servDES '25
భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad
tcs Research
Department of Design

Resilient by Design: the Dissolution of Alternative Food Networks

Cagri G. Varli[1], Stefano Maffei[2]
cagri.varli@itu.edu.tr
[1]Istanbul Technical University, Turkey
[2]Politecnico di Milano, Italy

Abstract

Alternative food networks (AFNs) are often presented through peak-period success stories, leaving their entire lifecycle — transformations, challenges, and reconfigurations — underexplored. By rethinking AFN dissolution process through a service design lens, this study examines how embedded values, networks, and operational models evolve beyond their initial structures. The research uses a new-generation consumer cooperative as a case study, and it employs multiple sources of evidence — semi-structured interviews, archival data, media sources, and direct observations — to analyze the cooperative's evolution. Findings reveal how AFNs transition from grassroots initiatives to structured models but struggle with economic constraints and governance challenges. Their dissolution underscores their structural fragility as interdependent networks sustain and destabilize their viability. Yet, rather than signaling failure, dissolution enables transformation, with core values and operational knowledge remaining in new configurations. This perspective aligns with service design principles of adaptability, participatory governance, and systemic resilience, offering insights into how AFNs can maintain impact amid evolving socio-economic conditions.

Keywords: new-generation food cooperatives, alternative food networks, transformative networks, resilient food systems

Introduction

Over the past 5 to 10 years, discussions, discourses, and experimental initiatives around agriculture and food systems have gained momentum in Turkey (Soysal Al, 2020), particularly among local governments, cooperatives, and food communities.

This evolving landscape reflects a growing interest in alternative food networks (AFNs), underscoring the need for service design approaches that facilitate participatory governance, collective decision-making, and sustainable food practices.

AFNs, as decentralized and socially embedded food systems, offer an alternative to industrialized food networks that prioritize efficiency and economies of scale (Dansero & Puttilli, 2014). They take multiple organizational forms, including community-supported agriculture, farmers' markets, food cooperatives, solidarity purchasing groups, urban food initiatives, etc. This diversity of operational models enables them to respond to needs specific to local contexts (Rossi, 2017) while creating alternative service models for food provisioning. However, their long-term sustainability remains uncertain, as organizational resilience, governance models, and adaptation strategies are crucial to their survival.

AFNs have gained significant academic and media attention, often framed through success stories highlighting their most effective periods. However, much of this coverage focuses on case studies at their peak, leaving a gap in understanding the entire lifecycle of AFNs—including their transformations, challenges, and potential for reconfiguration. As these networks operate within highly dynamic systems—shaped by social structures, economic shifts, and climate change—it is crucial to examine their peaks and broader trajectories and adaptations.

Rather than viewing dissolution as an endpoint, this study explores how AFNs' embedded values, networks, and operational models persist beyond their initial structures, influencing new configurations within alternative food movements. From a service design perspective, AFNs can be understood as dynamic service systems that sustain their impact through co-creation, adaptability, and distributed governance. Rather than static entities, they function as participatory service structures that evolve by transferring knowledge and reconfiguring.

This study grounds these theoretical discussions within a practice, Kadıköy Cooperative (KC), as a case of what can be defined as a new-generation consumer cooperative. KC's efforts to establish an alternative public space through a horizontal and participatory model positioned it as an active agent in the transition towards food sovereignty. According to Nizam (2021), the defining characteristic of these new-generation cooperatives is their commitment to social and environmental challenges. Rather than simply ensuring affordable food access for their members, they strive to develop alternative food systems that prioritize ethical, ecological, and health-conscious production and consumption.

By analyzing KC's evolution and dissolution, this research aims to contribute to the broader discussion on AFNs' resilience, their potential for transformation, and the service design approaches that could support their long-term sustainability.

Theoretical Background

AFNs as Community-Driven Service Models

AFNs have emerged as a response to the industrialized and globalized food system, prioritizing efficiency and economies of scale (Ericksen, 2008; Ilbery & Maye, 2005). In contrast, AFNs promote decentralized, socially embedded, and environmentally conscious food systems that reconnect consumers with production (Goodman & Goodman, 2009; Maye et al., 2007).

AFNs' organizational diversity is a key feature, allowing them to function in multiple forms, including community-supported agriculture, farmers' markets, food cooperatives, solidarity purchasing groups, and urban agriculture initiatives. This diversity enables AFNs to adapt to different local contexts while maintaining their core principles.

Unlike centralized food systems, AFNs rely on decentralized, participatory governance structures encourage democratic engagement from consumers, producers, and community stakeholders (Feagan, 2007; Wald & Hill, 2016). Many AFNs employ horizontal decision-making structures, ensuring that governance is inclusive, transparent, and adaptable to community needs (Renting et al., 2012). It aligns AFNs with community-driven service models, where users actively shape the service experience rather than being passive consumers.

AFNs operate within a solidarity-based economic model, prioritizing social justice, mutual aid, and economic redistribution over profit maximization (Tregear, 2011). Bypassing intermediaries and shortening supply chains enable direct producer-consumer connection and transparency (Renting et al., 2012). These help to retain economic benefits within local communities (Chenarides et al., 2021) and shape price formation collectively (Thorsøe & Kjeldsen, 2016).

New-generation cooperatives have emerged as an advanced form of AFNs, incorporating these values into their frameworks. They have evolved by focusing on shared characteristics, such as contributing to developing alternative agri-food relationships shaped by the principles of food sovereignty while creating an "alternative public space" through food for social and political transformation

(Feagan, 2007; Soysal Al, 2024). Unlike conventional cooperatives, these models prioritize local development by linking farmers, workers, and urban consumers within an interconnected network and embedding democratic participation throughout the production and consumption (Şahin, 2019).

The Fragility and Limitations of AFNs

Although AFNs are often positioned as resilient alternatives to industrial food systems, they remain structurally fragile due to economic, organizational, and systemic pressures (Tregear, 2011; Renting et al., 2012). Their dependence on short food supply chains exposes them to economic fluctuations, price volatility, and logistical challenges (Michel-Villarreal et al., 2019). Additionally, operating under non-profit or low-profit models makes securing financial stability a persistent challenge (Cerrada-Serra et al., 2018). Institutional barriers, including regulatory restrictions and limited governmental support, further complicate the long-term sustainability of AFNs in larger food systems. AFNs often struggle to follow national food safety and taxation laws designed for large-scale agribusiness systems (Born & Purcell, 2006). Additionally, political and regulatory environments often favor large-scale models (Lutz & Schachinger, 2013), disadvantaging AFNs.

Their emphasis on participatory governance and community-driven models (Goodman & Goodman, 2009) may lead to inconsistencies in leadership, decision-making, and operational continuity due to a heavy reliance on volunteer labor and informal organizational structures (Gori & Castellini, 2023).

Additionally, the success of AFNs often depends on social trust and strong interpersonal relations between producers and consumers (Grasseni, 2014; Renting et al., 2003). While this fosters close-knit communities, it can also limit scalability, as maintaining personal relationships becomes more difficult with expansion (Bos & Owen, 2016). In cases where trust corrodes, AFNs face fragmentation and eventual dissolution.

While some AFNs remain active for extended periods, many operate as temporary responses to specific socio-political or economic contexts (Rodriguez, 2020). Their emergence is often linked to local food crises, financial instability, or grassroots movements (Cerrada-Serra et al., 2018). Still, once these pressures shift, their relevance and engagement levels may decline, and this has led some scholars to conceptualize AFNs not as permanent alternatives but as transitional initiatives that indirectly influence food policies and practices (Maye et al., 2007).

Beyond Dissolution: Service Design & the Evolution of AFNs

The transformation of AFNs resonates with the core principles of service design outlined by Manzini (2015), particularly in its emphasis on co-creation, participatory governance, and iterative adaptation. Rather than being static entities, AFNs continuously evolve through collective efforts, where producers, consumers, and other stakeholders actively shape their structure and decision-making processes (Jarosz, 2008). Co-creation plays a crucial role in AFNs, as their governance relies on shared responsibility and the involvement of diverse actors in shaping food supply models. Their transformation also follows iterative adaptation, a key tenet of service design. Many AFNs shift their structures in response to changing socio-economic conditions, sometimes altering typology, developing hybrid organizational models, or integrating into other networks.

Rather than merely adapting their internal mechanisms, AFNs often function as catalysts for broader systemic change, transferring their accumulated knowledge, networks, and ethical principles into new initiatives, ensuring that their impact extends beyond the duration of a single entity. This adaptation ensures that AFN values persist in alternative configurations, reinforcing food system resilience. Through service design approaches emphasizing continuity, adaptation, and transformation, AFNs maintain their embedded values, which are not lost but evolve into new forms while responding to emerging challenges.

Method

Research Design and Case Selection

This study follows a longitudinal case study approach, examining how certain conditions and their underlying processes change over time (Yin, 2014). Case studies allow detailed, multi-dimensional examinations of complex phenomena in real-world contexts, making them well-suited for analyzing the dynamics of AFNs.

KC was selected as the case study due to its unique trajectory within Turkey's AFN ecosystem, reflecting both the potential and the challenges of cooperative-based food distribution models. Its evolution—marked by different phases of organizational structuring, volunteer engagement, and participatory governance—offers valuable insights into the resilience and adaptability of AFNs. This study aims to contribute to service design discussions on participatory governance, organizational sustainability, and community-led food provisioning models by investigating KC's transformation over time.

Data Collection

The study employs multiple data sources (Figure 1) to ensure a comprehensive and multi-perspective understanding of KC's trajectory. The primary data consists of six semi-structured interviews conducted between April 2023 and January 2025 with various stakeholders of KC (Table 1). The interviews, lasting between 40 and 120 minutes, were recorded, transcribed, and anonymized. Additionally, the study draws upon materials produced directly by the cooperative (Figure 2), such as booklets, leaflets, social media posts, podcast episodes, and external sources, including press releases, news articles, and previously conducted interviews by journalists and researchers.

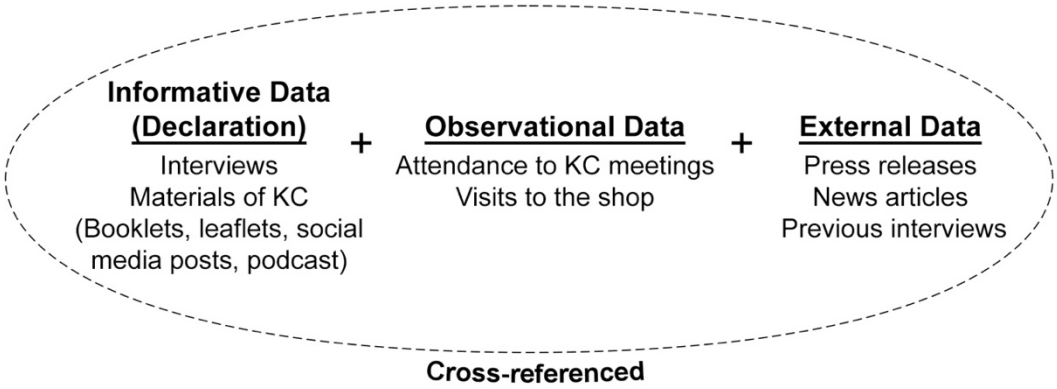

Figure 1. Data types and contents.

Participant	Age	Gender	Education	Role
P1	Young adult (18-39)	Female	MSc	Long-term volunteer
P2	Young adult (18-39)	Male	MSc	New volunteer
P3	Middle adult (40-59)	Female	PhD	Long-term volunteer / Partner
P4	Middle adult (40-59)	Female	Bachelor	Long-term volunteer
P5	Older adult (60+)	Female	Bachelor	Cooperative friend
P6	Young adult (18-39)	Female	Bachelor	New cooperative's member

Table 1. Demographic information of the interviewees and their relationship with the cooperative.

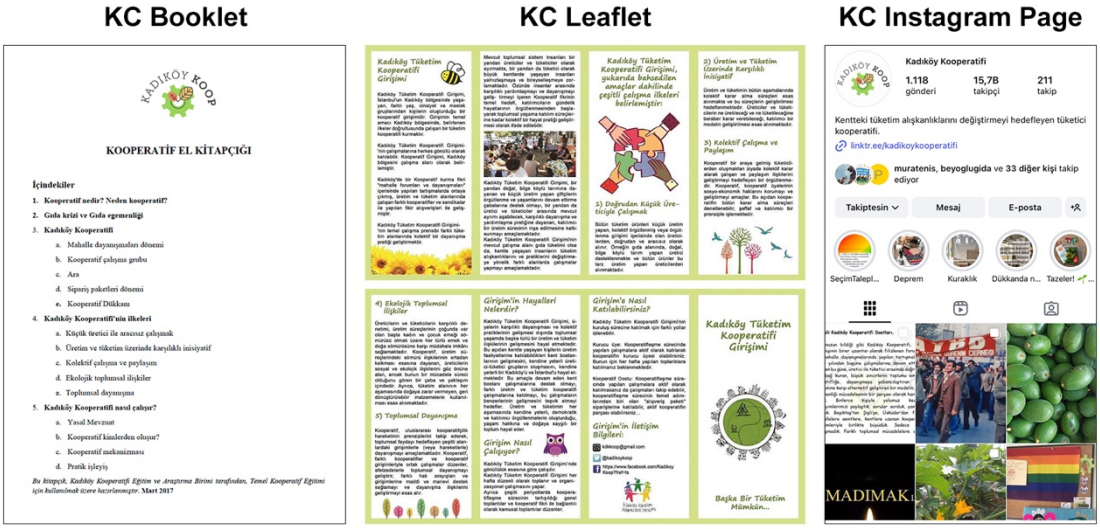

Figure 2. Materials produced directly by the cooperative.

The real-world setting enabled direct observation of volunteer coordination, decision-making, and operations. In addition, participant observation was employed, allowing deeper immersion into the cooperative's internal dynamics and community relationships. Observational evidence provided additional data on relevant social and environmental conditions, helping contextualize findings from interviews and archival records. While this approach secures a comprehensive analysis, several challenges were encountered during data collection. The high turnover of volunteers and the fluctuating intensity of members' engagement with the cooperative made it challenging to track consistent narratives over time. Additionally, archival gaps—particularly concerning certain operational phases and decision-making processes—posed limitations in reconstructing a fully detailed history of KC.

Data Analysis

To make sense of this complex dataset, the findings were analyzed using the explanation-building technique (Yin, 2014). This method iteratively refines causal explanations as evidence accumulates. Given the cooperative's shifting organizational structure and fluctuating levels of engagement, this approach allowed for a progressive interpretation of its trajectory.

Validity was strengthened through triangulation of multiple data sources. (see Fig. 1). The study developed convergent evidence by integrating interviews, archival materials, and direct observations, strengthening the conclusions' reliability.

Case Context: Kadıköy Cooperative

KC derives its name from Kadıköy, a district on the Asian side of Istanbul with a population of approximately half a million (Kadıköy Belediyesi, 2019). Kadıköy is a metropolitan sub-center with strong commerce, services, and cultural production. Today, it is primarily a residential area for middle- and upper-income groups.

KC was established in 2014 as an initiative led by individuals who aimed to create a solidarity-based, participatory food network. Initially operating informally, KC gained legal status as a consumer cooperative in November 2016 and opened its first store (Kadıköy Cooperative Education and Research Unit, 2017). Unlike conventional cooperatives, KC functioned as a non-hierarchical, autonomous organization, emphasizing collective work, participatory governance, and community engagement (Figure 3). Through collaborations with other cooperatives, food collectives, and advocacy groups, KC built a network centered on solidarity and mutual support. KC is guided by principles that emphasize direct collaboration with small-scale producers, mutual initiative in production and consumption, collective work and participatory decision-making, ecological and social responsibility, and social solidarity through cooperative networks. Figure 4 illustrates KC's actor relationships guided by these principles.

Figure 3. Key community activities of KC: Cooperative kitchen meeting, members' picnic, and producer visit (left to right). Source: KC official Instagram account (@kadikoykooperatifi)

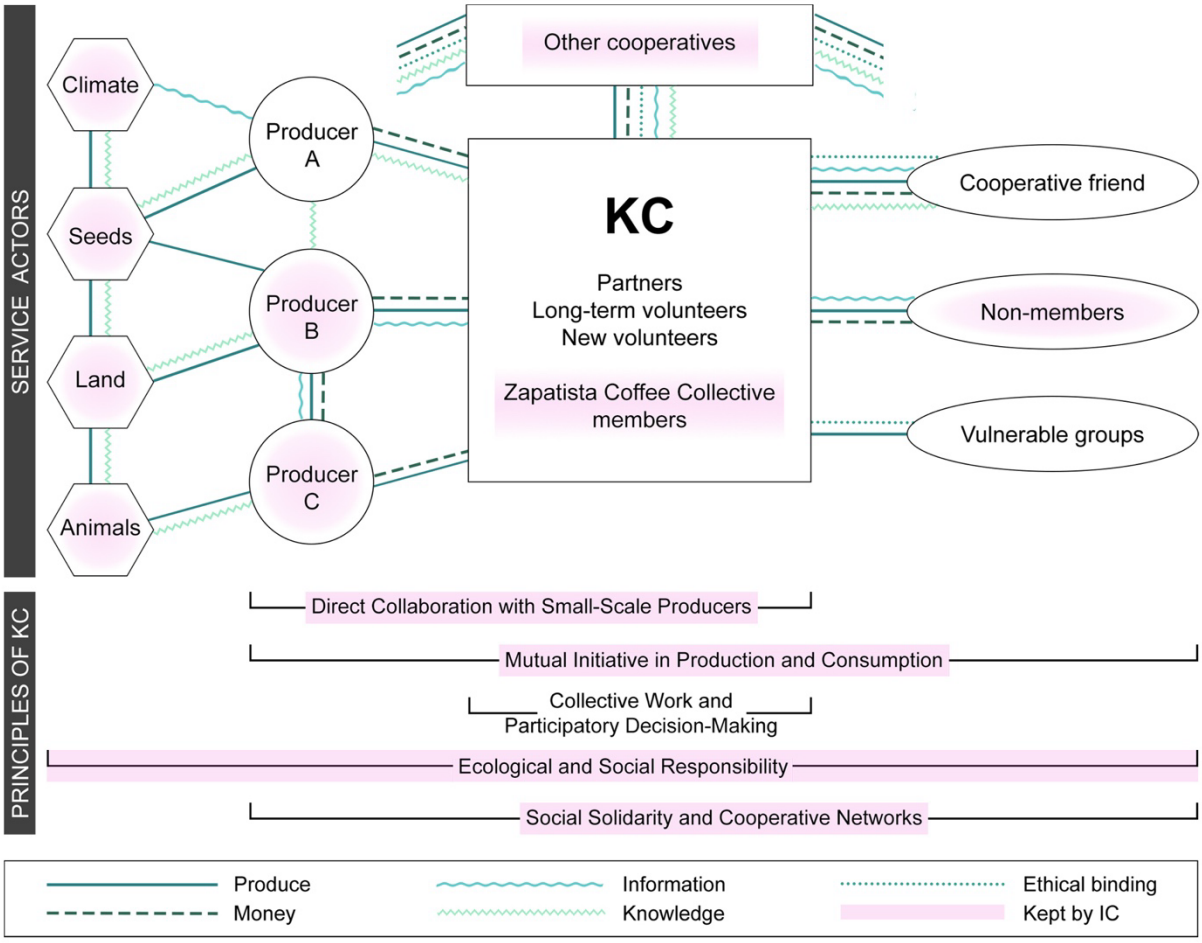

Figure 4. Actor relationships guided by KC's principles and the components sustained by IC as part of new AFN.

Findings: The Evolution and Dissolution of KC

KC's Lifespan: From Emergence to Transformation

KC's trajectory (Figure 5) can be divided into multiple phases, reflecting different stages of its evolution. While its trajectory includes significant milestones from its early formation, this study focuses on the final years when the cooperative faced growing operational challenges and underwent structural transformations.

- **Phase 1: Formation & Growth**

  Following the 2013 Gezi Protests, neighborhood solidarity groups in Kadıköy, including Caferağa Solidarity, initiated discussions on cooperative-based food

distribution. KC was born from these discussions, marking its **Neighborhood Solidarity Period**.

To formalize these discussions, a **Cooperative Working Group** was established, bringing together members from different solidarity networks, farmer unions, and established cooperatives. The first cooperative workshop in 2014 produced a draft operational model, but as neighborhood movements lost momentum, internal tensions caused a **Break Period**, stalling progress.

In early 2015, new participants reactivated discussions, leading to the formalization of the *Kadıköy Consumer Cooperative Initiative*. A practical step was taken at this stage by launching an **Order Packages Period**, where a multi-product package system was introduced. Food packages were distributed through volunteer networks and solidarity groups, expanding over time. Throughout this process, knowledge exchange with stakeholder cooperatives played a crucial role. This period highlighted the need for a structured model.

With official registration in November 2016, KC shifted from an order-based system to a **Cooperative Shop** model, opening a permanent retail space managed collectively by members and volunteers (Figure 6). The shop functioned actively not only as a marketplace but also as a community hub. However, the COVID-19 pandemic disrupted the shop's daily traffic and limited interactions between volunteers, producers, and consumers. This period marked a shift, introducing a sense of disconnection within the cooperative and foreshadowing the operational difficulties that would unfold in the following years.

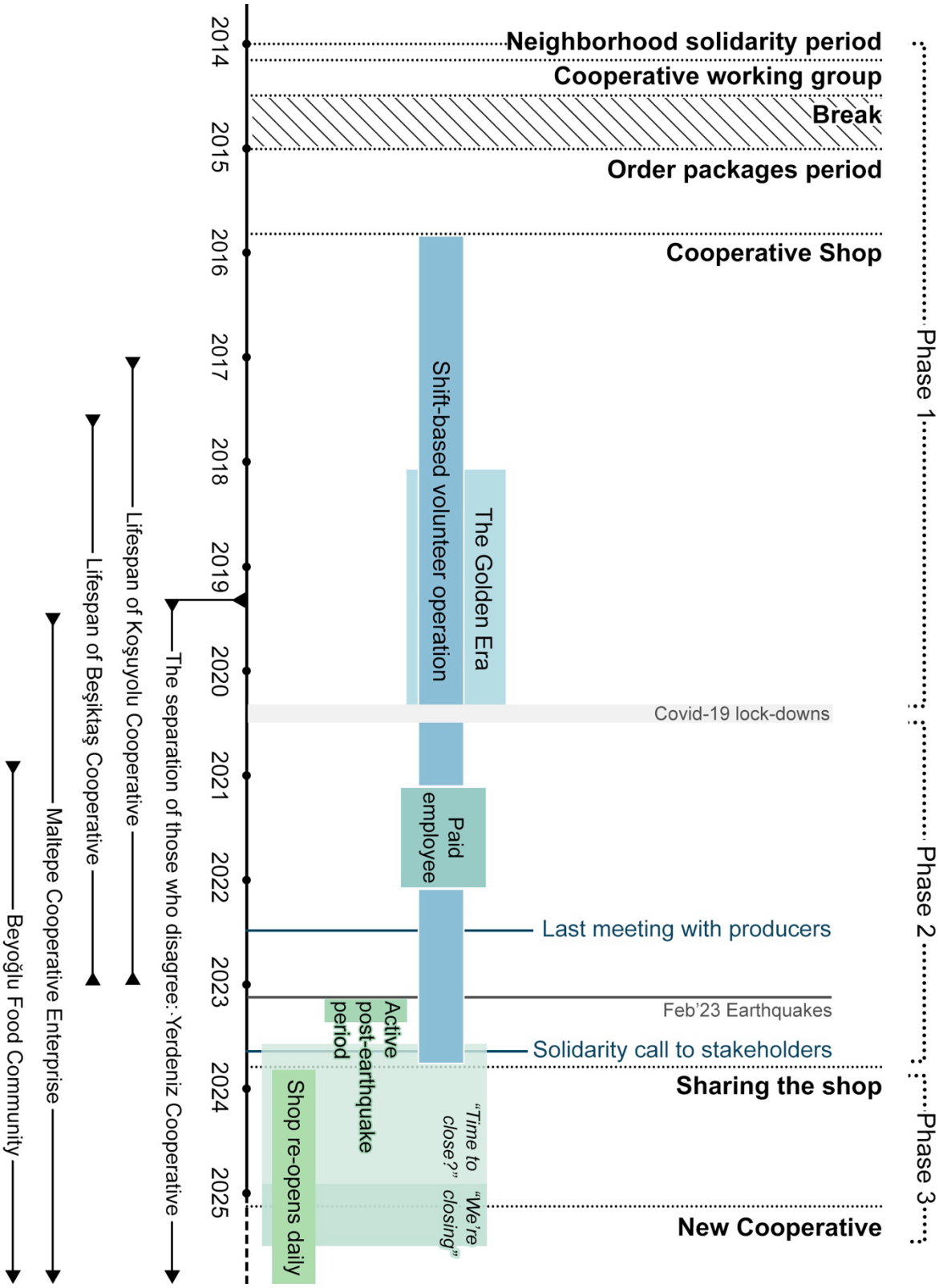

Figure 5. The lifespan of Kadıköy Cooperative reflects its evolutionary stages and the concurrent lifespans of stakeholders.

Figure 6. Fresh produce section from outside and inside the shop at different phases of KC.

- **Phase 2: Challenges & Struggles**

As KC evolved, its focus shifted from upholding founding principles to sustaining daily shop operations. Instead of focusing on food sovereignty and collective action, much of the cooperative's energy was spent managing the logistical and operational demands of the space.

> "Ensuring food sovereignty is the priority. However, the daily management of the shop consumes too much time and energy. We need more members to focus on our core purpose." (P1)

Volunteer shortages and the increasing difficulty of maintaining the rotation system led to temporarily hiring a paid employee for a year to stabilize operations. However, this proved unsustainable, and KC returned to a volunteer-based model, still struggling to maintain regular operations.

KC held its last face-to-face meeting with producers in mid-2022, marking a shift in its direct engagement with suppliers. The community's final active period was in February 2023, when volunteers responded to the Kahramanmaraş Earthquakes, reviving the space as a solidarity center. Facing ongoing difficulties, KC issued a solidarity call, reaching out to producers, cooperatives, and food communities in an attempt to sustain itself.

- **Phase 3: Dissolution & Transformation**

The dissolution and transformation of KC were not distinct phases but rather overlapping processes. Within the cooperative, discussions about its future had become increasingly prominent, with internal conversations often centering around *"Time to close?"* and eventually, *"OK, we're closing."*
Following KC's solidarity call, Zapatista Coffee Collective, whose products had been available in the shop for several years, responded positively. The collective placed a full-time staff member in the shop to serve takeaway coffee while handling the shop's daily operations. It initiated the **Sharing the Shop period**, during which the shop opened daily, leading to a noticeable KC sales increase.

> "When Zapatista stepped in during Nov'2023, the shop started opening daily, and there was an immediate boom. Sales tripled, creating the illusion of saving the cooperative. But it didn't last." (P2)

While this shift ensured the shop's continued operation, it significantly altered the cooperative's dynamics. KC members were no longer required to maintain daily shifts, leading to reduced physical presence and participation.

> "Before, the biggest effort was going to the shop—shifts, stock counting… But after Zapatista, there was always someone on duty. We thought, 'If we don't have to take shifts anymore, we can use our time for activism.' But that never really happened. It felt like KC was no longer ours." (P1)

As KC dissolved, a **New Cooperative** emerged. KC's legal dissolution gradually transferred its space to a new initiative. This new entity, *İkiyaka Cooperative* (IC), continued as a venue for food sales while expanding its scope to takeaway snacks and beverages. They aimed to increase foot traffic in the shop and offer a value-added product by processing the produce they were selling. A key shift was hiring a full-time paid staff member, replacing KC's volunteer rotation.
Additionally, IC partnered with Patronsuz Kurye, a Kadıköy-based bicycle courier collective, to launch a local delivery service. It aligned with shifting urban food consumption patterns, where home delivery food services are increasingly preferred.

Resilience and Challenges in the Key Principles of KC

The principles that shaped KC's operations and community engagement also faced challenges over time. This section examines how these foundational values were maintained, adapted, or strained as KC evolved, highlighting the tensions between its original vision and operational realities.

1. **Direct Collaboration with Small-Scale Producers**

KC committed to directly sourcing from small-scale farmers, cooperatives, and grassroots collectives. Eliminating intermediaries ensured fair pricing and greater transparency, a widely recognized AFN model (Åsebø et al., 2007; Cicatiello, 2020). This direct exchange benefits producers by strengthening financial stability (Giampietri et al., 2016) and improving traceability (Corsi & Novelli, 2016).

However, KC struggled to sustain this model in its later phases. Rising transportation costs and economic fluctuations[1] altered producer-consumer dynamics. Farmers increasingly required immediate payments due to financial precarity, while consumers demanded lower prices amidst inflation. Trust, a key factor in AFN sustainability, began to erode. One interviewee reflected:

> "At first, what excited me was deciding on the product with the producer—asking about their trees, animals, and debts. But now, it feels too good to be true." (P2)

The deterioration of producer-consumer dialogue turned what was once a relationship-based model into a transactional one, reducing its distinctiveness from conventional supply chains.

2. **Mutual Initiative in Production and Consumption**

KC aimed to foster participatory engagement between producers and consumers, enabling joint decision-making on what and how to produce. AFNs are often framed as shifting consumers from passive buyers to active participants in food provisioning (Maxey, 2007). This close engagement enhances food safety (Corsi & Novelli, 2016) and fosters cooperation among local actors (Forssell & Lankoski, 2015).

However, economic constraints weakened this participatory model. While initial interactions were highly collaborative, logistical and financial difficulties made

[1] According to the most recent data from December 2024, Turkey's agricultural input price index increased by 32.49% annually, while the index for goods and services contributing to agricultural investment rose by 44.23% (TÜİK, 2024).

sustained producer-consumer dialogue unfeasible. Fewer in-person meetings and limited in-kind exchanges weakened relationships. The shift in priorities is evident in the interviewee's reflections: *"Co-designing the service with the producer became impossible. The economic reality took over."* (P4) reflecting a broader challenge within AFNs—balancing economic feasibility with mutual initiative.

3. Collective Work and Participatory Decision-Making

KC operated as a collectively managed entity, emphasizing shared decision-making and horizontal governance. These practices align with AFN principles, which stress collaborative practices and shared decision-making, creating more participatory food systems (Holloway et al., 2007; Grasseni, 2014). In its earlier years, KC thrived as a space where volunteers facilitated food distribution and actively shaped its governance and broader political engagement. However, over time, differences in energy and commitment levels between long-standing and newer volunteers became evident.

> "As newcomers, we were excited. We wanted to take more initiative, but it felt like; 'Sure, you can stick around, but it's already too late.'" (P2)

> "Access to clean, fair food was valuable, but that was only part of it. (…) The real loss is the community. The sense of locality, neighborhood, and solidarity is gone." (P3)

Moreover, sustaining the volunteer-driven model became more challenging, as responsibilities were not equally distributed. The cooperative, which had prided itself on resisting exploitative labor structures, could not balance workloads fairly, weakening its core principles. These shifts signal the fragility of informal governance structures when organizational continuity is compromised.

4. Ecological and Social Responsibility

KC prioritized ecological sustainability and social welfare, advocating for local, ethical production and ensuring accessibility to high-quality food. These values align with the broader framework of food sovereignty, which emphasizes local communities' control over their food systems and promotes culturally appropriate, ecologically sustainable agricultural practices (Lugo-Morin, 2020). While KC did not take direct negative actions against these principles, its dissolution created a gap in the neighborhood's access to sustainable food sources.

The cooperative's impact was evident in meetings, where members voiced concerns: *"Where will we get our food in the neighborhood now? We need to do*

something as a community." (P5) It reflects how KC fostered responsibility for sustainable food consumption, encouraging members to seek alternatives. While other principles weakened, ecological and social responsibility remained a core value rather than an operational mechanism.

5. Social Solidarity and Cooperative Networks

KC positioned itself within a larger solidarity-based ecosystem, actively collaborating with other cooperatives, advocacy groups, and grassroots initiatives. Beyond food distribution, it engaged in disaster relief and social justice efforts. Zoll et al. (2018) discussed, community-driven initiatives demonstrate a strong commitment to collective action, mobilizing grassroots movements to achieve common goals and address shared challenges. KC, as a non-profit, reinvested profits into solidarity initiatives. At its peak, it engaged in resource and knowledge-sharing with multiple stakeholders, reinforcing its role within a more extensive solidarity network. One interviewee highlighted its impact:

> "The cooperative's real value was its role in social solidarity. It wasn't just about clean food—it was about supporting other groups. We mobilized during the pandemic and supported stray animals and imprisoned children." (P3)

KC's embeddedness in a broader food network further weakened KC. Yerdeniz Cooperative, established in 2019 by a group of KC members, marked a moment of expansion for the AFN ecosystem but simultaneously drained human resources from KC (see Figure 5). Koşuyolu and Beşiktaş Cooperatives, which had received direct support from KC in their early stages, ceased operations by the end of 2022. It underscores how AFNs are not isolated entities but part of a more extensive network where sustainability depends on mutual reinforcement.

Discussion: Rethinking AFN Dissolution Through a Service Design Lens

This study's findings align with key discussions in service design, particularly in the areas of transformation design, co-production, and iterative adaptation. Rather than viewing AFNs as static alternatives to mainstream food systems, our analysis suggests that they function as adaptive and evolving service platforms, continuously shaped by internal and external effects. The case of KC illustrates that AFN dissolution does not necessarily signify failure but rather a transition, where embedded values and practices may remain through new formations.

Dissolution as a Transformation Process, Not a Failure

The dissolution of AFNs is commonly associated with financial instability, volunteer burnout, or governance failures. However, an alternative perspective views dissolution as a process of adaptation, where key values, relationships, and organizational knowledge are transferred into new configurations (Michel-Villarreal et al., 2019). It aligns with service design principles, emphasizing iteration, co-creation, and the continuous reshaping of service ecosystems (Manzini, 2015; Sangiorgi, 2011).

KC's case exemplifies this adaptive cycle (see Fig.4). Although the cooperative struggled to maintain its volunteer-based model, its food sovereignty and ecological responsibility values continued to shape its successor, IC. IC took steps to sustain the service by introducing a full-time paid employee and expanding sales models. Likewise, KC's producer-consumer relationships and solidarity-based economic model were kept but reconfigured.

The service ecosystem approach (Vargo & Lusch, 2018) helps explain how KC's dissolution contributed to the broader evolution of AFNs rather than their outright disappearance. Closure can be seen as reconfiguring social capital, governance knowledge, and cooperative structures into more adaptable forms (Cerrada-Serra et al., 2018). This adaptation highlights how service organizations are not merely operational entities. They actively contribute to contemporary social capital, fostering trust networks and collaborative practices that persist beyond their formal existence.

Beyond Dissolution: Sustaining AFNs through Service Design

AFNs are often conceptualized as resilient alternatives to industrial food systems, yet their structural fragility is frequently overlooked (Tregear, 2011). A key challenge is ensuring long-term sustainability while maintaining participatory governance (Holloway et al., 2007).

In the late years of KC, the burden of maintaining daily operations overshadowed participatory structures, leading to volunteer fatigue—a common issue in AFNs. Service design provides strategies to address governance and engagement challenges by embedding co-production and co-evolution into organizational models. Applying principles of participatory service design can help implement modular governance structures to distribute engagement based on the availability or skillsets of members (Maffei et al., 2013; Sangiorgi, 2011). AFNs could enhance resilience and sustain community participation by involving multiple levels of engagement, from temporary event-based roles to ongoing governance.

Know-how continuity is essential for AFN resilience. Many cooperatives lack institutional memory due to high volunteer turnover, leading to governance disruptions (Rodriguez, 2020). KC's transition to IC highlights the importance of structured knowledge transfer mechanisms, such as documentation, mentorship programs, and digital knowledge-sharing platforms—approaches commonly used in public service organizations (Manzini, 2015; Sangiorgi, 2011). In its final meetings, KC discussed creating a digital archive of practices, but existing documentation was based on ideal workflows, leaving little guidance for unexpected crises.

It points to a broader challenge in AFNs: while principles and values serve as guiding frameworks, they can also become constraints if they do not allow flexible adaptation. As Uçar (2025) suggests, principles define what can be done and what cannot—without this awareness, they risk becoming unbounded in ways that may undermine the initiative's stability. Designing 'what if' scenarios—where AFN principles are stress-tested against real-world uncertainties—can enhance AFN resilience by helping future initiatives adapt their practices dynamically. As Holmlid (2009) notes, service design is less about fixed solutions than enabling systemic change through participatory processes.

KC exemplifies this dynamic transformation. While KC ceased its formal operations, its governance model, community networks, and participatory practices continued to inform other initiatives. This process reflects the co-production principle (Sangiorgi, 2009), where service users are not passive consumers but active participants in shaping the service ecosystem. KC's evolution demonstrates how dissolution does not necessarily mean the end of an initiative but rather its integration into new service and food provisioning models.

Conclusion

The case of KC illustrates how AFNs do not simply end but transform, demonstrating the service-oriented nature of food networks. Rather than a definitive endpoint, KC's dissolution facilitated the emergence of a new cooperative, underscoring how values, networks, and operational knowledge persist beyond the lifespan of a single organization. This perspective aligns with service design principles emphasizing adaptability, participatory governance, and systemic resilience.

A key insight from this study is that AFN sustainability depends not only on internal governance and financial viability but also on their embeddedness within broader solidarity networks. The fragmentation of interconnected cooperatives, shifting economic conditions, and the increasing difficulty of sustaining volunteer-driven

models highlight systemic fragilities within AFNs. These findings suggest that designing AFNs with built-in mechanisms for knowledge transfer, flexible participation structures, and networked support systems could improve their long-term resilience.

Moreover, KC's trajectory highlights the dynamic and context-dependent nature of AFNs. While cooperative principles serve as guiding frameworks, their application must remain flexible to accommodate changing human resources, political environments, and economic landscapes. Future research should explore how service design tools like modular governance and knowledge-sharing can help AFNs maintain core principles while adapting to new challenges.

Ultimately, AFNs are not static entities but dynamic service models embedded in larger systems of solidarity and resistance. Their longevity depends on internal governance and adaptability. Rather than seeking radical and immediate transformation, systemic change in food networks often emerges through localized, incremental shifts, shaping their evolution through a continuous process of negotiation and adaptation. The case of KC invites a rethinking of AFN sustainability—not as a question of permanence but as an ongoing negotiation of values, structures, and systemic interdependencies.

While this study provides insights into the transformation of AFNs, certain limitations must be acknowledged. Specific to KC, its findings may not be directly transferable to other AFNs as solidarity networks evolve in response to local socio-economic conditions. These context-specific constraints limit the scalability of insights. However, future research could explore how transformation processes observed in one AFN translate across different configurations, offering a broader understanding of resilience and adaptability in AFNs.

References

Åsebø, K., Jervell, A. M., Lieblein, G., Svennerud, M., & Francis, C. (2007). Farmer and Consumer Attitudes at Farmers Markets in Norway. *Journal of Sustainable Agriculture*, *30*(4), 67–93.

Born, B., & Purcell, M. (2006). Avoiding the Local Trap: Scale and Food Systems in Planning Research. *Journal of Planning Education and Research*, *26*(2), 195–207.

Bos, E., & Owen, L. (2016). Virtual reconnection: The online spaces of alternative food networks in England. *Journal of Rural Studies*, *45*, 1–14.

Cerrada-Serra, P., Moragues-Faus, A., Zwart, T. A., Adlerova, B., Ortiz-Miranda, D., & Avermaete, T. (2018). Exploring the contribution of alternative food networks to food security. A comparative analysis. *Food Security*, *10*(6), 1371–1388.

Chenarides, L., Grebitus, C., Lusk, J. L., & Printezis, I. (2021). Food consumption behavior during the COVID-19 pandemic. *Agribusiness*, *37*(1), 44–81.

Cicatiello, C. (2020). Alternative food shoppers and the "quantity dilemma": A study on the determinants of their purchases at alternative markets. *Agricultural and Food Economics*, *8*(1), 15.

Corsi, A., & Novelli, S. (2016, October 27). Alternative Food Networks and short food chains: Estimating the economic value of the participation in solidarity purchasing groups. *Structural Change in Agri-Food Chains: New Relations between Farm Sector, Food Industry and Retail Sector*. EAAE Seminar, Rennes, France.

Dansero, E., & Puttilli, M. (2014). Multiple territorialities of alternative food networks: Six cases from Piedmont, Italy. *Local Environment*, *19*(6), 626–643.

Ericksen, P. J. (2008). Conceptualizing food systems for global environmental change research. *Global Environmental Change*, *18*(1), 234–245.

Feagan, R. (2007). The place of food: Mapping out the 'local' in local food systems. *Progress in Human Geography*, *31*(1), 23–42.

Forssell, S., & Lankoski, L. (2015). The sustainability promise of alternative food networks: An examination through "alternative" characteristics. *Agriculture and Human Values*, *32*(1), 63–75.

Giampietri, E., Koemle, D., Yu, X., & Finco, A. (2016). Consumers' Sense of Farmers' Markets: Tasting Sustainability or Just Purchasing Food? *Sustainability*, *8*(11), 1157.

Goodman, D., & Goodman, M. K. (2009). Food Networks, Alternative. In *International Encyclopedia of Human Geography* (pp. 208–220). Elsevier.

Gori, F., & Castellini, A. (2023). Alternative Food Networks and Short Food Supply Chains: A Systematic Literature Review Based on a Case Study Approach. *Sustainability*, *15*(10), 8140.

Grasseni, C. (2014). Seeds of Trust. Italy's Gruppi di Acquisto Solidale (Solidarity Purchase Groups). *Journal of Political Ecology*, *21*(1).

Holloway, L., Kneafsey, M., Venn, L., Cox, R., Dowler, E., & Tuomainen, H. (2007). Possible Food Economies: a Methodological Framework for Exploring Food Production–Consumption Relationships. Sociologia Ruralis, 47(1), 1–19.

Holmlid, S. (2009). Participative, Co-operative, Emancipatory: From Participatory Design to Service Design, in *Proceedings of the First Nordic Conference on Service Design and Service Innovation*, Oslo, Norway, 105-118.

Ilbery, B., & Maye, D. (2005). Food supply chains and sustainability: Evidence from specialist food producers in the Scottish/English borders. *Land Use Policy*, *22*(4), 331–344.

Jarosz, L. (2008). The city in the country: Growing alternative food networks in Metropolitan areas. *Journal of rural studies, 24*(3), 231-244.

Kadıköy Belediyesi. (2019). *Kadıköy Şehir Sağlık Profili 2019* [Kadıköy City Health Profile 2019]. Kadıköy Belediyesi Strateji Geliştirme Müdürlüğü. Retrieved from http://www.skb.gov.tr/wp-content/uploads/2020/01/Kadikoy-Belediyesi-Sehir-Saglik-Profili.pdf

Kadıköy Cooperative Education and Research Unit. (March 2017). *Kadıköy Kooperatifi El Kitapçığı* [Kadıköy Cooperative Handbook].

Lugo-Morin, D. R. (2020). Indigenous communities and their food systems: A contribution to the current debate. *Journal of Ethnic Foods, 7*(1), 6.

Lutz, J., & Schachinger, J. (2013). Do Local Food Networks Foster Socio-Ecological Transitions towards Food Sovereignty? Learning from Real Place Experiences. *Sustainability*, *5*(11), 4778–4796.

Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation.* MIT Press.

Maffei, S., Villari, B., & Foglieni, F. (2013). Embedding design capacity in public organizations: Evaluation by design for public service. *Swedish Design Research Journal, 9,* 41–47.

Maye, D., Holloway, L., & Kneafsey, M. (Eds.). (2007). *Alternative Food Geographies: Representation and Practice* (First). Elsevier.

Maxey, L. (2007). From 'Alternative' to 'Sustainable' Food. In D. Maye, L. Holloway & M. Kneafsey (Eds.), *Alternative Food Geographies* (pp. 55-75). Elsevier.

Michel-Villarreal, R., Hingley, M., Canavari, M., & Bregoli, I. (2019). Sustainability in Alternative Food Networks: A Systematic Literature Review. *Sustainability*, *11*(3), 859.

Nizam, D. (2021). *Yeni nesil kooperatifler: topluluk, aidiyet ve yer-temellilik* [New generation cooperatives: community, belonging and place-basedness]. Oğlak.

Renting, H., Marsden, T. K., & Banks, J. (2003). Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A: Economy and Space*, *35*(3), 393–411.

Renting, H., Schermer, M., & Rossi, A. (2012). Building Food Democracy: Exploring Civic Food Networks and Newly Emerging Forms of Food Citizenship. *Int. Jrnl. of Soc. of Agr. & Food*, *19*(3), 289–307.

Rodriguez, P. A. G. (2020). *Sustainability values in Alternative Food Networks: The case of Box Schemes and CSAs* [PhD]. Coventry University.

Rossi, A. (2017). Beyond Food Provisioning: The Transformative Potential of Grassroots Innovation around Food. *Agriculture*, *7*(1), 6.

Sangiorgi, D. (2009, April). Building up a framework for Service Design research. In *8th European Academy of Design conference* (pp. 415-420).

Sangiorgi, D. (2011). Transformative Services and Transformation Design. *International Journal of Design, 5*(2), 29–40.

Soysal Al, İ. (2020). The Promising Momentum and Collective Practices of the Recently Expanding Network of Consumer-Led Ecological Food Initiatives in Turkey. *İstanbul Üniversitesi Sosyoloji Dergisi*.

Soysal Al, İ. (2024). Yeni Nesil Kooperatiflerin Alternatif Kamusal Alan Açma ve Gıda Egemenliği İdeallerinin Kesişiminde Son Yıllardaki Seyri: Kadıköy Kooperatifi Örneği. *Alternatif Politika*, *16*(3), 504-539.

Şahin, Ç. E. (2019). Türkiye Tarımının Güncel Sorunlarının Çözümünde Kooperatifler Bir Model Olabilir mi? Fırsatlar ve Handikaplar Üzerine Düşünceler [Can Cooperatives Be a Model for Solving Current Problems of Turkish Agriculture? Thoughts on Opportunities and Handicaps]. In F.S. Öngel & U.D. Yıldırım (Eds.), *Krize Karşı Kooperatifler: Deneyimler, Tartışmalar, Alternatifler* [Cooperatives Against the Crisis: Experiences, Discussions, Alternatives] (2nd ed., pp. 79-115). Notabene.

Thorsøe, M., & Kjeldsen, C. (2016). The Constitution of Trust: Function, Configuration and Generation of Trust in Alternative Food Networks. *Sociologia Ruralis, 56*(2), 157–175.

Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies*, *27*(4), 419–430.

TÜİK. (2024). *Tarımsal Girdi Fiyat Endeksi, Aralık 2024* [Agricultural Input Price Index, December 2024]. Retrieved February 10, 2025, from https://data.tuik.gov.tr/Bulten/Index?p=Tarimsal-Girdi-Fiyat-Endeksi-Aralik-2024-53474

Uçar, A. (2025). *Kooperatifler neden batar? Türkiye'de tarımsal kalkınma kooperatiflerinde kör alanlar ve başarısızlıkla ilişkisi* [Why do cooperatives fail? Blind spots in agricultural development cooperatives in Turkey and their relationship to failure] (Unpublished master's thesis). Akdeniz University.

Vargo, S., & Lusch, R. (2018). *The Handbook of Service-Dominant Logic*. London: SAGE Publications.

Wald, N., & *Hill, D. P. (2016). 'Rescaling' alternative food systems: From food security to food sovereignty. Agriculture and Human Values, 33*(1), 203–213.

Yin, R. K. (2009). *Case study research: Design and methods* (5th Ed.). Sage.

Zoll, F., Specht, K., Opitz, I., Siebert, R., Piorr, A., & Zasada, I. (2018). Individual choice or collective action? Exploring consumer motives for participating in alternative food networks. *International Journal of Consumer Studies, 42*(1), 101–110.