

Designing for People and Place
A Case Study of Packaging Development for Local Winemakers in Lower
Silesia

Mariusz Wszolek¹, Agata Gasiorowska²

¹ Faculty of Law and Communication, SWPS University, Ostrowskiego 30, 53-238 Wrocław, Poland, Email: mwszolek@swps.edu.pl

² Faculty of Psychology in Wrocław, SWPS University, Ostrowskiego 30, 53-238 Wrocław, Poland, Email: agasiiorowska@swps.edu.pl

Correspondence concerning this article should be addressed to Mariusz Wszolek, Faculty of Law and Communication, SWPS University, Ostrowskiego 30, 53-238 Wrocław, Poland, Email: mwszolek@swps.edu.pl. This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record.

Please cite this article as:

Wszolek M., Gasiorowska A. (2026), Designing for People and Place: A Case Study of Packaging Development for Local Winemakers in Lower Silesia, **Wine Economics and Policy**, Just Accepted.

DOI: 10.36253/wep-19773

Abstract

This paper presents a qualitative case study of packaging development with local winemakers in Lower Silesia, an emerging wine region in Poland. The study conceptualizes packaging as an integral component of local wine value chains—a coordination mechanism that reduces information asymmetry, lowers consumer search and interpretation costs, and supports disintermediation in direct-to-consumer channels. Using a design-led participatory approach, the study documents a collaborative process involving designers and small-scale producers through workshops, interviews, and iterative prototyping. Five recurring communication strategies are identified—people-centered, place-based, cultural, character-based, and semantically open—interpreted as distinct signaling and coordination mechanisms within the value chain. These strategies enable producers to build credibility, communicate origin, and differentiate products despite structural constraints of small production scale and limited institutionalized reputation. Although systematic quantitative performance data are unavailable due to the predominance of direct sales, the study documents widespread adoption of packaging solutions and provides qualitative evidence of their role in market positioning. The paper contributes to wine economics by conceptualizing packaging as a mechanism of value coordination and adaptation in emerging wine regions.

Keywords: Wine value chains; packaging design; local winemakers; place-based value creation; regional development; sustainability

1 Introduction

In wine markets, characterized by experience attributes and high information asymmetry, consumers cannot fully assess product quality before purchase and therefore rely on extrinsic cues as signals of value [1]. Packaging is among the most consequential such cues, shaping consumer expectations, perceived quality, and willingness to pay [2,3], and should be understood not merely as a communication device but as a mechanism that reduces uncertainty and coordinates market interactions.

Structural transformations in the global wine industry—including declining consumption in traditional markets, generational shifts in preferences, climate-related pressures, and evolving sustainability regulations [4,5]—are reshaping how value is created, communicated, and captured along wine value chains. Producers are increasingly required not only to compete on price or volume but to signal quality, build trust, and facilitate market access through reconfigured channels, including wine tourism, local retail, and direct-to-consumer models, especially where institutional reputation mechanisms are weak or absent.

For small and local winemakers operating outside recognized wine regions, these challenges are compounded by limited production scale, financial constraints, and restricted distribution access [6–8]. The Polish wine sector clearly illustrates these dynamics. Over the past two decades, the number of producers and vineyard areas have grown substantially; according to data from the National Support Centre for Agriculture [9], 724 grape growers now cultivate 1,098.66 hectares, with 324 producers registered for wine production and bottling—representing a more than thirtyfold increase from 36 hectares in 2009.

Despite this growth, Poland remains a marginal player: its 1,098 hectares represent approximately 0.034% of the EU's roughly 3.2 million hectares of vineyards. Cultivation is concentrated in Lubuskie (165 ha), Malopolskie (138 ha), and Dolnoslaskie (136 ha), is highly fragmented (average vineyard ~1.3 ha), and is dominated by cold- and disease-resistant varieties—Solaris, Hibernal, Johanniter, Rondo, and Regent—though classical *Vitis vinifera* varieties including Chardonnay and Pinot Noir are increasingly being introduced. White wines dominate, reflecting climatic conditions and varietal structure. This structural configuration—small scale, fragmentation, and limited distribution access—means Polish wineries must rely on differentiation-based strategies rather than price or volume competition.

Within Poland, Lower Silesia is one of the most developed subregions, with approximately 60–80 registered wineries cultivating over 130 hectares (average ~2.5 ha, above the national average) and continuing to expand [10]. Growth was substantially enabled by the 2011 “wine law,” which aligned Polish legislation with EU requirements, simplified fiscal and administrative obligations, and removed barriers that had previously made commercial production economically prohibitive [10]. This deregulation triggered a decade of sustained expansion. Winemaking in the region thus remains institutionally young: most producers started from scratch and have accumulated craft knowledge incrementally through successive vintages rather than drawing on inherited expertise or established reputational capital [10].

The absence of formally recognized appellations of origin—unlike Italy or France—means that reputation and quality must be constructed through alternative signaling mechanisms [11,12]. In this context, packaging becomes a primary mechanism through which producers translate place-based resources, production practices, and sustainability efforts into market-relevant signals, substituting for absent institutional quality guarantees.

Packaging strongly influences product evaluation and decision-making. Congruent text–image labels increase affective fluency, enhancing product liking, perceived taste, and purchase intentions [13], while color acts as a pre-consumption signal shaping quality perception [14]. Signaling effectiveness is context-dependent: unconventional labels may increase salience but can weaken credibility cues, reducing perceived quality among risk-averse consumers [15]. Together, these findings position packaging as a market coordination mechanism that shapes the transmission of information about quality, origin, and identity in the absence of direct producer–consumer knowledge or institutional certification.

While prior research has primarily treated packaging as a marketing or perceptual variable, its coordination role within value chains remains underexplored, particularly in emerging wine regions. This paper addresses this gap by conceptualizing packaging development as a situated process embedded in local wine value chains—one that aligns production practices, territorial narratives, sustainability considerations, and consumer expectations.

Empirically, the paper draws on a participatory design case study conducted in collaboration between graphic design practitioners at SWPS University in Wrocław and winemakers from Lower Silesia and surrounding regions. The project focused on developing wine labels and packaging for local producers, addressing visual identity, information readability, and territorial

references. Design thinking and participatory design methods [16,17] served as structured interaction frameworks through which producers and designers jointly articulated constraints and strategic choices related to market positioning, regulation, and place-based differentiation. Although conducted in an academic setting, the project's relevance lies in its function as a process of collective learning and coordination within local wine value chains. Design activities served as a sense-making device through which producers translated tacit knowledge about production, sustainability, and regional embeddedness into market-relevant signals.

Building on this empirical setting, the study addresses the following research question: How does packaging design contribute to value creation and adaptation in local wine value chains amid structural change in the wine sector?

2 Wine Value Chains, Local Embeddedness, and the Role of Packaging

Wine value chains encompass interconnected stages from viticulture and winemaking to distribution, retail, and consumption [18,19]. They are increasingly shaped by macro-level forces—climate change, trade disruptions, labor shortages, and shifting consumer preferences and regulatory frameworks [20], to which wineries respond through diversification, localization, and the development of direct-to-consumer (DtC) channels, often resulting in shortened or reconfigured chains [21,22].

These transformations are particularly consequential for small-scale producers in emerging wine regions, where the absence of established governance structures—appellation systems, collective reputation, stable distribution networks—means that coordination must be achieved through firm-level strategies. Producers must internalize functions typically performed by intermediaries, including quality signaling, product differentiation, and consumer communication.

Among the mechanisms of mediated communication, packaging occupies a central position as the key interface through which producers communicate quality, origin, and identity to consumers. Research demonstrates that packaging strongly influences product attention, categorization, and evaluation [23] and the interpretation of verbal and visual cues at the point of sale [24]—effects particularly salient in retail environments where many purchase decisions are made in situ. Despite this evidence, packaging's coordination role within value chains has received relatively limited attention in wine economics—a gap particularly relevant in emerging regions where firm-level strategies must compensate for absent governance structures.

From a value chain perspective, packaging operates at the intersection of material, symbolic, and regulatory dimensions: it must ensure product protection, comply with labeling and certification requirements, respond to sustainability standards, and communicate meaning to consumers. It can be understood as the final, yet economically consequential, stage of production that performs a protective and identificatory function for the value embodied in the product, while accounting for only a fraction of total life-cycle energy [25].

This coordination role is especially salient in short supply chains and DtC contexts where the absence of traditional intermediaries requires product explanation, quality assurance, and trust-building to occur at the producer–consumer interface. Packaging thus reduces search and interpretation costs, enabling consumers to evaluate products without third-party endorsement [26,27], and contributes to transaction cost reduction under conditions of uncertainty.

Packaging development can also be understood as situated problem-solving and collective learning within the value chain. Drawing on Frayling’s [28] distinction between research into, through, and for practice, packaging design processes as presented in this case study constitute instances of practice-based knowledge generation through which producers, designers, and other actors jointly explore constraints and align expectations—here treated as complementary to the economic analysis. From a value chain perspective, such processes contribute to governance by articulating quality conventions and translating tacit knowledge into market-facing signals. In emerging regions with weak formal institutions, they may support functional upgrading [18], extending producer capabilities into branding, communication, and market access.

For local wineries, packaging is particularly consequential. In the absence of recognized appellations or strong reputational capital, it becomes a primary governance and signaling mechanism through which producers construct credibility and convey territorial embeddedness [29,30]. Through visual language, material choices, and information architecture, packaging enables storytelling that connects wine to specific landscapes, practices, and communities while responding to sustainability expectations and regulatory demands. This perspective provides the rationale for the methodology adopted here. If packaging development is a site of coordination, learning, and governance within local wine value chains, participatory design offers an appropriate analytical lens for examining how value is negotiated and stabilized in practice, making visible how constraints and strategic priorities are translated into market-facing artifacts through interaction across value chain stages.

3 Materials and methods

The study adopts a qualitative case study methodology [31] combined with a design-led research approach—well-suited to examining processes of value creation, coordination, and adaptation that unfold through interaction and experimentation rather than standardized measures. Its methodological premise is that packaging development constitutes a site where economic, symbolic, and institutional dimensions of value are actively aligned within local wine value chains. The empirical core is a participatory design case study focused on packaging development for local wineries in Lower Silesia and surrounding regions. Conducted in an academic setting, it is treated here as a field-based research infrastructure enabling systematic observation of coordination processes, knowledge translation, and strategic alignment across multiple cases—not for its educational function but for its capacity to generate comparable empirical material.

Participatory design served as a structured interaction framework through which value chain actors articulated constraints, priorities, and expectations regarding production, regulation, sustainability, and market positioning. In line with participatory design literature [17,32], design activities are treated as shared acts of inquiry through which tacit knowledge is externalized and translated into actionable forms, enabling direct observation of coordination mechanisms at the producer–market interface. This approach is grounded in Cross’s [33] epistemological argument that design constitutes a “third culture” of knowledge production, oriented toward synthesis, iteration, and the resolution of ill-defined problems—particularly apt for studying value chains where adaptation involves navigating uncertainty and translating place-based resources into market-relevant forms. Design is thus treated as an analytical lens that makes visible coordination and value construction processes that are otherwise difficult to observe. The process was structured using a design-thinking framework [34,35], used here not as a normative prescription but as an organizing framework for observing how actors frame problems, generate alternatives, test solutions, and revise strategies under evolving constraints.

Empirical material was collected through participatory workshops, structured interviews with vineyard owners, field observations at production sites, and analysis of intermediate and final packaging prototypes. Workshops focused on producer identities, production constraints, sustainability practices, and market aspirations; interviews provided deeper insight into individual strategies and perceived challenges; observations contextualized production practices and place-

based resources; and prototypes documented how value propositions were progressively articulated and stabilized.

The design process comprised six stages: (1) source research situating each vineyard in its cultural, institutional, and market context; (2) field research through interviews and on-site observation, focusing on production practices and place-based resources; (3) development of a communication profile articulating core values and strategic positioning; (4) iterative prototyping of labels and packaging systems at increasing fidelity; (5) expert consultations with oenologists and industry representatives for validation of regulatory compliance, logistical fit, and strategic coherence; and (6) presentations to vineyard owners to assess relevance and feasibility.

The process was supported by standardized tools—interview protocols, observation frameworks, visual-discourse analysis templates, and market analysis guidelines—and was implemented over three consecutive years (2020–2023) in collaboration with 30 vineyards in the Lower Silesia region of Poland. This longitudinal, multi-case design enabled identification of recurring patterns and context-specific variation in how packaging functions as a coordination mechanism.

Data analysis followed an iterative, abductive logic through thematic coding and process tracing. Initial codes focused on production constraints, regulatory considerations, sustainability practices, territorial narratives, and market strategies; these were subsequently examined in relation to one another to trace how packaging decisions emerged and functioned as coordination and signaling mechanisms. Particular attention was paid to moments of negotiation and validation, which revealed how competing value dimensions were aligned.

In sum, rather than evaluating outcomes against quantitative performance indicators, the study identifies mechanisms through which packaging contributes to value creation and coordination—a process-oriented perspective appropriate for contexts where systematic performance data are limited and chain dynamics are observable primarily through practice and decision-making. Methodologically, the study operationalizes participatory design as an analytical lens for observing coordination, learning, and governance in action. By treating packaging development as a situated process rather than a downstream marketing decision, the approach makes visible micro-level adaptation dynamics that are difficult to capture through firm-level surveys or quantitative indicators, thereby extending existing methodological approaches in wine economics.

4 Findings: Packaging Development within Local Wine Value Chains

4.1 Packaging as a Site of Value Articulation and Coordination

The empirical material comprised three interrelated components: (1) a diagnosis of each vineyard's situation, combining internal perspectives with external social, cultural, and market contexts; (2) a communication profile defining core identity elements, target audiences, and strategic positioning; and (3) packaging and label prototypes translating these assumptions into visual and material form. Presentations were conducted in academic settings and at vineyards, enabling validation with producers.

Qualitative analysis identified five dominant communication categories, reflecting recurring ways in which value, place, and identity were articulated through packaging. Rather than purely stylistic variation, each corresponds to a distinct signaling and coordination strategy within local wine value chains.

4.2 People-Centered Narratives: Embedding Value in Producers and Caretakers

The most frequent category centered on people—winemakers, families, and caretakers of place—emphasizing human agency, commitment, craftsmanship, and accumulated local knowledge as primary sources of value (see examples in Figure 1).

From a value chain perspective, people-centered narratives may function as credibility signals: by embedding the producer in the narrative, packaging reduces information asymmetry and supports trust in DtC and local markets, enabling differentiation through authenticity and relational proximity rather than scale or price.

The economic relevance of this mechanism is illustrated by Adoria Winery, whose identity is built around the founder's personal biography and artisanal commitment, supporting entry into premium channels—including LOT Polish Airlines, high-end hotels, and airport retail [36]. The case demonstrates that narrative-based differentiation can translate into tangible market access for small-scale producers in emerging wine regions.

Figure 1.

Projects using people-centered narratives as a mechanism of value embedding and trust-building



1 Winica Parypa
Aleksandra Tomczak, Michał Michalski, Justyna Stafrańska



1 Winica Mlynowo
Magda Wigrocka, Leander Warajski, Natalia Vega Dechbił, Wojciech Lusak, Weronika Leontyńska

Parypa Winery

The central visual motif was a wreath, developed as an identifying element symbolizing the collective and intergenerational nature of vineyard work. The wreath integrates family members connected with the vineyard and communicates continuity, care, and shared responsibility, embedding the value of the wine in the people who cultivate and sustain the place over time.

Mlynowo Winery

The design team drew on family analogue photographs as the primary visual motif for the wine labels. By foregrounding personal and familial imagery, the packaging anchors the product in lived experience and everyday labor, positioning the winemakers as caretakers of both the vineyard and its cultural memory, and reinforcing authenticity through human presence.

4.3 Place-Based Narratives: Packaging as a Carrier of Landscape and Context

A second category focused on place—understood both geographically and culturally—with packaging drawing on landscape features, spatial structures, and regional references to construct recognizable identities (see examples in Figure 2). In these cases, packaging operated as a “carrier of the landscape,” translating environmental and spatial characteristics into market signals.

In value chain terms, place-based narratives function as origin signals that substitute for weak or absent geographical indication systems, stabilizing interpretations of origin and quality in the absence of formal institutions.

Figure 2.

Projects using place-based narratives as a mechanism of territorial signaling and differentiation.



Harmonia Winery

The packaging design draws directly on the vineyard's immediate surroundings, with plant motifs and landscape references forming the core visual language. By embedding ecological and spatial cues into the labels, the packaging operates as a territorial signaling device, linking the wine to its specific environmental context and supporting differentiation through place-based identity.

Moderna Winery

The central visual motif is the grid, a design structure strongly associated with modernist architecture and graphic design. Referencing the modernist heritage of Wrocław, the packaging translates an urban–regional context into a coherent visual system, aligning the vineyard's identity with the symbolic and institutional significance of the regional capital and signaling a distinct sense of place beyond purely rural imagery.

Moderna Winery illustrates a particularly developed form of place-based signaling. The winery's pre-existing identity drew on the architectural heritage of Wrocław—particularly its modernist traditions—with the owner deliberately selecting less iconic buildings, reflecting personal fascination rather than obvious landmarks [37]. The project-developed packaging did not replicate this strategy; instead, it shifted from modernism as a set of architectural objects to modernism as a cultural and aesthetic mindset—communicating the values of functionalism and minimalism rather than specific buildings [38].

This distinction between geographic and cultural registers of place-based signaling is economically significant. Where many emerging-region strategies rely on landscape or recognizable territorial markers, the Moderna case shows how regional embeddedness can be communicated through cultural forms and aesthetic conventions that are more selective, less easily imitated, and potentially more resonant with specific consumer segments.

A further dimension concerns coherence between packaging aesthetics and product character. The owner describes his wines as restrained and low-intervention, “economical, without aromatic fireworks” [37]. The alignment between this stylistic positioning and the minimalist visual language constitutes an economically significant signaling strategy: when packaging and product style are congruent, packaging structures expectations the wine can credibly fulfill, reducing post-purchase dissonance and supporting repeat consumption—functioning as a quality convention in the absence of formal certification.

More broadly, such strategies contribute to collective regional image capital, showing that regional identity may be built not only through direct landscape representation but also through culturally coded references connecting product, producer, and place.

4.4 Cultural Narratives and Micro-Histories: Extending Value through Symbolic Resources

A third category mobilized cultural narratives—folklore, legends, and historical references—treated not as decorative additions but as core identity-building resources (see examples in Figure 3). The cultural depth available in Lower Silesia is considerable: documentary evidence of viticulture dates to at least the early 13th century, with records from the Cistercian convent in Trzebnica mentioning a winemaker [39]. This historical presence is further reflected in place names—Winna Góra (Wine Hill), Winnica (Vineyard)—and in heraldic representations in regional towns [10]. These elements constitute a reservoir of symbolic resources rooted in long-term territorial memory—not artificially constructed, but organically available for activation. Using folklore, legends, and local histories in packaging thus mobilizes deep symbolic capital that is difficult to replicate outside the region, supporting durable differentiation.

From a value chain perspective, cultural narratives extend value creation beyond measurable attributes—grape variety, production method, origin—by mobilizing collective memory and culturally specific meanings to strengthen emotional engagement and perceived authenticity. This

mechanism is especially relevant in emerging wine regions where narrative depth can substitute for established reputational signals.

The economic implications are most visible in experiential contexts—wine tourism, DtC encounters, and gifting—where consumers engage not only with a product but with a story, a place, and cultural associations. In such settings, packaging carries and stabilizes these meanings beyond the moment of interaction, supporting premium positioning and perceived uniqueness.

Figure 3.

Projects using cultural memory and legends as a mechanism of symbolic value articulation.



Bielawska Winery

Located near the Owl Mountains, the packaging design draws on a local legend about seven sisters who were believed to possess the ability to transform into animals and were ultimately turned into owls. By embedding this narrative into the visual language of the labels, the packaging mobilizes regional folklore as a form of symbolic capital, anchoring the wine in a culturally specific landscape and strengthening narrative differentiation.

Sydonia Winery

The design references the legend of Sydonia von Borck through the motif of “Sydonia’s garments,” evoking elegance, strength, and historical resonance. This visual strategy translates a locally rooted cultural narrative into a distinctive branding element, using legend-based symbolism to construct a unique identity and enhance the communicative depth of the vineyard’s packaging.

4.5 Character -Based Strategies: Performative Identity Construction in the Absence of History

A fourth category approached brand identity as a performative construct, particularly for vineyards lacking established histories or recognizable place-based references, actively constructing identity through narrative, tone, and visual expression rather than drawing on inherited resources (see examples in Figure 4).

Brand meaning emerged from values, aspirations, and communication styles articulated by producers, with designs emphasizing accessibility, playfulness, and emotional engagement. Rather than referencing tradition or terroir, these strategies framed wine as a contemporary cultural good embedded in informal consumption.

From a value chain perspective, character-based strategies may function as mechanisms of market entry and visibility: by increasing salience and memorability, they enable differentiation where conventional quality signals—appellations, established reputation—are absent. This is particularly relevant for younger wineries and new product categories such as natural wines, where existing classification systems offer limited consumer guidance.

However, this strategy entails trade-offs: highly expressive or unconventional designs may attract attention but can weaken credibility cues and reduce perceived quality among risk-averse consumers. Such strategies are most effective when calibrated to specific segments—younger or more exploratory audiences—and aligned with appropriate distribution contexts such as informal retail or experiential settings.

Character-based strategy thus represents adaptive value creation, enabling producers to generate market relevance without inherited reputational capital—packaging becoming a tool through which identity is actively produced, allowing wineries to participate in value creation beyond the limits of their production scale.

Figure 4.

Projects using character-based narratives as a mechanism of performative brand construction.



Jakubów Winery

The packaging design centers on a specific product—a natural sparkling wine—around which a brand hero (“the rascal”) is constructed. Characterized by lightness, playfulness, and mischief, this figure serves as a performative device that positions the wine as accessible and experiential, supporting differentiation through personality-driven storytelling rather than place- or tradition-based cues.

Sen i Wino Winery

The design draws on the process of transformation—from seeds to mature plants—as a metaphor for winemaking and brand development. By translating this process into a coherent visual narrative, the packaging frames quality as an outcome of growth, care, and gradual change, constructing brand character through an abstract yet process-oriented storyline.

4.6 Semantically Open Strategies: Flexibility under Constraint

The final category comprised semantically open strategies, characterized by the absence of explicit cultural or place-based references (see examples in Figure 5). These emerged when participatory engagement was limited, producer identity was not yet clearly articulated, or strategic priorities remained fluid. Rather than indicating a lack of direction, such designs functioned as deliberately open visual systems allowing multiple interpretations, relying on abstract forms, minimal references, or stylistic experimentation—enabling flexibility across contexts and audiences.

From a value chain perspective, such strategies operate as adaptive positioning mechanisms under uncertainty: they accommodate heterogeneous consumer segments, evolving product portfolios,

and reduce repositioning costs—particularly relevant for small-scale wineries where premature identity commitment may constrain future options.

Semantic openness also has limitations: the absence of clear narrative or origin cues may reduce interpretive clarity and, in competitive environments, limit differentiation without additional quality signals. Nevertheless, in early-stage or rapidly evolving contexts, semantic openness provides strategic optionality: by deferring definitive identity commitments, producers retain capacity to adapt as capabilities and market understanding develop.

Figure 5.

Projects using semantically open visual strategies as a mechanism of adaptive positioning.



Leńcze Winery

The packaging design employs abstract motifs of molecules and relational systems to create a light and approachable visual composition. By avoiding explicit cultural or territorial references, this semantically open strategy allows for multiple interpretations, supporting flexibility in storytelling and enabling the wine to accommodate different narratives, including those related to blending practices.

Zywer Winery

The design draws on an eclectic collage-inspired visual language, reinterpreting classic nature-related motifs such as fruits, plants, and landscapes through a contemporary aesthetic. This approach produces a dynamic and youthful visual identity, using semantic openness and stylistic experimentation to appeal to younger audiences and to position the product within evolving consumption cultures.

4.7 Packaging and Direct-to-Consumer Value Creation

The packaging solutions in Figures 1–5 are not hypothetical proposals but projects implemented commercially by participating wineries, adopted for regular use and integrated into their ongoing portfolios. Several producers also introduced limited editions—one-off releases, anniversary labels, experimental lines—illustrating how packaging can serve as a flexible strategic instrument for testing alternative narratives and positioning strategies amid uncertainty.

However, systematic performance data remain limited: most participating wineries operate primarily through DtC channels—cellar-door sales, local events, wine tourism—without formal wholesale distribution or centralized sales tracking. Comprehensive quantitative evidence on sales volumes or price realization is therefore unavailable across cases, constraining before–after comparisons but not diminishing the analytical relevance of observed adoption patterns as indicators of practical and economic significance.

Across all categories, packaging played a central role in DtC contexts—winery visits, local fairs, short supply chains—functioning as a micro-level coordination device that reduces informational asymmetries and interpretation costs, enabling consumers to evaluate products without third-party certification or intermediary explanation.

Trade-press coverage documents producers' responses [38]. Several winemakers had previously relied on informal, self-designed visual solutions perceived as inadequate relative to product quality; as one noted, “we were aware that the result of these activities was not quite what we would want to see on a bottle that contains the work of our entire winemaking process” [38]. Following the project, participating wineries implemented the proposed solutions commercially, with at least one launching multiple product lines under a new visual identity. For producers introducing new categories such as natural wines, redesign was framed as a prerequisite for differentiation: “these wines deserve different, more individualized labels” [38]. While these observations do not constitute systematic performance data, they provide qualitative evidence that packaging redesign was perceived as strategically consequential.

The economic relevance is further shaped by price positioning: Lower Silesian wines typically retail at 50–100 PLN per bottle, comparable to small family wineries in Germany, the Czech Republic, or Austria [10]. At this price point, credible differentiation through packaging is economically consequential: the premium between a product perceived as artisanal and one perceived as generic justifies investment in professional design, and its absence risks rendering the

product uncompetitive against imports at similar or lower prices. Packaging thus operates not as a discretionary aesthetic layer but as a structural condition for price realization.

The structural dependence on packaging as a primary communication medium is further illustrated by Jakubów Winery—one of Lower Silesia’s longest-established producers—which has achieved recognition without a systematic digital marketing presence [40]. Brand identity and consumer relationships are constructed primarily through the product and direct interaction at the point of sale, highlighting that for DtC-oriented producers, packaging is not one element of a marketing mix but the central medium through which brand meaning is stabilized.

Beyond DtC, packaging is increasingly relevant for HoReCa access: regional industry representatives indicate that restaurant and hospitality buyers actively seek locally distinctive products, with multiple Wrocław venues already including Lower Silesian wines [41]. In this context, packaging functions not only as a consumer-facing signal but as a trade credential—a legible marker of provenance, production philosophy, and stylistic positioning supporting listing decisions by buyers with no prior relational contact. This extends packaging’s signaling function from DtC into HoReCa, expanding market access and channel diversification.

Across cases, producers reported that packaging facilitated trust-building and more effective communication of production methods, sustainability practices, and identity narratives—functioning simultaneously as a conversation starter, a credibility signal, and a durable material representation of producers’ values [38].

4.8 Linking Communication Categories to Value-Chain Functions

The identified communication categories can be interpreted as distinct mechanisms of signaling, coordination, and value capture within the wine value chain, rather than as purely stylistic variations. In established markets, equivalent functions are performed by intermediaries or institutional frameworks—appellation systems, certification bodies, distribution networks. In short supply chains and DtC contexts where such structures are absent, packaging assumes this coordinating role by making value attributes legible at the point of exchange.

Each category thus represents an alternative coordination strategy: people-centered narratives embed the producer within the product, reducing information asymmetry through relational and identity-based cues; place-based narratives substitute for weak or absent geographical indications by anchoring the product in territorial resources; cultural narratives extend value through symbolic capital, supporting premium positioning; character-based strategies facilitate market entry and

visibility by increasing salience and lowering trial barriers; and semantically open strategies provide flexibility under uncertainty, accommodating evolving portfolios without committing to a fixed identity.

These mechanisms are not neutral in their economic effects. Place-based and culturally grounded strategies are most compatible with premium HoReCa and specialty retail contexts, where origin and craftsmanship support price differentiation. People-centered strategies are most effective in DtC settings where trust is central. Character-based and semantically open strategies may facilitate entry into younger or exploratory segments but require careful calibration, as salience may come at the cost of perceived quality.

Across these contexts, packaging functions as a micro-level governance device that aligns production attributes, territorial signals, and consumer interpretation—reducing search and interpretation costs, structuring expectations, and contributing to transaction cost reduction under conditions of uncertainty.

Table 1 summarizes these relationships by linking each communication category to its dominant economic mechanism, primary market context, and expected business effect. This reframing positions packaging not as a downstream marketing element, but as an integral component of value chain coordination, particularly in small-scale, emerging wine regions where formal reputation systems and distribution infrastructures remain limited.

Table 1.

Communication categories and their economic functions within the wine value chain

Communication category	Dominant economic mechanism	Primary market context	Expected business effect
People-centered	Trust and authenticity signaling; reduction of information asymmetry through producer visibility	Direct-to-consumer (cellar door, fairs), local retail, wine tourism	Higher conversion rates, increased consumer trust, stronger loyalty and repeat purchase
Place-based	Territorial signaling; substitution for weak or absent geographical indications; origin-based differentiation	Regional gastronomy, wine tourism, specialty retail	Improved recognizability, stronger origin association, support for price differentiation
Cultural narratives	Symbolic value extension; activation of cultural capital and storytelling	Tourism, gifting, premium and experiential	Enhanced perceived value, support for premium positioning,

Communication category	Dominant economic mechanism	Primary market context	Expected business effect
		consumption contexts	deeper consumer engagement
Character-based	Market entry and experimentation; visibility and salience in competitive environments	Younger consumers, informal consumption, entry-level product lines	Increased attention and trial, facilitation of brand differentiation in early-stage markets
Semantically open	Strategic flexibility; reduced commitment to fixed identity under uncertainty	Diverse or evolving portfolios, experimental or hybrid products	Lower repositioning costs, adaptability to multiple segments, portfolio scalability

5 Discussion

This case study demonstrates that packaging design plays a substantive role in transforming local wine value chains by coordinating economic, symbolic, and territorial dimensions of value. Rather than a peripheral marketing decision, packaging emerges as a site where adaptation strategies are negotiated and materialized through interaction between producers, designers, and place-based resources. Across the identified categories—people, place, cultural memory, character, and semantic openness—packaging operated as a flexible coordination mechanism that translated heterogeneous constraints and assets into market-facing signals.

The findings also reveal a broader structural challenge in emerging wine regions such as Poland: a systemic deficit in shared image capital and institutionalized appellations. Fragmented structure, small scale, and limited international recognition mean that reputation and quality cannot be externalized to institutional frameworks but must be constructed through firm-level signaling embedded in the product [11,12,42]. Coherent narratives anchored in people, place, craftsmanship, and lived experience can partially compensate for weak formal reputation systems, enabling wineries to articulate value beyond rigid appellation frameworks.

Wine is a typical experience good for which quality cannot be assessed before consumption [43]; consumers therefore rely on extrinsic cues—including packaging—to reduce uncertainty [1]. People-centered and place-based narratives might serve as credibility and origin signals that partially substitute for missing institutional guarantees, reducing information asymmetry in DtC and local-market contexts.

Packaging also reduces consumer search and interpretation costs. Clear, narratively integrated labels facilitate faster product recognition and evaluation in contexts of limited prior knowledge—consistent with research showing that congruent text–visual combinations increase affective fluency, enhancing product liking, taste perception, and purchase intentions [13,14]. Packaging thus aligns production attributes with consumer expectations at the point of encounter.

Packaging also enables disintermediation. For small-scale wineries operating outside dominant distribution systems, product explanation, trust-building, and quality reassurance must occur directly at the producer–consumer interface. Well-structured packaging supports this by making production practices, origin, and identity legible without third-party endorsement, increasing the viability of short supply chains and DtC strategies and allowing producers to retain a larger share of final value [21,22].

The findings point to an important distinction within the place-based category. Geographic narratives primarily reduce uncertainty about provenance, functioning as credibility signals in the absence of formal geographical indications. Cultural narratives, by contrast, extend value through symbolic and aesthetic resources, attracting consumers who engage with wine as an expression of a cultural position and supporting premium positioning and longer-term engagement. The Moderna case illustrates how cultural signaling can generate a differentiation advantage that is difficult to imitate, rooted in the specific biographical and aesthetic commitments of the producer [37,38].

Where visual language and wine style form a consistent, mutually reinforcing system, packaging becomes part of the value proposition itself—a pattern consistent with research on label–product congruence and affective fluency [44]. The economic contribution of packaging thus extends beyond information transmission to the construction of credible, internally consistent brand identities.

From a communicative perspective, packaging stabilizes meaning by selecting and structuring information to reduce complexity for consumers and value chain actors [44]. Visual form, layout, and material choices operate as communicative operations that coordinate expectations across production and consumption contexts [45], with direct producer involvement enabling articulation of tacit knowledge and alignment of quality interpretations.

While the study does not provide systematic quantitative performance evidence, documented adoption and commercial implementation provide structured qualitative evidence of practical

relevance [38]. The study's contribution lies in identifying mechanisms and processes of value creation and coordination rather than measuring their effects—treating packaging development as practice-based coordination and learning.

The findings support a segmentation-oriented approach to packaging design in emerging wine regions. Place-based and culturally grounded strategies are most appropriate for premium and HoReCa channels, where origin and craftsmanship cues support price differentiation; people-centered narratives are most effective in DtC contexts, strengthening relational proximity and trust; and character-based or semantically open strategies may increase visibility and encourage trial among younger or exploratory segments, though salience gains may come at the cost of perceived quality [14,15].

The case study also highlights collective action dynamics in regional reputation construction. Producers are increasingly aware that territorial image is a collective rather than individual asset [37], a dynamic reflected in the activities of the Lower Silesia Wineries Association (*Stowarzyszenie Winnice Dolnośląskie*), which has established coordinated mechanisms—jointly produced wines, shared infrastructure, regional wine trails, and collaborative research [10,41]—representing early-stage institutionalization of collective reputation.

Individual producers also engage with broader institutional support: participation of wineries such as Moderna in the EU-funded Dolnośląskie Innovation Rocket program illustrates how public support can amplify branding strategies and extend reach beyond local markets [39]. These dynamics are consistent with models of collective reputation, which suggest that without strong traceability systems, individual incentives to invest in quality and communication may be suboptimal relative to group-level outcomes [1,46], making coordinated governance mechanisms important for accumulating shared image capital.

Packaging should thus be understood not only as a firm-level tool but as a building block of collective regional identity, with individual investments contributing incrementally to a recognizable regional profile in the absence of formal appellations.

From a policy perspective, shared design frameworks, collective branding strategies, or publicly supported design advisory services may lower barriers for individual producers and contribute to shared image capital—though given the qualitative and exploratory nature of this study, these implications require further empirical validation.

Overall, packaging operates as a multi-functional coordination mechanism within local wine value chains. By reducing information asymmetry, lowering interpretation costs, enabling disintermediation, and contributing to individual and collective reputation-building, it plays a central role in the economic organization and adaptive capacity of emerging wine regions.

5.1 Limitations and Further Research

First, the analysis is based on a qualitative case study in an emerging wine region characterized by small-scale production, no appellations, and limited reputational capital. While this context is appropriate for examining early-stage adaptation, the findings capture a specific moment in value chain development, offering analytical generalization through coordination and signaling mechanisms rather than stable outcomes.

Second, the study lacks systematic quantitative performance evidence—such as sales volumes, income, price realization, or margins. This reflects a structural feature of the sector: most participating wineries operate through DtC channels without formal wholesale distribution or centralized sales tracking, making consistent comparative data unavailable. While adoption and implementation are documented as indicators of practical relevance, the absence of performance data limits direct evaluation of economic outcomes.

Third, the research focuses on packaging development at a particular point in time. Although some wineries implemented proposed solutions, the study does not track how strategies perform, evolve, or stabilize as producers accumulate market experience. Given that reputation, trust, and symbolic value are cumulative and path-dependent, longitudinal research is needed to examine how packaging-based narratives evolve under changing consumer expectations, regulatory environments, and sustainability standards.

This limitation is compounded by the sector's learning-by-doing character: most Polish winemakers have developed practices from scratch, with successive vintages as the primary mechanism of skill accumulation [10,41]. Packaging strategies will likely evolve alongside production capabilities and market exposure, making the present findings best interpreted as an early-stage snapshot. Longitudinal research tracking how packaging strategies change as producers accumulate experience and reputational capital would be particularly valuable.

Fourth, while the participatory design setting provides access to micro-level adaptation processes rarely observable through conventional methods, it constitutes a mediated research context. Future

research could complement it by following wineries into subsequent phases of independent decision-making, market testing, and institutional embedding.

Future research could adopt longitudinal mixed-methods designs combining qualitative analysis with repeated observations, market data, and consumer research—assessing whether packaging functions as a temporary compensatory mechanism or contributes to the gradual accumulation of collective image capital. Such designs would also be valuable for evaluating the effectiveness of design support programs, regional branding initiatives, and sustainability labeling frameworks.

5.2 Conclusion

This study demonstrates that packaging design is an integral component of wine value chains, functioning as a micro-level governance device that reduces information asymmetry, lowers transaction costs, enables disintermediation, and supports both firm-level differentiation and collective regional image capital. By enabling local wineries to mobilize place-based resources and reconfigure production–consumption relationships in the absence of institutionalized reputation systems, packaging is central to market legibility and price realization in emerging regions such as Poland, where producers cannot compete on scale. More broadly, the findings underscore the importance of integrating design and communication practices into value chain analysis, contributing to bridging design research and wine economics and advancing understanding of how local value chains adapt under conditions of uncertainty, fragmentation, and institutional incompleteness.

6 References

- [1] J.A. Winfree, J.J. McCluskey. Collective reputation and quality. *American Journal of Agricultural Economics* 87 (2005) 206–213. <https://doi.org/10.1111/j.0002-9092.2005.00712.x>
- [2] S. Mueller, G. Szolnoki. The relative influence of packaging, labelling, branding and sensory attributes on liking and purchase intent: consumers differ in their responsiveness. *Food Quality and Preference* 21 (2010) 774–783. <https://doi.org/10.1016/j.foodqual.2010.07.011>
- [3] U.R. Orth, K. Malkewitz. Holistic package design and consumer brand impressions. *Journal of Marketing* 72 (2008) 64–81. <https://doi.org/10.1509/JMKG.72.3.064>
- [4] K. Anderson, V. Pinilla. Wine's belated globalization, 1845–2025. *Applied Economic Perspectives and Policy* 44 (2022) 742–765. <https://doi.org/10.1002/aapp.13174>
- [5] R. Vecchio. Determinants of willingness-to-pay for sustainable wine: evidence from experimental auctions. *Wine Economics and Policy* 2 (2013) 85–92. <https://doi.org/10.1016/j.wep.2013.11.002>

- [6] G. Banks, J. Overton. Old world, new world, third world? Reconceptualising the worlds of wine. *Journal of Wine Research* 21 (2010) 57–75. <https://doi.org/10.1080/09571264.2010.495854>
- [7] E. Giuliani. Role of technological gatekeepers in the growth of industrial clusters: evidence from Chile. *Regional Studies* 45 (2011) 1329–1348. <https://doi.org/10.1080/00343404.2011.619973>
- [8] E. Giuliani. Network dynamics in regional clusters: evidence from Chile. *Research Policy* 42 (2013) 1406–1419. <https://doi.org/10.1016/j.respol.2013.04.002>
- [9] Krajowy Ośrodek Wsparcia Rolnictwa. Rozkwit polskiego winiarstwa – od tradycji do nowoczesności. <https://www.gov.pl/web/kowr/rozkwit-polskiego-winiarstwa--od-tradycji-do-nowoczesnosci> [Accessed 1 December 2025]
- [10] D. Chruściel. Unikalny klimat i kapryśna pogoda. Mimo wyzwań ten region rozwija winiarstwo. [https://www.horecatrends.pl/gastronomia/114/unikalny_klimat_i_kapryśna_pogoda_mimo_wyzwan_ten_region_rozwija_winiarstwo_wywiad,73331.html](https://www.horecatrends.pl/gastronomia/114/unikalny_klimat_i_kapryсна_pogoda_mimo_wyzwan_ten_region_rozwija_winiarstwo_wywiad,73331.html) [Accessed 10 April 2026]
- [11] M. Haberla. Wine market development in Poland and its impact on regional attractiveness. *Scientific Papers of Silesian University of Technology Organization and Management Series* 192 (2024). <https://doi.org/10.29119/1641-3466.2024.192.21>
- [12] D. Maciejewska, D. Olewnicki, M. Tyminski, T. Krupa. The wine market in Poland and the main determinants of its development – selected aspects. *Zeszyty Naukowe. Organizacja i Zarządzanie / Politechnika Śląska* 168 (2023). <https://doi.org/10.29119/1641-3466.2023.168.20>
- [13] D.A. Jaud, V. Melnyk. The effect of text-only versus text-and-image wine labels on liking, taste and purchase intentions: the mediating role of affective fluency. *Journal of Retailing and Consumer Services* 53 (2020) 101964. <https://doi.org/10.1016/j.jretconser.2019.101964>
- [14] E. Lick, B. König, M.R. Kpessa, V. Buller. Sensory expectations generated by colours of red wine labels. *Journal of Retailing and Consumer Services* 37 (2017) 146–158. <https://doi.org/10.1016/j.jretconser.2016.07.005>
- [15] R. Lunardo, B. Rickard. How do consumers respond to fun wine labels? *British Food Journal* 122 (2019) 2603–2619. <https://doi.org/10.1108/BFJ-04-2019-0286>
- [16] E. Manzini. *Design, when everybody designs: an introduction to design for social innovation*. Cambridge: MIT Press; 2015
- [17] E.B.-N. Sanders, P.J. Stappers. Co-creation and the new landscapes of design. *CoDesign* 4 (2008) 5–18. <https://doi.org/10.1080/15710880701875068>
- [18] G. Gereffi, J. Humphrey, T. Sturgeon. The governance of global value chains. *Review of International Political Economy* 12 (2005) 78–104. <https://doi.org/10.1080/09692290500049805>
- [19] R. Kaplinsky, M. Morris. *A handbook for value chain research*. Brighton: Institute of Development Studies; 2000
- [20] K. Anderson. Agriculture in a more uncertain global trade environment. *Agricultural Economics* 53 (2022) 563–579. <https://doi.org/10.1111/agec.12726>
- [21] P. del Vecchio, C. Malandugno, G. Passiante, G. Sakka. Circular economy business model for smart tourism: the case of Ecobnb. *EuroMed Journal of Business* 17 (2021) 88–104. <https://doi.org/10.1108/EMJB-09-2020-0098>

- [22] A. Gilinsky, S.K. Newton, R.F. Vega. Sustainability in the global wine industry: concepts and cases. *Agriculture and Agricultural Science Procedia* 8 (2016) 37–49. <https://doi.org/10.1016/j.aaspro.2016.02.006>
- [23] J.P.L. Schoormans, H.S.J. Robben. The effect of new package design on product attention, categorization and evaluation. *Journal of Economic Psychology* 18 (1997) 271–287. [https://doi.org/10.1016/S0167-4870\(97\)00008-1](https://doi.org/10.1016/S0167-4870(97)00008-1)
- [24] R. Rettie, C. Brewer. The verbal and visual components of package design. *Journal of Product & Brand Management* 9 (2000) 56–70. <https://doi.org/10.1108/10610420010316339>
- [25] F. Bassani, C. Rodrigues, P. Marques, F. Freire. Life cycle assessment of pharmaceutical packaging. *The International Journal of Life Cycle Assessment* 27 (2022) 978–992. <https://doi.org/10.1007/s11367-022-02062-9>
- [26] S. Mueller, L. Lockshin, J.J. Louviere. What you see may not be what you get: asking consumers what matters may not reflect what they choose. *Marketing Letters* 21 (2010) 335–350. <https://doi.org/10.1007/s11002-009-9098-x>
- [27] B. Rundh. The role of packaging within marketing and value creation. *British Food Journal* 118 (2016) 2491–2511. <https://doi.org/10.1108/BFJ-10-2015-0390>
- [28] C. Frayling. Research in art and design. <https://researchonline.rca.ac.uk/384/> [Accessed 1 December 2025]
- [29] M. Granovetter. Economic action and social structure: the problem of embeddedness. *American Journal of Sociology* 91 (1985). <https://www.journals.uchicago.edu/doi/abs/10.1086/228311> [Accessed 31 January 2026]
- [30] P.S. Murdoch, J.S. Baron, T.L. Miller. Potential effects of climate change on surface-water quality in North America. *JAWRA Journal of the American Water Resources Association* 36 (2000) 347–366. <https://doi.org/10.1111/j.1752-1688.2000.tb04273.x>
- [31] R.K. Yin. *Case study research: design and methods*. Los Angeles, London, New Delhi, Singapore, Washington, DC; 2014
- [32] J. Simonsen, T. Robertson. *Routledge international handbook of participatory design*. London: Routledge; 2012. <https://doi.org/10.4324/9780203108543>
- [33] N. Cross. Designerly ways of knowing. *Design Studies* 3 (1982) 221–227. [https://doi.org/10.1016/0142-694X\(82\)90040-0](https://doi.org/10.1016/0142-694X(82)90040-0)
- [34] T. Brown. Design thinking. *Harvard Business Review* 86 (2008) 84–92
- [35] L. Waidelich, A. Richter, B. Kölmel, R. Bulander. Design thinking process model review. In: 2018 IEEE International Conference on Engineering, Technology and Innovation. 2018 1–9. <https://doi.org/10.1109/ICE.2018.8436281>
- [36] A. Augustyn. Potomek Siuksów i wino spod Wrocławia. Kiedy zaczynał, urzędnicy pukali się w głowę. <https://wyborcza.biz/biznes/7,147584,19934267,potomek-siuksow-i-wino-spod-wroclawia-kiedy-zaczynal-urzednicy.html> [Accessed 10 April 2026]
- [37] KUKBUK. Etykiety win inspirowane architekturą. <https://www.youtube.com/watch?v=9HT3OOcmaeo> [Accessed 9 April 2026]
- [38] A. Szydziak. Wino: świeżym okiem na etykiety win. *Food Service* 5/2021 (2021)
- [39] J. Pochłopen. Dolnośląskie wino wyrusza w świat. <https://businessinsider.com.pl/firmy/dolnoslaskie-wino-wyrusza-w-swiat/b8pvre6> [Accessed 10 April 2026]
- [40] Winnica Jakubów. Terroir Wzgórz Dalkowskich i wino bez pośpiechu. <https://podcasts.apple.com/gb/podcast/winnica-jakub%C3%B3w-terroir-wzg%C3%B3rz-dalkowskich-i-wino-bez/id1821487278?i=1000741511219> [Accessed 9 April 2026]

- [41] D. Chruściel. Biznes z potrzeby serca. O regionie, który pokochał produkcję wina. https://www.horecatrends.pl/trendy/119/biznes_z_potrzeby_serca_o_regionie_ktory_pokochal_produkcje_wina_wywiad,74255.html [Accessed 10 April 2026]
- [42] A. Mazurkiewicz-Pizło, W. Pizło. Determinants of the development of vineyards and wine tourism in Poland. *Acta Scientiarum Polonorum. Oeconomia* 17 (2018)
- [43] L. Lockshin, A.M. Corsi. Consumer behaviour for wine 2.0: a review since 2003 and future directions. *Wine Economics and Policy* 1 (2012) 2–23. <https://doi.org/10.1016/j.wep.2012.11.003>
- [44] N. Luhmann. What is communication? *Communication Theory* 2 (1992) 251–259. <https://doi.org/10.1111/j.1468-2885.1992.tb00042.x>
- [45] R. Duszek, T. Bierkowski, M. Wszolek. Myślenie wizualne. <https://share.swps.edu.pl/handle/swps/1622> [Accessed 31 January 2026]
- [46] J. Tirole. A theory of collective reputations. *The Review of Economic Studies* 63 (1996) 1–22. <https://doi.org/10.2307/2298112>

Just Accepted