specialist chains — Kolo, MauDau, Horokh, independent eco stores. Lower listing fees, simpler negotiations, time-to-shelf of 2–4 weeks rather than 2–6 months. Second (Month 30–42): premium chains Silpo and Novus, with a full commercial package including HoReCa sales history, lab analysis, HACCP documentation, and working capital provision for 30–60 day payment terms. Third (Month 36+): mass retail — Fora, ATB — conditional on sufficient production capacity and working capital reserves. The competitive window is open but closing: international brands are expected to begin meaningful Eastern European retail expansion within 3–5 years. Chapter 3 findings directly underpin the operational and financial planning in Chapter 4.

3.4. BRAND IDENTITY AND VISUAL POSITIONING

3.4.1. Brand Rationale: Why Identity Matters in Phase 1

Brand identity in a B2B keg supply model is often treated as a secondary concern, subordinate to product quality, logistics reliability, and pricing. In Phase 1 of this venture, that framing is partially correct: the primary commercial relationship is between producer and venue manager, and the purchase decision is driven by unit economics, keg format convenience, and pilot results rather than by consumer-facing aesthetics. However, the brand is not irrelevant in Phase 1 — it operates at two distinct levels that directly affect commercial outcomes.

At the B2B level, a coherent brand communicates seriousness and long-term commitment to the venue manager. A supplier who presents with a developed visual identity, a tap badge, and a branded menu card signals that this is not a micro-producer experiment but a venture with a considered market entry strategy. This matters in negotiations with established venues such as FEST Group properties, where procurement decisions are made by managers who evaluate suppliers partly on professional presentation. At the consumer level, brand assets placed in the venue — tap badges, table cards, menu integration — generate product awareness at the point of consumption, which is precisely the mechanism the HoReCa-to-retail transition in Phase 3 depends on. A consumer who notices and responds to the brand at a Lviv bar is more likely to choose it in a supermarket eighteen months later. The brand therefore functions as a long-duration investment whose return accrues in Phase 3, but whose cost is incurred and whose foundations must be established in Phase 1.

3.4.2. SUNNY — Brand Concept and Positioning

The brand developed for this venture is named SUNNY. The name and visual identity are built around a single core concept: energy, lightness, and the living character of the product. The tagline — “ЖИВА. ЛЕГКА. СПРАВЖНЯ.” (Alive. Light. Real.) — communicates the three functional and emotional attributes most relevant to the target consumer: the live culture character of kombucha (probiotic, fermented), the low-calorie and non-alcoholic positioning (lightness as contrast to beer), and the authenticity of a local craft product (real, as opposed to industrial).

The primary logo mark is a multi-pointed star — a symbolic form evoking energy, sunlight, and vitality — rendered in a bold, hand-crafted aesthetic that signals artisanal origin without sacrificing visual impact. The logotype uses a custom hand-lettered style for the brand name, reinforcing the craft positioning at the typography level. A secondary typeface is used for product descriptors (flavour names, volume, certifications), maintaining legibility at small sizes on can and keg formats.

3.4.3. Colour System and Flavour SKU Architecture

A five-colour system maps directly to the five planned flavour SKUs, providing immediate visual differentiation at the point of sale and on the menu card. Each colour is drawn from the natural palette of the corresponding ingredient, creating an intuitive association between visual identity and product content. The colour-to-flavour mapping is as follows: deep red (#D94A6F) for Strawberry; orange (#F39C34) for Mango; yellow-gold (#E5D13D) for Lemon & Ginger; blue (#2FA9C9) for Blueberry Lavender; and forest green (#2E6B3F) for Apple Cinnamon. This system is consistent across all touchpoints: can labels, tap badges, menu cards, sticker sets, and branded merchandise.

The flavour architecture reflects the phased commercial logic. Phase 1 (keg, HoReCa) will launch with two or three core SKUs — Strawberry and Mango as the highest-appeal starting point based on European market data showing fruit-forward kombucha variants outperforming unflavoured in on-trade settings, supplemented by Lemon & Ginger as the most established functional flavour in the category. The remaining two SKUs (Blueberry Lavender and Apple Cinnamon) are reserved for Phase 2 bottle launch, where shelf visibility and SKU variety are more commercially significant. This sequencing reduces Phase 1 production complexity — fewer flavour changeovers, less CIP time between batches — while still providing sufficient variety for HoReCa menus to build a category presence.

3.4.4. HoReCa Brand Touchpoints and Phase 3 Transition Logic

The brand system developed for SUNNY includes a set of HoReCa-specific touchpoints designed to maximise consumer exposure within the venue environment. The tap badge — a circular branded medallion mounted on the draft handle — is the primary point-of-sale asset in Phase 1. It is visible to every guest who approaches the bar, functions as a passive advertisement at zero ongoing cost, and creates a visual anchor that bartenders can reference when recommending the product. The branded menu card and table card “Kombucha on Tap” lists available flavours with colour coding, providing a structured recommendation tool for venues with limited staff knowledge of the product category. These assets are supplied to partner venues as part of the Phase 1 commercial package at no additional charge, making adoption frictionless from the venue’s perspective.

The brand identity system was developed to be format-agnostic: it scales from keg tap badge through 330 ml can to retail bottle without structural redesign. This is a deliberate choice. When Phase 3 retail entry begins, the SUNNY brand will not require a visual rebrand — the consumer who recognises it from a Lviv bar will encounter the same star mark, the same colour system, and the same typography on the supermarket shelf. This continuity is the mechanism through which HoReCa-built brand equity transfers to retail recognition. The European market evidence — specifically the +35% retail surge that followed HoReCa credibility building (Section 2.1.3) — suggests that this transfer works precisely because the brand is the same object in both contexts, not a different product dressed for a different channel. SUNNY is designed from the outset as a brand that will be seen in both environments, which is why the identity investment in Phase 1 is strategically justified even when the immediate commercial return flows entirely from B2B keg sales.

CHAPTER 4. OPERATIONAL, FINANCIAL, AND INVESTMENT PLANNING OF THE BUSINESS PROJECT

4.1. PRODUCTION AND OPERATIONAL PLAN (MIT DE STEP 17)

4.1.1. Production Location and Infrastructure

The production facility is in Lviv. The land plot belongs to the founder's family; the building is a sandwich-panel construction of approximately 400 m², chosen for installation speed (2–4 months), thermal insulation adequate for stable fermentation temperatures, sanitary compliance, and modular expandability as production scales. The facility is zoned across six functional areas: F1 primary fermentation (180–200 m², housing 4 CCT vessels of 400 L each and a tea brewing accumulation tank); F2 secondary fermentation and carbonation (60–80 m², 3 tanks of 300 L each); filling and kegging (40–50 m²); cold storage for finished goods (30–40 m², maintained at +2...+6°C); raw materials storage (20–30 m²); and admin/laboratory (15–20 m²).

4.1.2. Production Technology Cycle and Capacity Analysis

Kombucha production follows a four-stage sequential cycle in which biological and physicochemical transformations occur under controlled parameters at each stage. The cycle applied in this venture combines two distinct fermentation phases with intermediate filtration and flavouring, followed by natural carbonation and cold-chain packaging. The key design principle is the “conveyor” model: multiple parallel batches run simultaneously at different stages, ensuring continuous output rather than batch-and-wait production. This significantly improves asset

utilisation across the fermentation tank pool and smooths weekly keg availability for HoReCa clients.

Table 4.1. Production technology cycle — four-stage process with controlled parameters.

Stage	Duration	Volume / Equipment	Controlled parameters	Quality control action
Step 1. Tea wort preparation	2–4 h	400–800 L per brew; brewing accumulation tank	Water temperature 90–95°C; tea steeping 15–20 min; sugar dissolution (60–80 g/L); Brix 8–12° before cooling to +26°C	Brix refractometer check before transfer; visual inspection for clarity; cool to target temp before SCOBY contact
Step 2. F1 — Primary fermentation (open vessel)	7 days	CCT 400 L × 4 units; SCOBY mat + liquid starter (10–15% vol.)	pH target 2.8–3.5; Brix drop monitored daily; temperature +22–26°C; ABV control ≤0.5% (non-alcoholic classification); CO₂ venting through breathable cover	pH meter reading on days 5 and 7; Brix refractometer daily; organoleptic check (acidity, aroma); batch rejected if pH <2.5 or contamination detected
Step 3a. Filtration and flavouring	2–4 h	Pump + inline filter (100 micron for semi-clear; 20 + 5 micron for clear); F2 tank 300 L × 3 units	SCOBY mat removed; liquid pumped through filter stack; natural flavour concentrate added (ginger, berry, or citrus) at 3–8% vol.; residual Brix adjusted to 2–4° to feed F2 carbonation	Visual clarity check post-filtration; Brix reading to confirm residual sugar for F2; filter integrity test before each batch; cross-contamination prevention via CIP between flavour SKUs
Step 3b. F2 — Secondary fermentation (closed vessel, natural carbonation)	3–4 days	300 L closed CCT × 3 units; pressure-rated vessels	Vessel sealed; yeast consume residual sugar generating CO ₂ naturally; target carbonation 3.5–5 g/L CO ₂ ; temperature +18–22°C; pressure 1.0–1.5 bar monitored continuously	Pressure gauge reading twice daily; CO ₂ level measured at end of F2 via carbonation meter; pH recheck (target 2.8–3.2 post-F2); batch approved by technologist before transfer to cold storage

Step 4. Keg filling and cold storage	1–2 h per batch	30 L stainless steel kegs; cold storage zone +2–+6°C; pool of 60–80 kegs	CIP sanitisation of each keg before filling; counter-pressure filling to preserve carbonation; keg sealed and labelled with batch number, fill date, flavour SKU, best-before date	Microbiological swab of keg interior after CIP; final weight check per keg (30 L $\pm$ 0.5 L); cold chain maintained +2–+6°C from filling through delivery; shelf life 21–30 days from fill date
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Source: Author's own elaboration based on fermentation industry standards and kombucha production benchmarks (Nummer; Villarreal-Soto et al.). Capacity parameters per financial model, Capacity Model sheet.

The SCOBY (Symbiotic Culture of Bacteria and Yeast) is the biological core of the production process and the venture's primary proprietary asset. The SCOBY mat consists of a cellulose pellicle produced by acetic acid bacteria (predominantly *Acetobacter* and *Gluconobacter* species) which house a stable community of yeasts (*Brettanomyces*, *Zygosaccharomyces*) and lactic acid bacteria. During F1, the SCOBY converts tea sugars into organic acids — primarily acetic and gluconic — and a small quantity of ethanol, which the acetic acid bacteria immediately oxidise. The result is the characteristic mild acidity (pH 2.8–3.5) that defines kombucha's organoleptic and preservative properties. The SCOBY is propagated in-house: after each F1 batch, the mat grows a new cellulose layer ("baby SCOBY") which is separated, stored in a maintenance vessel with starter liquid, and used for the next cycle. This eliminates dependence on external SCOBY suppliers — a significant operational risk for any kombucha producer. A reserve culture is maintained separately at all times as insurance against contamination or accidental destruction of the primary mat.

Natural carbonation in F2 is achieved by sealing the filtered, flavoured liquid in a closed pressure vessel with a controlled residual sugar content (Brix 2–4°). The residual yeast population — which passes through the filter at sub-100-micron particle size — continues metabolising the remaining sugars anaerobically, producing CO₂ that dissolves into solution under the pressure of the sealed vessel. Target carbonation is 3.5–5 g CO₂ per litre, which delivers the effervescent mouthfeel characteristic of premium kombucha and differentiates the product from still alternatives. The natural carbonation approach was selected over forced CO₂ injection for three operational reasons:

it preserves the live culture character of the product (relevant to health positioning), it requires no additional CO₂ gas supply infrastructure, and it produces a finer, more stable bubble structure that holds better in a keg format over the 21–30 day shelf life window.

Cross-contamination between flavour SKUs is the primary microbiological risk in multi-flavour production. When the same filtration and F2 equipment is used sequentially for different flavour variants — ginger, berry, citrus — residual flavour compounds and microbial populations can carry over between batches, degrading product consistency. The control mechanism is Clean-In-Place (CIP): a standardised sanitation protocol using hot water rinse (70–80°C), food-grade alkaline detergent, acid rinse, and final water flush applied to all tanks, pipes, pump heads, and filter housings between batches. CIP is documented in the HACCP plan and constitutes one of the Critical Control Points (CCPs) in the food safety system. HACCP certification is a regulatory prerequisite under Ukrainian food safety law (see Section 4.3) and is planned for completion prior to the first commercial delivery.

The capacity model identifies F2 as the binding bottleneck. F1 net throughput (after 5% waste) is 6,514 L/month across four 400 L CCT units; F2 net throughput is 6,413 L/month across three 300 L closed vessels. The binding constraint is therefore F2 at 6,413 L/month, equating to 213 kegs of 30 L per month at full utilisation. At 32 active venues ordering one keg per week, monthly demand reaches approximately 138 kegs — an F2 utilisation rate of 64.8%, leaving meaningful headroom before the constraint binds. At 45 venues (Phase 2 threshold), utilisation approaches 98.4%, which signals the investment trigger for additional F2 capacity. Planned expansion is modular: 2 additional F1 tanks raise net output to 9,771 L/month (Phase 2); doubling the full tank configuration to 8 F1 and 6 F2 units reaches 13,029 L/month (Phase 3); the maximum planned configuration of 12 F1 tanks yields 19,543 L/month, providing headroom for national retail distribution without facility redesign.

4.1.3. Venue Ramp-Up and Seasonal Demand

The financial model (Assumptions sheet C) projects venue growth from 5 in April (Month 1) to 32 by March of Year 2 (Month 12), reaching 52 by Month 24 and stabilising at 57 from Month 27 onward. The seasonal demand coefficients are material: July (Month 4 of operations) carries a coefficient of 1.50, January (Month 10) of 0.70 — roughly a 2x swing that affects both production planning and revenue forecasting. Summer months will run close to or at capacity; winter months will leave significant slack. This has cash flow implications that the three-month working capital reserve is designed to absorb.

4.1.4. Operations and Staffing

Initial team: Founder/Operations Director (strategy, sales, quality control, finance; salary included in Fixed OpEx); Production Technologist/Fermentologist (UAH 40,000–45,000/month, all production cycles and HACCP documentation); Driver/Logistics Assistant (UAH 18,000–25,000/month, keg delivery, container returns, production assistance); Sales Manager added in Months 4–6 (UAH 20,000–30,000 plus commission). Outsourced accounting: UAH 3,000–5,000/month. Fixed OpEx per the financial model: UAH 191,184.68/month constant across all 39 months, inclusive of straight-line depreciation of UAH 51,726/month (UAH 4,345,000 Phase 1 CapEx over a 7-year useful life).

4.2. PRICING STRATEGY AND UNIT ECONOMICS (MIT DE STEP 18)

4.2.1. Cost of Goods Sold and Gross Margin

Variable COGS is modelled at approximately UAH 23/L in the base case, comprising tea (3–5 g/L), sugar (60–80 g/L), SCOBY/starter (amortised), water treatment, electricity (fermentation

and cooling), CIP sanitation chemicals, keg cost share (amortised over ~5 cycles), and direct labour allocated per litre. At 32 active venues, monthly variable COGS reaches approximately UAH 54,716.

The resulting gross margins — 83–92% across the 39-month model period — reflect the high operating leverage of keg B2B. Low margins appear in winter (lower seasonal demand coefficient, fewer active venues early); peak margins appear in summer (July Month 4 shows 92.0%). Year 1 gross profit is projected at approximately UAH 3,258,000 on Year 1 revenue of UAH 3,768,475.

4.2.2. Fixed Operating Costs

Fixed OpEx of UAH 191,184.68/month breaks down as follows: team payroll (technologist, driver, sales manager from Month 4–6) UAH 63,000–90,000; outsourced accounting UAH 5,000–8,000; rent UAH 0 (own land); utilities (electricity, water, gas) UAH 15,000–25,000; fuel and van maintenance UAH 8,000–15,000; marketing and promotion UAH 5,000–15,000; admin costs (CRM, software) UAH 3,000–5,000; equipment depreciation UAH 51,726. Additional variable costs modelled separately: logistics fuel (UAH 250–2,750/month depending on venue count), CAC (UAH 4,000 per new venue in months with new acquisitions), and a 3% bad debt provision on keg revenue.

4.2.3. Break-Even Analysis

$$\text{BEP} = \text{Fixed OpEx} / \text{Gross Profit per venue per month} = \text{UAH } 191,185 / \text{UAH } 12,590 = 15.2 \text{ venues.}$$
 In the base case, this is reached in Month 5 (August), when 17 active venues are

generating revenue. Three scenarios are compared in Table 4.2 (see Table 4.2). The sensitivity analysis indicates that a 10% price reduction delays break-even by roughly 1–2 months; a 20% volume shortfall pushes it to Month 6–7. Both scenarios remain within the 3-month working capital reserve.

Table 4.2. Break-even analysis — three scenarios.

Scenario	Price (UAH/L)	Fixed Costs/Month	GP/Venue/Month	BEP (Venues)	Month of Achievement
Conservative	100	UAH 191,185	UAH 10,262	18.6	Month 7–8
Base Case (Model)	~110	UAH 191,185	UAH 12,590	15.2	Month 5
Optimistic	150	UAH 191,185	UAH 15,393	12.4	Month 4

Source: Investor-grade financial model — Cash Flow & DCF sheet.

4.2.4. Three-Year Financial Summary

Key financial indicators from the financial model are consolidated in Table 4.3 (see Table 4.3).

Table 4.3. Key financial indicators — financial model v3.0.

Metric	Value	Source / Notes
Year 1 Revenue (M1–M12, UAH)	3,768,475	Revenue & Demand sheet — SUM(M1:M12)

Metric	Value	Source / Notes
Year 2 Revenue (M13–M24, UAH)	7,438,288	Revenue & Demand sheet — SUM(M13:M24)
Gross Margin (range)	83–92%	Monthly GP/Revenue across 39 months
Fixed OpEx/month (UAH)	191,185	Cash Flow & DCF — Fixed OpEx row
Break-even (venues / month)	15.2 venues / Month 5	BEP = Fixed OpEx / GP per venue
Total CapEx Phase 1 (UAH)	4,345,000	Cash Flow & DCF — CapEx row M1
NPV — 39M period (UAH)	1,676,718	Discounted at 22.7% CAPM
IRR — annualised	42.3%	$(1 + \text{IRR monthly})^{12} - 1$
Undiscounted payback (month)	Month 29	First month CumFCF ≥ 0
Discounted payback (month)	Month 32	First month CumPV FCF ≥ 0
Terminal EBITDA annualised (UAH)	4,186,406	Avg EBITDA M34–M39 $\times 12$

Source: Investor-grade financial model — Cash Flow & DCF sheet, valuation summary section.

Key financial assumptions underlying the model: stable demand per venue of 1 keg/week at baseline; 5% annual price escalation built into the model; exchange rate approximately UAH 43.9/USD held constant; seasonal demand coefficients as calibrated (July peak 1.50, January low 0.70); venue ramp-up per Assumptions sheet C; FOP Group 3 tax regime at 6% revenue tax (5% income + 1% military levy) plus fixed USC of UAH 1,600/month.

4.3. ORGANIZATIONAL AND LEGAL STRUCTURE (MIT DE STEP 19)

Registration as FOP (sole trader) Group 3 under the simplified taxation system is the recommended starting structure. The key advantages: 5% single tax rate (without VAT) or 3% with VAT; fixed USC of ~UAH 1,600/month; minimal reporting burden; income limit of UAH 10,091,049/year; 1–3 day registration timeline. An LLC (TOV) becomes preferable when annual

revenue approaches the FOP income ceiling, or when external investors are brought in during Phase 3.

Primary KVED: 11.07 (production of soft drinks and bottled waters). Additional codes: 46.34 (wholesale beverage trade) and 47.11 (retail trade, for Phase 3). Regulatory requirements include: HACCP system (mandatory under Ukrainian food safety law, outsourced development at UAH 15,000–30,000); alcohol content classification (kombucha $\leq 0.5\%$ ABV = non-alcoholic under Ukrainian law, excise duty does not apply — this classification carries regulatory risk if kombucha is ever reclassified, see Section 5.5); production capacity declaration with the State Food and Consumer Service; technical conditions (TU) per recipe variant (UAH 5,000–15,000 each); batch laboratory analysis (pH, sugar, microbiology; UAH 500–1,500/analysis); and product labelling compliance.

4.4. RISK ANALYSIS AND SCENARIO MODELLING (MIT DE STEPS 20–21)

The three-scenario financial projections are presented in Table 4.4 (see Table 4.4). The spread across scenarios is meaningful — Year 1 EBITDA ranges from negative (conservative) to UAH 2.5 million (optimistic), and payback shifts from Month 22 to Month 33+. The base case, derived from the financial model, represents the most internally consistent set of assumptions.

Table 4.4. Scenario modelling — Year 1 financial projections.

Parameter	Conservative	Base Case (Model)	Optimistic
Sale price (UAH/L)	100	~110	150
Venues after Month 12	20	32	35
Pilot conversion rate	50%	70%	85%

Parameter	Conservative	Base Case (Model)	Optimistic
Fixed OpEx/month (UAH)	191,185	191,185	191,185
Revenue Year 1 (UAH)	~2,600,000	3,768,475	~5,616,000
EBITDA Year 1 (UAH)	Negative	~120,000	~2,500,000
BEP (venues / month)	18.6 / Month 7–8	15.2 / Month 5	12.4 / Month 4
Positive cumulative FCF (month)	Month 33+	Month 29	Month 22
Total CapEx required (UAH)	4,900,000	4,345,000	4,345,000

Source: Investor-grade financial model.

Four risks are rated critical. Low pilot conversion rate (<50%): addressed through price flexibility, recipe adjustment, and willingness to extend pilot duration before requiring a commercial commitment. Quality incidents (contamination, unstable fermentation): HACCP implementation, mandatory lab testing of every batch, and temperature-controlled logistics are the primary controls — this risk is low probability but high impact. Cash flow gap at launch: a three-month Fixed OpEx reserve (UAH ~573,000) provides a buffer; phased CapEx deployment reduces the initial drawdown. Military/force majeure escalation: channel diversification, property insurance, and a documented contingency plan are the available mitigants, though this risk cannot be fully controlled.

The financial model indicates cumulative FCF turns positive at Month 29 (base case), with discounted payback at Month 32. NPV of UAH 1,676,718 at 22.7% CAPM and annualised IRR of 42.3% are consistent with potential viability under the modelled assumptions. Terminal EBITDA of UAH 4,186,406 annualised (average of Months 34–39) provides a terminal value basis for investor conversations. Key limitations of the financial analysis — no live pilot data, secondary COGS estimates, wartime uncertainty, absence of a Phase 2 model — are addressed in Chapter 5.5.

CHAPTER 5. SYNTHESIS OF RESULTS AND CONCLUSIONS BASED ON FINANCIAL AND OPERATIONAL ANALYSIS

5.1. SUMMARY OF KEY ANALYTICAL AND FINANCIAL RESULTS

This thesis has applied the MIT Disciplined Entrepreneurship 24-step framework to evaluate whether a keg-first, HoReCa-entry kombucha business model is commercially viable in the Lviv market. The desk-based analysis, taken together, suggests that the model is potentially viable under the assumptions specified — but this conclusion is explicitly conditional. No live pilot has been conducted, and the key demand-side assumptions (pilot conversion rate, per-venue order volume, seasonal coefficients) remain calibrated estimates rather than empirically observed figures. A structured pilot with 3–5 venues over three months would be the necessary next step before any investment decision.

The market analysis established three things. First, kombucha is not a niche category in decline — it is a structurally growing market at multiple levels of geography. Second, the Ukrainian market, while pre-mainstream, has an unoccupied competitive position: no producer currently offers a standardised keg-based B2B supply model with a deliberate three-phase channel strategy. Third, the European distribution pattern — HoReCa first, retail second — provides direct empirical support for the phasing logic, not just intuitive justification.

The financial model produced the following outputs. Year 1 revenue: UAH 3,768,475. Year 2 revenue: UAH 7,438,288. Gross margin: 83–92% throughout. Break-even: 15.2 venues, reached in Month 5. Fixed OpEx: UAH 191,185/month. Total Phase 1 CapEx: UAH 4,345,000. Annualised IRR: 42.3%. NPV (39 months, 22.7% CAPM): UAH 1,676,718. Undiscounted payback: Month 29. Discounted payback: Month 32. Terminal annualised EBITDA: UAH 4,186,406.

5.2. ASSESSMENT OF BUSINESS FEASIBILITY BASED ON INVESTMENT CALCULATIONS

The quantitative case for viability is reasonably strong. An annualised IRR of 42.3% against a cost of capital of 22.7% leaves a meaningful margin. The NPV of UAH 1,676,718 is positive and not trivially small. Payback at Month 29 (undiscounted) is within the 3-year horizon that most early-stage investors would consider acceptable for a food production venture in an emerging market.

The break-even of 15.2 venues is achievable within the base case ramp-up schedule — Month 5 corresponds to August, a peak demand month (seasonal coefficient 1.10) with 17 projected active venues. The high gross margin (83–92%) is the structural reason break-even is reachable so quickly: because variable COGS per litre is low relative to wholesale price, each additional venue contributes meaningfully to fixed cost coverage. The LTV/CAC ratio of 8–19x confirms that customer acquisition economics are robust — CAC of UAH 3,300–4,500 per venue is recovered within 1.5–2 months of first commercial deliveries.

These figures are internally consistent and follow from the model's assumptions. The more important question is whether those assumptions hold. The 70% pilot conversion rate, the 1 keg/week baseline order per venue, the seasonal demand coefficients — none of these have been empirically tested in the Lviv market. The financial case is strong conditional on the demand assumptions. Section 5.5 addresses the implications of that conditionality.

5.3. STRATEGIC IMPLICATIONS AND SCALABILITY POTENTIAL

The phased sequencing — keg to HoReCa, bottle to HoReCa, bottle to retail — is the thesis's primary strategic argument. The logic is not circular: it rests on a specific empirical claim about how European kombucha markets developed, and on the structural argument that brand equity built in HoReCa is more durable and commercially transferable than brand equity built through retail shelf presence alone. That claim is supported by distribution data (60.8% of European kombucha flows through HoReCa) and by the documented +35% retail surge that followed, not preceded, HoReCa credibility-building.

The capacity model indicates that Phase 1 infrastructure is sufficient for the projected ramp-up, with F2 as the binding constraint at 6,413 L/month. Expansion is modular and can be timed to revenue milestones: adding 2 F1 tanks at ~45 active venues (Phase 2); doubling to 8 tanks as retail entry begins (Phase 3). Maximum configuration (12 F1 tanks, 19,543 L/month) provides headroom for national retail distribution without fundamental redesign of the production facility.

The competitive window is time-bounded. International brands — Remedy, Humm, GT's — are not yet present at scale in Eastern Europe, but they are moving. The 3–5 year estimate is speculative, but directionally supported by their documented geographic expansion strategies. Executing Phase 1 in 2025–2026 and Phase 2 in 2026–2027 is strategically appropriate given the current competitive landscape, though the timeline remains contingent on pilot validation outcomes.

5.4. PRACTICAL IMPLICATIONS AND MANAGERIAL RECOMMENDATIONS

Four recommendations follow directly from the analysis. First: anchor venue selection in Phase 1 is not a secondary concern — it is the most consequential operational decision in the first six months. The first 5–10 venues determine the brand's initial positioning, generate (or fail to

generate) referrals, and provide the primary data source for Phase 2 flavour and format decisions. Selection criteria should be applied rigorously, not relaxed to meet volume targets faster.

Second: quality infrastructure must precede the first commercial delivery, not follow it. HACCP certification, batch testing protocols, and cold-chain logistics are not compliance formalities — they are the primary control mechanisms against the highest-impact risk in the project (quality incident in Phase 1). A single contamination event in the first six months could cause cascade churn among anchor venues at a stage when the business cannot afford it.

Third: the Green Zone KPIs identified in the financial model — pilot conversion rate $\geq 70\%$, gross margin $\geq 80\%$, cash runway ≥ 6 months — should be monitored monthly and trigger explicit contingency responses the moment they enter Yellow or Red zone ranges. The model provides a clear decision framework; the operational discipline is to actually use it.

Fourth: Phase 2 planning should begin no later than Month 9 of Phase 1 operations. Bottling line procurement, food safety certification for the bottled format, and flavour selection from keg sales data all have lead times. Waiting until Phase 2 prerequisites are formally met before beginning procurement means a 3–6 month delay that is avoidable.

5.5. LIMITATIONS OF THE STUDY AND DIRECTIONS FOR FURTHER RESEARCH

This thesis is primarily an analytical and feasibility study, not an empirical validation of a live business. Its evidentiary base consists of three components: desk research drawing on named secondary market sources (Grand View Research, NielsenIQ, Circana, and others); financial modelling constructed from industry benchmarks and cost estimates calibrated to the Ukrainian HoReCa context; and a limited set of qualitative interviews with six Lviv venue managers and

owners. This combination is appropriate for the research question — whether a keg-first B2B kombucha model is commercially feasible in Lviv — and is consistent with the MIT Disciplined Entrepreneurship framework’s explicit design for desk-research-based venture evaluation in the absence of a live pilot. The framework requires evidence-based evaluation of assumptions, not empirical proof of outcomes; the thesis satisfies that standard. What it does not do, and cannot claim to do, is prove that the model will perform as projected when implemented. That distinction is not a defect of this work — it is its honest scope.

Five specific limitations follow from this research design. First, the qualitative interview sample of six Lviv HoReCa venues is directionally informative but not statistically representative. The interviews indicated pricing willingness of up to UAH 125/L, existing keg infrastructure at four venues, and general openness to a pilot arrangement — findings that are directionally consistent with the model’s assumptions and strengthen its plausibility, while falling short of statistical confirmation. However, the absence of large-scale quantitative primary research means that the 70% pilot conversion rate, the one-keg-per-week baseline order assumption, and the seasonal demand coefficients remain calibrated estimates rather than empirically observed figures. Any material divergence between these assumptions and real venue behaviour will propagate directly into revenue, break-even, and payback projections. Second, no real pilot has been implemented. The financial model projects Month 5 break-even at 15.2 active venues; this figure has not been tested against actual logistics costs, actual spoilage rates, actual keg return cycles, or actual churn patterns among early-adopter venues. Third, COGS estimates are derived from secondary input price data for Ukrainian raw materials. Wartime inflation, energy grid instability, and supply chain disruption introduce non-linear cost risks that the model partially addresses through a 5% annual escalation assumption and a three-month Fixed OpEx reserve, but does not model under stress scenarios. Fourth, the Ukrainian kombucha market TAM (~USD 8 million) is estimated through benchmark adjustment from European per capita data rather than primary market sizing research; a significant error in this figure would affect Phase 3 retail projections materially. Fifth, Phases 2 and 3 are not

modelled in operational or financial detail. The bottling line CapEx, per-unit packaging COGS, Phase 2 break-even, and Phase 3 working capital requirements for 30–60 day retail payment deferrals are described qualitatively but remain outside the scope of the quantitative model.

These limitations define a clear and structured agenda for further research and development, ordered by the sequence in which each validation step should logically precede the next capital commitment. The first priority, before any Phase 1 investment is deployed, is a structured quantitative customer study: a survey of 60–100 Lviv HoReCa venue managers measuring willingness to pay across price points, stated keg frequency, and barriers to adoption. This would convert the current directional pricing estimate (UAH 125/L from six interviews) into a statistically defensible demand curve and allow explicit modelling of demand elasticity — a parameter currently absent from the financial model. The second priority is a real pilot implementation: 3–5 venues over 3 months, generating observed data on keg consumption per venue per week, actual delivery logistics costs, spoilage and return rates, and pilot-to-contract conversion rates. This single intervention would resolve the four largest sources of uncertainty in the Phase 1 model simultaneously and provide the empirical foundation for a revised, post-pilot financial projection. The third priority is operational testing of the cold-chain logistics model: actual fuel costs, delivery scheduling under Lviv urban conditions, and keg return compliance rates from real partner venues — all of which are currently estimated from industry benchmarks rather than observed data. The fourth priority is construction of a Phase 2 financial model: bottling line CapEx in the USD 25,000–40,000 range, per-unit COGS for 0.33L and 0.5L formats, Phase 2 gross margin relative to Phase 1, and the Phase 2 break-even venue count — none of which can be responsibly committed to without a dedicated model. The fifth priority, relevant before Phase 3 retail entry, is working capital modelling: the cash flow impact of 30–60 day retail payment deferrals, minimum order volumes from major chains, and listing fee structures — factors that make Phase 3 capital requirements substantially higher than Phase 1 and that require explicit modelling before chain negotiations begin. Finally, a regulatory risk analysis of the ABV classification boundary — the point at which

kombucha exceeding 0.5% ABV becomes subject to Ukrainian excise duty — is warranted in light of anticipated harmonisation with EU excise standards, which could materially affect Phase 3 retail pricing and margin structure. Each of these research steps is executable at a scale and cost appropriate to an early-stage venture; none requires the full Phase 1 capital deployment as a prerequisite. Taken together, they represent a roadmap from the feasibility conclusion of this thesis to the empirical validation required before each subsequent phase of capital commitment.

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APPENDIX B. KEY ASSUMPTION REGISTER

Table B.1. Key assumption register — financial model v3.0.

Assumption	Value / Description	Source	Confidence	NPV Impact if Wrong	Mitigation
1 keg/week per venue	Each active venue orders one 30L keg/week (~130 L/month baseline)	Calibrated from Choven & Play interview data; kombucha capture ~25–30% of non-alc volume	Medium	High — 20% shortfall delays BEP ~2 months; reduces Year 1 revenue by ~UAH 750K	Conservative baseline; pilot data will recalibrate before scale-up
UAH 110/L wholesale price	Base-case keg price ~UAH 110/L (UAH 3,300 per 30L keg)	6 venue interviews: WTP up to UAH 125/L reported; model uses figure 12% below this directionally supported ceiling	Medium-High	Medium — 10% price cut delays BEP 1–2 months; reduces Year 1 revenue ~UAH 340K	Floor set conservatively; optimistic scenario at UAH 150/L is achievable at FEST venues
70% pilot conversion	7 of 10 piloted venues sign commercial contract after 5-week trial	B2B craft beverage benchmark; consistent with venue openness in interviews	Medium	High — at 50% conversion BEP shifts to Month 7–8; Month 12 venues fall to ~20	Structured 5-week pilot protocol (Section 3.3.1); free keg reduces adoption barrier
32 venues by Month 12	Ramp from 5 (M1) to 32 venues by end of Year 1	Financial model Assumptions sheet C; derived from 70% conversion rate and pilot cycle length	Medium	High — conservative scenario (20 venues) yields negative Year 1 EBITDA	Sales funnel: ~80 targets → 50 contacted → 30 pilots → 20+ conversions
COGS ~UAH 23/L	Variable cost per litre: tea, sugar, electricity, CIP, keg amortisation, direct labour	Secondary Ukrainian raw material prices; fermentation industry benchmarks	Medium-Low	Medium — if COGS = UAH 35/L, gross margin falls from ~83% to ~68%; BEP rises to ~19 venues	5% annual cost escalation built into model; COGS decomposed by component
CAC UAH 4,000/venue	Pilot keg COGS (~UAH 2,200) + sales time (~UAH 800) + materials (~UAH 500) + logistics (~UAH 200)	Bottom-up cost build; B2B craft beverage industry norms	Medium-High	Low — at UAH 6,000 CAC, LTV/CAC remains >6x; payback under 3 months per venue	CAC potentially lower for 4 of 6 interviewed venues (reported keg infra = no equipment negotiation required)
Churn <15% at Month 12	Fewer than 1 in 7 active venues discontinues within Year 1	B2B craft beverage industry benchmark	Medium	Medium — at 25% churn, active venues at M12 fall to ~24, delaying BEP	Monthly NPS tracking; dedicated account manager from Month 4; OTIF >=95% target
F2 capacity sufficient	3 x 300L F2 tanks = 6,413 L/month net; demand at 32 venues ~4,140 L/month (64.8% utilisation)	Engineering calculation; production model (Section 4.1)	High	Low in Phase 1 — constraint binds only at ~45 venues (Phase 2 trigger)	Expansion modular: +2 F1 tanks at Phase 2 threshold (~45 venues)

Source: Author's own elaboration based on primary research (Section 2.5), financial model (Section 4.2), and B2B craft beverage industry benchmarks. Confidence: High = confirmed data; Medium-High = primary research supported; Medium = calibrated estimate; Medium-Low = secondary source only.

AI DISCLOSURE STATEMENT

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B2B FERMENTED BEVERAGE SUPPLY FOR UKRAINIAN HORECA

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