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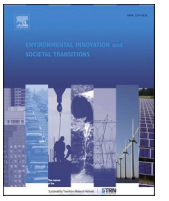

Research article

Transitions in South Korean public food procurement policy: Landscape context, institutionalization, and local agents

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ABSTRACT

The main objective of transformative food actions is to effect fundamental changes in the institutional structures that shape current food practices. For those actions to gain constant momentum, it is necessary to understand the types of operations and the mechanisms through which they can permanently impact conventional food systems. To provide an empirical operationalization of the Multi-level Perspective, a prominent framework in the sustainability transition literature, this study examines the decades-long evolution of South Korea's public food procurement policy. Policy paradigm shifts in South Korea describe transitional processes in which accumulated dynamics between local actors and the incumbent regime achieve a tipping point at the juncture of niche movements, landscape pressure, and institutionalization. This paper argues that niche and regime are not inherently confrontational, as is frequently assumed in the broader literature, by highlighting the fact that niche innovations can continuously inform adaptations and additional shifts in policy paradigm.

1. Introduction

Concerns regarding climate change and the vulnerabilities in food supply chains caused by profit-driven industrial agriculture have led to a global consensus on the need for food system transformation, both in research and practice (Bezner-Kerr et al., 2011; Horrigan et al., 2002; Houser and Stuart, 2020). Transformative actions aim to fundamentally alter institutional structures currently promoting neoliberal and corporate-concentrated trends in food practices across production, processing, distribution, consumption, and waste disposal. Understanding the mechanisms and types of operations required to permanently impact conventional food systems is necessary for gaining momentum in these actions. This study draws on the sustainability transitions literature, recognized as a promising framework for identifying transitions from unsustainable to sustainable practices, to reconstruct a historical narrative of transformative initiatives in South Korea (hereafter Korea)'s public food procurement since the early 1990s.

The literature on sustainability transitions is a developing field that explores the intricate and long-term socio-technical processes involved in moving towards a sustainable society (Grin et al., 2010). These transitions involve shifts or "system innovations" in socio-technical configurations (Coenen et al., 2012), leading to multidimensional and fundamental transformation processes that shift established socio-technical systems towards more sustainable modes of production and consumption (Markard et al., 2012). Various stakeholders, including firms, industries, policymakers, politicians, consumers, civil society, engineers, and researchers, play a vital role in these transitions by reproducing, maintaining, and modifying transition-related components (Geels, 2011). The multi-level

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perspective (MLP) is a theoretical framework that conceptualizes and promotes such sustainability transitions by emphasizing the role of three analytical levels (*niche, regime, and landscape*) in generating systemic change through interacting processes (Geels, 2005; Grin et al., 2010). While effective for explaining structural dynamics leading to social transformations, some scholars argue that the MLP overlooks the role of agents and the state, the pre- and post-development process of niche innovations, and the spatial dimension of transition mechanisms (Coenen et al., 2012; Genus and Coles, 2008; Johnstone and Newell, 2018; Sarabia et al., 2021; Smith et al., 2005; Smith and Raven, 2012). This paper responds to these criticisms by illustrating the transitions in Korean public food procurement policy, with a focus on the nexus of landscape-level factors, institutions, and niche movements. The Korean case demonstrates the ongoing governance dynamics between grassroots activism and the existing policy, as well as the institutionalization processes that continuously inform adaptations and additional shifts in policy paradigm.

Given that agrifood systems are enmeshed in dynamic ecological, economic, and social processes and are influenced by external pressures, a theoretical framework for sustainability transitions can provide future visions and offer insights into effectual components and pathways of social change that are crucial for transforming food systems (Thompson and Scoones, 2009). Although sustainability transitions scholarship has not adequately addressed agrifood systems yet (el Bilali, 2019), this study fills this gap by operationalizing the MLP through the lens of food systems using Korea's public food procurement programs as a case. Public food procurement has gained increasing attention as a transformative tool to re-embed and re-localize regional food systems (Morgan and Morley, 2002; Morgan and Sonnino, 2013) due to its purchase power and innovative policy tools. Public food procurement programs in Korea have evolved through four phases: a) contracting out school food canteens to private companies (witak geubsik), b) self-operating school food canteens (jik-yeong geubsik), c) the Universal, Free, Eco-friendly school lunch program (UFEF), and d) the Urban-rural Coexistence Public Meal Program (UCPM). The trajectory of these paradigm shifts demonstrates the ability of niche movements to influence mainstream food policy and establish economically and environmentally viable regional food systems. Public procurement programs also provide a clear example of the state's role in transformative food actions, as they necessitate government involvement in expanding sustainable food chains through public entities acting as anchor institutions.

The long-term, evolutionary paths of socio-technical change provide insight into the nature of structure and agency (Coenen et al., 2012). The food policy transitions in Korea can be categorized into four stages: a) strong government regulation during the dictatorship prior to the 1980s, b) burgeoning grassroots movements in the 1990s opposing the expansion of free trade agreements and global food corporations (the school food movement, the local food movement '*shintoburi*'), c) implementation of innovative food policies since the 2010s resulting from bottom-up actions (Universal, Free, Eco-friendly school lunch program: UFEF, urban agriculture, local food plans), and d) a current experimenting phase of food politics in which cooperation and co-optation coexist in public-led food planning (Urban-rural Coexistence Public Meal program: UCPM, launched in 2017 as an expansion of the UFEF into other public institutions). This study focuses on periods since the early 1990s when bottom-up grassroots movements gained visibility and influence as Korean society democratized.

While a few studies have used the MLP to explore the potential of public food procurement to effect change in conventional food systems (Gaddis and Jeon, 2020; Stahlbrand, 2016), there is a dearth of knowledge on the long-term, adaptive aspect of public food procurement policy innovations in the context-specific setting. This study aims to answer three theory-grounded questions: 1) how does a grassroots innovation enable a policy paradigm shift and sustain its impacts? 2) what role does the government play in transition dynamics as a regime-level actor (support or suppression)? and 3) how can a spatial perspective – urban-rural linkage enhanced by public food procurement – be incorporated into an analysis using the MLP? A close analysis of Korean public food procurement programs reveals a possible pathway in which accumulated dynamics between grassroots actors and the existing institutional practices produce a paradigm shift in public policy at the juncture of external economic and political forces, bottom-up movements, and policy response. Ultimately, this study argues that niche- and regime-level initiatives are not intrinsically antagonistic, as is frequently assumed in the broader literature, and suggests that the focus should be on the capacity of niche-innovations that consistently adapt to and push for policy innovations.

This paper begins by outlining the theoretical background of this study, highlighting key characteristics of the MLP as a heuristic framework for elucidating sustainability transitions. Following the methodology section, the paper examines three distinct phases of Korea's public food procurement initiatives centered on school food policy since the 1990s: contracted-out school food programs (*witak geubsik*), directly-run school food canteens (*jik-yeong geubsik*), and the Universal, Free, Eco-friendly school lunch program (UFEF). The paper then shows innovative elements of the Seoul Food Masterplan 2020 as an umbrella policy of the Urban-rural Coexistence Public Meal Service program (UCPM), which emerged as an expanded version of the UFEF to reinvigorate local food economies and urban-rural linkages. Finally, this paper discusses the theoretical implications of this study and suggests policy recommendations for ongoing transformative food projects.

2. Theoretical background

2.1. Multilevel perspective: a heuristic framework for sustainability transitions

Sustainability transition scholarship emerged in the early 2000s in response to environmental challenges which require long-term systemic transformation for resolution (Geels, 2010). One perspective on sustainability transitions emphasizes socio-technical transformations that involve both technological breakthroughs and societal changes (Geels, 2004, 2010). The MLP framework is widely used in the literature on socio-technical transformations to illustrate the multidimensional nature of complex transitions (Geels, 2002, 2011; Smith et al., 2010). As a middle-range theory that bridges the divide between grand theory and abstracted empiricism (Geels, 2010, 2011), the MLP views transitions as non-linear processes of interactions at three analytical levels, each of

which is functionally distinct: *niches* (the micro level locus for radical innovations), socio-technical *regimes* (the locked-in and stabilized structure at the *meso* level), and a socio-technical *landscape* (the macro level exogenous context imposing externalities on the other two levels) (Grin et al., 2010; Rip and Kemp, 1998). A socio-technical regime is an established system with a 'deep structure' that stabilizes the existing system through semi-coherent rules governing and coordinating the activities of social groups by reproducing elements within the system (Geels, 2011; Holtz et al., 2008). These regime rules, such as policies and institutional practices, demonstrate the "duality of structure" by functioning as both a medium and a result of action (Geels, 2011). The socio-technical landscape, which remains constant, changes incrementally or generates rapid external shocks, comprises exogenous events and trends, such as demographic changes, macroeconomic trends, political developments, wars and crises, deep cultural and societal values, and climate change (el Bilali, 2019; Lachman, 2013; van Driel and Schot, 2005). Changes at the landscape level can create chances for niche activities to develop or exert pressure on regimes to change (Geels, 2011; Smith et al., 2010).

Although there is a tension between two perspectives on transitions – an open-ended process as a societal phenomenon versus a normative direction to accomplish (Schäpke, 2018), – transitions are generally defined in the MLP as regime shifts from one socio-technical system to another. The dialectic interactions between niche, regime, and landscape produce transitions, underscoring the importance of aligning processes at the three levels (Geels, 2011; Grin et al., 2010). Geels and Schot (2007) proposed different types of transition pathways based on the competitive or symbiotic nature of multi-level interactions: 1) transformation (a moderate landscape pressure when niche-innovations are not fully developed yet, which compels regime actors to alter the direction of developments), 2) de-alignment and re-alignment (a divergent, large, and abrupt change at the landscape level when niche-innovations are not fully developed yet, which results in the dismantling of the existing regime, the coexistence of multiple niche-innovations, and the (re)construction of a new regime), 3) technological substitution (significant landscape pressure when niche-innovations are adequately developed, which enables a niche-innovation to break through and replace the incumbent regime), and 4) reconfiguration (symbiotic innovations develop in niche, permeate into the regime, and trigger further adjustment in the regime). This typology represents a specific view on transition pathways within the MLP framework, highlighting the presence and critical roles of agency.

Some scholars argue that the typology presented oversimplifies certain aspects of niche innovations, including their diversity in organizational forms and strategies (Audet et al., 2017). Transitions do not always follow a single path but may occur as a series of paths in a pluralistic pattern where multiple pathways unfold concurrently (Geels and Schot, 2007; Vlahos et al., 2017). Furthermore, the view of transitions as regime shifts has been criticized for its analytical and empirical shortcomings, as it neglects the consideration of transition outcomes (Pitt and Jones, 2016) and "what looks like a regime shift at one level may be viewed merely as an incremental change in inputs for a wider regime at another level" (Geels and Schot, 2007, p. 400). To avoid confusion regarding analytical levels, this study views food procurement policy and relevant institutions as components of the mainstream food regime, suggesting that a policy shift does not necessarily entail a holistic change in the regime. Instead, this study focuses on interactions between niche and regime components, as well as the long-term implications of policy paradigm shifts that could signal a regime transition. An analysis of governance dynamics underpinning those paradigm shifts can offer empirical information on the roles of agency and the nature of niche-regime interactions towards a sustainability transition.

2.2. Niche, regime, and landscape in the food systems literature

A sustainability transition approach provides a framework to understand alternative food initiatives within the context of a shift towards more sustainable food practices. One of the few studies that applies the MLP lens to food systems is by El Bilali (2019), who documents how the MLP is conceptualized and operationalized in the literature on agrifood systems. The *niche* indicates a network of food systems actors who collaborate to develop alternative rules and practices (Bui et al., 2016), including organic agriculture, agroecology, urban agriculture, community-supported agriculture, farm-to-table, fair trade, and local food movements (el Bilali, 2019; Konefal et al., 2019; Marsden, 2013). A perspective on food as commons, such as public food procurement, tends to be associated with those who challenge dominant power structures, regardless of where they position themselves within the transition process. It is important to consider the originality of niche innovations in relation to the incumbent regime, however, as not all alternative food initiatives are reformist or transformative (Sutherland et al., 2014; Vivero-Pol, 2017). El Bilali (2019) also underscores the importance of internal niche dynamics, particularly 'niches-in-the-making (niche formation and development),' to understand how a niche becomes robust and mature enough to scale up and out.

Regimes in agrifood systems are only vaguely defined and articulated (Holtz et al., 2008), with the intensive, conventional, industrial agro-food sector and its related laws and practices being the dominant regime (El Bilali, 2019). Three decades ago, Friedmann and McMichael (1989) coined the concept of a "food regime" to describe the implicit rules governing agro-food relations that are based on international and geopolitical terms as well as the world food economy. Regimes in food systems include business codes, regulations, food safety laws, existing business network, logistics transport and infrastructure (Hinrichs, 2014), as well as "key government actors and their associated institutional structures in the agricultural sector, the political discourse on agricultural development, dominant agricultural practices, and the associated pattern of ecosystem services and human well-being" (Järnberg et al., 2018, p. 412). However, there has been a lack of holistic understanding of the relationships between production and consumption within food systems cycles, as much research on food systems transformation has concentrated exclusively on a single component (either production or consumption) of the food supply chain (el Bilali, 2019).

The landscape has also been largely overlooked in MLP-based food system studies. External trends and exogenous factors at the landscape, such as globalization, agrifood market internationalization, population growth, global financial crisis, changes in diets and lifestyles, (neo)liberalization, international treaties and conventions, and climate change, can exert pressure on the regime, generate opportunities for niche innovations to triumph, or protect niches from the incumbent regime (El Bilali, 2019; Geels, 2011; Smith et al.,

2010). Still, these factors do not necessarily favor niches, which could result in the destabilization and de-alignment of regimes. Thus, it is necessary to examine the landscape's stabilizing effects on regimes and how regime reconfiguration brings about landscape alternations (Geels, 2011).

2.3. Niche-regime interactions: anchoring, bricolage, and hybrid actors

The tension and dynamics between growing niches and stabilized regimes imply the possibility of system reconfiguration resulting from the emergence of new niches and regime instabilities (Geels, 2002; Geels and Schot, 2007). The relationship between niches and regimes concerns how niche- and regime-actors interact, negotiate, and bridge, as they consist of groups and networks of actors adhering to specific rules and practices (el Bilali, 2019). To better articulate the conceptual middle ground between niches and regimes, Rotmans and Loorbach (2010) propose an additional analytical level, *niche-regime*, where innovations at the niche level are sufficiently empowered and matured to threaten the incumbent regime. The niche-regime level helps illustrate micro-politics and interactions between niche and regime initiatives, especially when there is a lack of explanation about the comprehensive context of niche development and the role of actors in triggering, initiating, and accelerating transitions. As the linking process between niches and regimes has mostly been regarded as haphazard and coincidental (Geels, 2002; Smith, 2007), local and regional players, as well as dynamics between institutions operating at various territorial scales and system levels, require further attention (Sarabia et al., 2021).

Elzen et al. (2012) defined "anchoring" mechanisms as an emerging form of linking between a niche and a regime that creates a durable niche-regime linkage. Niches can anchor to regimes in three different forms: 1) technological linking (promoting new technical systems), 2) network anchoring (creating and expanding new networks and social groups), and 3) institutional anchoring (establishing new rules or institutions). "Bricolage" is a comparable idea to anchoring in that it allows for the integration of disparate components and collaboration among actors in the evolutionary and incremental transition process (Garud and Karnøe, 2003). Emphasizing the roles of certain actors playing in both niche and regime within this linking process, Sutherland et al. (2014) framed them as "hybrid actors" involved in the multiple levels of the agrifood system. This study highlights the roles that these hybrid actors (e.g., grassroots activists employed by the government as government officials) play within the anchoring process through networking and institutionalization. The concepts of anchoring, bricolage, and hybrid actors all suggest that transitions from niches do not occur through a unilateral, bottom-up process, but rather through mutual interactions where niches and regimes are not inherently competitive or confronting, as seen in this study.

Despite the significance of anchoring in understanding transition dynamics, little attention has been paid to the process of institutionalizing niche innovations (Smith et al., 2010), as part of the niche-regime linking process. Smith and Raven (2012) pointed out the lack of political narrative in transition process, while a niche-focused perspective can bridge gaps between innovative activities and the political sphere (Seyfang and Smith, 2007). Furthermore, Pitt and Jones (2016) analyzed the processes of scaling up and out as a form of policy transfer and argued that many scholars overlooked transition outcomes, leaving the question of why scaling is desirable and what should be scaled (e.g., actors, programs, or outcomes) unanswered. Therefore, this study addresses two overarching questions: 1) what short- and long-term outcomes of niche innovations can be achieved through institutionalization and policy innovation, and 2) what roles niche- (e.g., grassroots organizations and activists) and regime- (e.g., governmental bodies, government officials) actors play at multiple territorial levels (local, regional, and national) in leading a sustainability transition.

3. Method

Transitions are complex processes involving long-term structural changes that require a rich contextual understanding to be fully comprehended (Grin et al., 2010). This study employs the MLP framework to provide a theory-grounded case study of the public food procurement programs in Korea, with the aim of making contributions to the sustainability transition literature. The study examines the transitional history of Korean public food policy, specifically the evolution from national-level school food service to the most recent municipal-level public food procurement. This transition provides insight into the pathways that grassroots initiatives can take to achieve transformative outcomes. The study uses the dynamics of the alternative food movements and the incumbent regime in Korea over the past few decades as an example of niche-regime interactions where micropolitics occur between local agents and institutions under landscape pressures.

This paper consists of two parts: the first section presents the transitional history of school food policy in Korea from the 1950s to the 2010s, while the second section examines recent transformative efforts in municipal-level public food procurement. The evolution of school food policy in Korea was documented through an analysis of various sources, including archival data (primarily on national food policy prior to the 1990s, available at The Archives of Korean History, National Institute of Korean History, and National Archives of Korea), national and municipal government documents (including press releases, blueprints, white papers, and policy evaluation reports), press materials (such as newspapers and news clips), secondary literature (published journal papers and books), and national and local regulations accessible via the Korean Law Information Center. In-depth semi-structured interviews ($N = 32$) and site visits were conducted to investigate the development and implementation of the Seoul Food Master Plan 2020 (SFMP 2020) and the Urban-rural Coexistence Public Meal Service Program (UCPM). Interviewees include government officials ($N = 12$), staff members at district-level public meal centers and rural food hubs ($N = 12$), rural farmers ($N = 2$), urban consumers using the UCPM ($N = 3$), and scholars who participated in the design of the SFMP and the UCPM ($N = 3$). Some of the interviewees were recruited using snowball sampling from the initial interviewees. During interviews, it was discovered that many UCPM stakeholders had previously been involved in local or national school food movements. Additional data on school food movements was gathered by asking questions about the context of school food movements and how each interviewee's experience led to their current position in the UCPM governance.

The qualitative data collected was analyzed using the Dedoose software program and reconstructed according to specified school food program periods. This procedure helped establish a more cohesive historical narrative of the transitional routes in Korean public food procurement over decades. Document analysis and key informants were used to verify the information gathered through semi-structured interviews. The intermediate result of data analysis on the history and context of school food movements was corroborated by key informants with prior experience in the field through cross-checking. The ongoing nature of Korean school food movements allowed for triangulation of collected data, enabling the study to look into the past through current voices.

4. Findings

4.1. The evolution of school food policy in South Korea

4.1.1. Outsourcing school food: a neoliberal reflection of school meal programs

School food programs have been at the center of public food procurement strategies in Korea for decades (Table 1). The post-war era of the 1950s saw the advent of Korean public school food service, where foreign aid from countries and international organizations provided milk powder, wheat flour, and corn flour to provide free school lunches. During this post-war period, the United States provided a significant amount of food aid to foreign countries, including Korea, through the Food for Peace program (PL480). This aid was part of the US government's plan to distribute domestic agricultural surpluses to politically important countries (Friedman and McMichael, 1989; Müller, 2014). The influx of food commodities and agricultural inputs from the PL480 made Korea's food system more dependent on the American food regime. Free lunches for elementary school students (primarily milk and bread), funded by foreign aid, persisted up until the early 1970s, when the government started charging parents for school meals and scaled back social welfare initiatives as external food aid assistance came to an end. A food poisoning outbreak that caused a death in 1977 eventually led to the temporary termination of the public lunch program (Kang, 2011; Gaddis and Jeon, 2020), putting individual parents in charge of acquiring their children's daily school meals.

The first National Act on School Meals, enacted in 1981, shifted the focus of public school meal service from social relief work to providing nutritious food to support the physical and mental growth of school-age children. This act granted national and local governments the authority to subsidize school meals, though the majority of expenses still fell on parents and individual schools. The act laid the foundation for Korean-style school meals, which typically comprise rice, soup, and side dishes. Institutional efforts to enhance public school food services, however, yielded only marginal outcomes until the 1990s. This was when the need to revamp the school food program became urgent, as more women joined the workforce, and public concern about undernourished children grew in tandem with the rapid economic development of the 1980s (Yoon, 2014). The fifth revision of the National School Meals Act, passed in 1996, introduced *Witak Geubsik* in response to the rising demand for state support of school food services. The *Witak Geubsik* system contracts with commercial entities, including major food conglomerates, to handle the procurement and preparation of school meals. Song (2018) attributes the emergence of top-down *Witak Geubsik* to neoliberal trends in Korean public policy in the late 1980s, which enabled food corporations to penetrate the niche market of institutional food service.

Like many other countries, Korea faced pressure from the rise of free trade and the globalization of agricultural markets in the 1990s. Opposition to neoliberalization and globalization of agri-food systems (e.g., the General Agreement on Tariffs and Trade and the World Trade Organization) and their adverse impacts on domestic agri-food systems was a common theme among alternative food movement organizations. The democratization of Korea in the late 1980s allowed civic organizations to voice their opinions publicly. With the establishment of the first civilian administration at the start of the 1990s, the national government delegated much of its authority, including the capacity to set budgets and manage finances, to self-governing local governments. With the decentralization of power and the expansion of civil society, a variety of grassroots initiatives, such as organic agriculture and food cooperatives, which were two major food systems movements in the 1990s, had the potential to take off. Organic agriculture, as part of a larger peasant movement, led political moves to urge policy support to subsidize small- and mid-sized domestic farmers competing with the growing global corporate food system. On the other hand, food cooperatives focused on building direct-sale networks between farmers and customers by establishing self-owned short supply chains and protecting quotas for agrifoods supplied from specific rural communities. These types of alternative food initiatives aimed to protect local agriculture and farmers in response to changes in the domestic political landscape and the global food market. However, it was not until the latter half of the 2000s that schools became an integral part of local food movements.

4.1.2. The rise of school food movements and direct-run school food canteens

The *Witak Geubsik* system was implemented to reduce the financial burden of providing public school meals by outsourcing the service (Yoon, 2014). Yet, this move subjected the service to corporate food systems prioritizing profit over quality and safety, leading to incidents of food poisoning and administrative corruption. Consequently, nationwide school food movements emerged in the 2000s, spearheaded by grassroots activists[1] and concerned parents who shared common goals with the existing peasant movement of protecting the local food system and supporting small-scale farmers. Despite the diverse range of organizations and regions involved, these movements formed "bricolage" coalitions at the national level to navigate complex laws and administrative bodies, and to pressure the government to reform shool food systems (Jeong, 2007). The Nationwide School Lunch Network, one of the major grassroots

[1] Local farmers groups in Ganghwa-Gun were the first to call for public assistance to improve the quality of school meals (Jeong, 2007).

Table 1
Evolution of school food policy in Korea since 1980s.

Program	Free lunches with foreign food aid	Witak Geubsik	Jik-yeong Geubsik	Universally Free, Eco-friendly School Meals
Timeframe	1950s – 1970s	1996	2006	2011~
Relevant law	PL 480 (UDAID)	Fifth revision of National School Meals Act	Reformed National School Meals Act	Local-level ordinances (No national law)
Alternative food movements	–	Organic agriculture (part of larger peasant movements), food cooperatives	School food movements (in solidarity with peasant movements)	School food movements, local food movements

organizations committed to improving public school food service, advocated for school meal service that "a) is school-managed, b) is available free to all students, and c) uses organically grown local foods" (Kang, 2011, p.125). One interviewee who was a member of a civic organization that spearheaded a national push to establish local legislation on school meals described the essence of the grassroots school food movement:

"School food movements are the archetype of civic movements. School food movements sought to develop a new policy from the ground up, in contrast to earlier civic movements that mainly intended to control top-down policies, comply with them, or offer support. … We were concerned about the source of school meals, which we connected to fundamental problems in the domestic agrifood system, while the government was concentrating on food safety and nutrition." (Interviewee 3)

In 2003, Naju County adopted the first local legislation mandating the purchase of domestic agricultural products for school lunches. By providing financial incentives for local food procurement, Naju's school food ordinance aimed to promote the consumption of domestic agrifoods and improve children's nutrition and health (The ChoongAng, 2003). The county's efforts, however, were thwarted by the province and national governments, which claimed that the local ordinance violated WTO regulations by preferring domestically produced food over imported food, potentially causing a trade dispute (Gwon, 2003). Following court battles, it was suggested that local ordinances intending to encourage the consumption of locally sourced food use the term "good agricultural products" rather than "domestic product."

Beyond Naju County, other school systems continued to rely on *Witak Geubsik*. However, due to the inadequate allocation of funds, only a small percentage of the budget was reserved for food purchases, with the remaining funds being diverted towards operational and human resource expenses. As a result, the quality of the meals provided by contracted private companies dwindled, leading to a rise in food poisoning incidents. Furthermore, the cooks and dietitians hired by these private firms were predominantly part-time workers with unstable employment, which made it difficult for them to address management-related concerns. In light of these issues, a school food worker emphasized the necessity of introducing directly run school meal services and highlighted the shortcomings of *Witak Geubsik.* The worker expressed a desire for a new approach, currently being considered and referred to as *Jik-yeong Geubsik:*

"The Office of Education can directly engage school nutritionists and schools to make the best use of the funds for food procurement through the direct-run school meal service (*Jik-yeong Geubsik*). School meal service should be monitored by students and external organizations. Food procurement should be handled by a single party, and direct transactions with farmers would be ideal. Female kitchen staff and dietitians should be directly employed and appropriately compensated by schools." (Kim, 2006)

The *Jik-yeong Geubsik* system, which was implemented through the reformed 2006 School Meals Act in Korea, places the school principal in charge of planning and executing school meal services. The responsibility of selecting, purchasing, and inspecting food items cannot be delegated to a third party under this new system. The reformed national act also clearly outlines the responsibilities of the national and local governments in providing operational and financial support for school food programs. For instance, governments may support food expenses for the use of "agricultural products of excellence quality," while the founder or operator of the school and parents bear the financial responsibility for expenses in principle.

At this point in Korea's national school food history, the national school food policy had undergone a significant shift to emphasize the expanding role of the government in response to bottom-up school food actions and changing social demands. This shift was made possible through the coordinated national-level measures taken by grassroots organizations to institutionalize their demands and put reforms in place for school lunch programs. By addressing the general issue of food safety for children and upholding solidarity with the peasant movement, school food movements were able to mobilize resources and generate momentum for scaling up local food procurement. This, in turn, helped position their agendas in the broader context of local food systems.

4.1.3. Local adoption of universal, free, eco-friendly school food program

School food movements have achieved 1) the incremental introduction of free school meals, 2) the use of domestic agrifoods, 3) a shift from *Witak* to *Jik-yeong Geubsik*, 4) improved nutrition of school meals, and 5) greater transparency of school food service information (Jeong, 2007). More than 95% of schools successfully transitioned to *Jik-yeong Geubsik* within a few years of the reformed enactment in 2006, leading to an increase in efforts to make school meals accessible to all, healthier, and eco-friendly. In 2001, Gwacheon City launched the first universally free school meal program for elementary school students at the municipal level, and two years later, Naju County passed the first local ordinance mandating government support for the use of environment-friendly local produce. In 2010, Jeongseon County introduced the first universally free *and* eco-friendly school meals for all students across kindergarten to high schools.

Years of grassroots school food activism led to a substantial political realignment of school food discourse in the beginning of the 2010s, with progressive candidates linking the idea of universal welfare to school food winning the majority of local elections. The expansion of universally free, eco-friendly school food programs was backed by these politicians and superintendents of education at

the provincial and municipal levels.[2] Since then, numerous municipalities have updated their school meals programs by enacting local ordinances and establishing relevant plans. According to the Ministry of Education, as of March 2020, 97.4% of the students in elementary, middle, high, and special-education schools in Korea received free school meals (but not necessarily using eco-friendly ingredients, with the lack of data on accurate percentage of universally free *and* eco-friendly school meal programs).

Seoul has the most notable track record among these municipalities for implementing its universal, free, and eco-friendly school food program (UFEF) at the city level. Since Seongbuk District, one of Seoul's 23 subdistricts, started its district-level UFEF in 2010 by subsidizing the entire cost of school meals, Seoul's UFEF has been fully adopted across all levels of schools as of 2021. The city government views school food as a fundamental human right connected to the right to education and now provides every student with free public education and eco-friendly school meals from elementary to high schools. The UFEF in Seoul expanded in three phases: Phase 1 in 2011 partially implemented the program in elementary schools, Phase 2 from 2012 to 2014 expanded it from elementary to middle schools, and Phase 3 from 2019 to 2021 incorporated high schools (Seoul Metropolitan Government, 2021). To operate the UFEF at the district level, the Seoul Metropolitan Office of Education, Seoul Metropolitan Government, and district-level local governments each contribute 50%, 30%, and 20%, respectively, of the overall budget (Seoul Metropolitan Government, 2021).

The objectives of UFEF are clearly stated in the first article of Seoul's municipal ordinance, which was originally adopted in 2011:

"… by providing financial support for universally free school meals at schools within Seoul, this ordinance aims to promote the physical and mental development of children and adolescents and the formation of healthy eating habits. By encouraging the consumption of eco-friendly agricultural and livestock products, it aims to complete supply chains of agricultural and livestock products and contribute to sustainable regional development."

The article demonstrates how the UFEF aims to support local food economies in wider regions by utilizing the purchasing power of schools in Seoul, while also providing nutritious, healthy food to every student, irrespective of their socioeconomic status. *Orbon*, a public distribution hub established by the Seoul Metropolitan Government, has been instrumental in localizing supply chains and increasing transparency with transactions, supplying 75% of certified organic or sustainably grown agrifoods for the UFEF (Seoul Metropolitan Government, 2021). To further these efforts, the Seoul Metropolitan Government plans to 1) develop shorter, direct distribution channels that local farmers can rely on for stable demand from schools via contract farming and 2) allocate more resources for sustainable agriculture by incentivizing public purchases of eco-friendly agrifoods through *Orbon*.

The transition to universally free, eco-friendly school meal programs across Korea was also fueled by the local food movements in the 2010s, with schools playing a pivotal role as anchor institutions providing a consistent demand. The global food crisis of the late 2000s, which caused major price fluctuations, exposed the volatility of corporate food systems. Furthermore, several food scandals in Korea heightened public concerns about food safety and food sovereignty, leading to the growth of local food movements and urban agriculture aimed at achieving self-sufficiency. Kim (2013) argues that connecting local food and school food movements through public food procurement is one way to reform school food systems, and many grassroots activists in Korea believe that public food procurement has the potential to transform wider food systems.

"Among other goods or services, food procurement is most highly public. Public food procurement financed with public funds is the area where the public benefit of national finance can be most emphasized. … We should recognize the importance of public food procurement within food systems transitions. Public food procurement (through universally free, eco-friendly school meals) can be an effective tactic for transforming food systems." (Hope Food Network and Grassroots National Solidarity, 2013, pp. 258–259)

4.2. Seoul food masterplan 2020: a major shift in urban food policy

The late 2000s saw the Free Trade Agreement between Korea and the US, which required Korea to open up its agriculture and livestock industries. This resulted in widespread protests, particularly due to concerns about the import of US beef with BSE dangers (bovine spongiform encephalopathy, mad cow disease). In response, farmers' groups and grassroots organizations coordinated national food sovereignty campaigns, highlighting issues with the domestic agrifood market, shrinking rural economies, high dependence on food imports, and Westernized diets. These movements have stimulated civic initiatives to explore small-scale food system transformation measures, such as local food, communal production, and urban agriculture, as a counterpoint to the prevailing food system. With the increasing prominence of these initiatives, national and local governments have developed food policies and planning to bolster and amplify these grassroots models. Despite diverse goals and conflicting opinions on specific approaches (e.g., reforms within/outside the capitalist system), civic players have generated a collaborative momentum for food system transformation, as exemplified by the practice of "bricolage."

In 2015, Seoul joined the Milan Urban Food Policy Pact along with more than 100 global cities, agreeing on municipal-level commitment to building "sustainable food systems that are inclusive, resilient, safe and diverse, that provide healthy and affordable food to all people in a human rights-based framework" (Milan Urban Food Policy Pact, 2015). The United Nations' Sustainable Development Goals also inspired city-led efforts to transform regional food systems. To design an urban food plan, the Seoul Metropolitan Government collected feedback from various groups, including civic organizations, food activists, farmers, and academics, by conducting public hearings and forming task force teams comprising both government and civic members. A significant number of task force team members were involved in farmers' organizations or school food movements.

The Seoul Metropolitan Government finally introduced the Seoul Food Master Plan 2020 (SFMP 2020) in 2017 as its first

[2] South Korean superintendents of education in 17 regions have been directly elected since 2006.

comprehensive food plan (Seoul Metropolitan Government, 2017). This plan emphasizes the importance of citizens' wellbeing, public health, social welfare, and sustainable environment. One of the SFMP 2020′s primary objectives is to establish collaborative governance with the civic sector. The former mayor, Park, for example, believed that the failure of collaborative governance should not be accepted, even if a policy cannot be implemented. Focusing on five key areas – healthy food, food security, urban-rural coexistence, food safety, and governance building – the SFMP 2020 ultimately envisions a socially and ecologically sustainable urban food system that ensures the universal access to healthy and safe food:

"All Seoul citizens have the right to healthy and safe food. None of Seoul citizens should starve or eat low-quality food because of economic circumstances. Any social, local, or cultural issues should not interfere with access to healthy and safe food. … We recognize that enhancing the accessibility, safety, and sustainability of food is a social responsibility …" (The Declaration of Universal Right to Food for Seoul Citizens, SFMP 2020)

The declaration features nine strategies that align with innovative food system agendas, including expanding public food service, creating a food system that promotes the coexistence of urban and rural communities, supporting mid-sized, small-sized, and family farms, developing integrated food policies that relate to various planning areas (such as labor market, housing, transportation, and urban design), promoting biodiversity, and establishing a participatory planning process. The SFMP 2020, as an urban food plan, highlights the importance of spatial considerations in developing urban food policies. It aims to revitalize rural farming communities to address the longstanding spatial disparities between urban and rural areas that emerged from Korea's intense urbanization and industrialization since the 1960s. Additionally, the SFMP 2020 underscores the city's efforts to enhance the universal right to food, which is part of the right to the city. To conclude, it showcases the potential of leveraging urban initiatives to transform broader regional food systems, aligning with domestic needs and global movements towards sustainability.

4.3. Towards inclusive public food procurement: urban-rural coexistence public meal service

One of the major projects launched through the SFMP 2020 is the Urban-rural Coexistence Public Meal Service Program (UCPM), an expansion of the UFEF into early childhood education centers (e.g., daycare centers, preschools, local children centers) and welfare facilities. The UCPM aims to source sustainably grown agrifood directly from small-/mid-scale and family farms by matching urban districts in Seoul with rural towns. The program does not rely on the *Orbon* as a central food hub. Instead, respective district-level public meal centers serve as food hubs in Seoul and exclusively source food from the matched rural towns. As of March 2023, there are 12 pairs of districts and towns participating in the UCPM program.[3] For example, if District A is paired with Town B, food from Town B is directly distributed to participating institutions in District A through a district-level public meal center. To incentivize participation, the Seoul Metropolitan Government subsidizes food expenses for institutions that purchase more than 60% of their monthly food items through the UCPM.

Many of the interviewed stakeholders who work for the UCPM (e.g., local governments, district-level public meal centers, coordinating local food hubs in rural towns) have previous experience with cooperatives or school food movements. Some of the interviewees have worked for local governments, playing key roles in the design and implementation of public food services at the local level. According to Interviewee 23, many grassroots activists joined public and governmental institutions after the local elections in 2010, which were won by progressive candidates on the promise of expanding universally free and eco-friendly school meal programs. Interviewees 22 and 23 concur that the influx of grassroots players into the government was a crucial steppingstone in broadening the scope of school food movements and institutionalizing more inclusive public meal services. It is important to note that the current government-led initiatives, such as the SFMP 2020 and the UCPM, draw on a history of collaborative governance with alternative food movements. This underscores the importance of hybrid actors across civic sector and the governmental domain, demonstrating the potential for bottom-up initiatives to be incorporated into broader policy frameworks.

The UCPM aims to create stronger social networks between urban and rural stakeholders through its one-to-one pairing system, which goes beyond mere materialistic transactions. This program seeks to establish district-level public meal centers not only as local food hubs but also as communication channels between urban and rural stakeholders. The Seoul Metropolitan Government and district-level governments plan to transform these centers into local food centers that will act as intermediary organizations to design comprehensive local food plans based on local needs and connect urban and rural communities. The UCPM is a place-based public food procurement system that represents a unique experiment in creating local-based food supply chains across niche and regime domains.

5. Discussion

The evolution of policy paradigms for public food service in Korea over the past few decades demonstrates the ongoing dynamics between local agents and institutions, revealing critical tipping points shaped by landscape factors (e.g., democratization, globalization, food crisis, political turnover), institutions (national trade negotiations and local laws), and niche-level grassroots actors. Coulson and Sonnino (2019) assert that the future of local food governance is significantly influenced by the political-economic context, micro-politics, and spatial imaginary. The Multi-Level Perspective (MLP) framework, as discussed in the theoretical background section, can be beneficial for clarifying the complexities and pathways of sustainable food systems transitions, given that food

[3] The diffusion of the program has experienced delays since its initial implementation in 2017 due to conflicts among various stakeholders (e.g., small business owners, private sector, excluded grassroots organizations), logistic limitations (e.g., delayed construction of necessary infrastructure), and a shortage of available food from the rural towns.

connects various spaces, relations, and processes in a complex web of interconnections at multiple levels. This paper argues that to comprehend the factors leading to transformative outcomes in public food procurement efforts and their potential for enhancing sustainability, a thorough and historical reflection on policy innovations in public food service is necessary. Such a scholarly effort should take into account the roles of both government and local actors, along with the pre- and post-development of niche innovations, and time and space-specific conditions. Ignoring these factors is often seen as a drawback of the MLP framework, but it is crucial to consider them to avoid missing the finer details of niche-regime dynamics at the ground level. Tackling these potential shortcomings of the MLP framework can offer us a more lucid idea of the mechanisms that facilitate sustainability transition.

The study of policy changes in public food procurement in Korea provides a valuable illustration of the importance of niche-regime dynamics in advancing sustainable food governance. The recent development of the UCPM facilitated collaboration between the government and local grassroots actors to promote sustainable food procurement practices. Niche actors, with the assistance of hybrid actors who link across the government and grassroots sector, were able to influence policy outcomes by creating opportunities through forming alliances and networks with favorable regime players, particularly government officials recruited from civic organizations. The Korean case demonstrates the importance of network and institutional anchoring processes to connect niche and regime actors (Elzen et al., 2012), as grassroots food initiatives have expanded and intensified nationwide networks leading to the legislation of alternative food practices, which helps continue and solidify with bottom-up innovations. Understanding the complex nature of interactions between multi-level actors, processes, and time-space conditions (e.g., urbanizations, globalization) is crucial in unraveling these anchoring mechanisms, which is not a one-sided procedure but a mutual one. As such, the MLP framework and theory-grounded case studies can help scholars and policymakers identify feasible ways to facilitate sustainability transitions in food supply chains.

An historical analysis of public food procurement programs in Korea reveals the intricate interplay between global, regional, and local dynamics in food politics. The transition from outsourcing food services (*witak geubsik*) to direct management of school food canteens (*jik-yeong gebsik*) reflects national and municipal attempts to reduce dependence on globalized food systems and localize regional food systems through legal institutions. The introduction of the one-to-one pairing approach of the UCPM, along with the public food hub *Orbon* in Seoul, specifically showcases a city-wide initiative to encourage the consumption of locally sourced food. Whereas the *Orbon* model continues to depend on bulk ordering from educational institutions, which may perpetuate large-scale monoculture, the UCPM takes a different approach by providing support for small and medium-sized farmers to enhance the diversity and resilience of agricultural systems. It scales back and focuses on developing more direct, tightly linked networks of stakeholders across both urban and rural areas. This one-to-one pairing system enables physical and cognitive proximity between producers and consumers, reducing food transportation distances and emphasizing the role of local communities in transforming regional food systems. In addition, Seoul's food masterplan proposes a new understanding of 'local' by extending the scope of urban policy beyond the city limits to include adjacent and rural communities. The urban-rural co-existence agenda of the SFMP 2020 proves that the city acknowledges its responsibility as a critical stakeholder to enhance broader regional and national food systems. This perspective highlights the dynamic, inclusive, and flexible nature of 'local,' rather than its monolithic and potentially reactionary tendencies (Sonnino, 2009).

The case of Korea illustrates that transitions can take pluralistic patterns, as argued by some sustainability transition scholars (Geels and Schot, 2007; Vlahos et al., 2017), often involving institutional changes. The emergence of *Witak Geubsik* and *Jik-yeong Geubsik* can be categorized as transformations (see 2.1 section for the typology) that featured niche innovations that were not yet fully matured. Specifically, during the 1990s, *Witak Geubsik* relied on conventional players like food corporations, while *Jik-yeong Geubsik* incrementally (re)introduced the public sector (Orbon) to manage food procurement in the subsequent decade. A reconfiguration is currently underway in the UCPM with the government outsourcing to grassroots organizations such as cooperatives and nonprofit food organizations, based on symbiotic niche innovations that have the potential to influence the regime. Examining patterns and identifying factors that drive a particular pattern can help determine effective tools and governing structures to create sustainability transitions. While institutionalization is commonly seen as effective in securing transformative momentum and ensuring program continuity at the regime level by many interviewees, it should not be considered as the ultimate goal. The extent of formal institutionalization may differ depending on factors such as political willpower, networks with government officials, and competent intermediary organizations (food policy councils) (Dahlberg, 1994). Therefore, it is essential to examine political and context-specific circumstances that shape and impact a governing structure to achieve broader regime change.

Policy innovations can drive food systems transformation towards food justice and sovereignty. The recent declaration of the right to food in Seoul exemplifies how government perspectives have shifted from viewing food as a commodity to combat hunger to acknowledging safe, healthy, and culturally appropriate food as a universal right and a crucial aspect of citizen well-being. Public food service, as part of broader social welfare programs, can significantly impact various local food systems stakeholders. For instance, the UFEF and UCPM policy target groups encompass a diverse range of demographics, including economically disadvantaged school-aged children, the disabled, the elderly, and rural farmers. Public institutions can also leverage their purchasing power through institutional food procurement to support local food economies, which have long been dominated by multinational, profit-driven food corporations. Transitions in mainstream public food service policy in Korea indicate the potential of food as public goods to broaden the scope of public dialog on what to eat, whom to feed, and how to nourish citizens as an important political and social agenda.

The role of local grassroots initiatives such as school food movements should not be overlooked in making policy innovations. Social movements have been instrumental in driving policy changes and creating broader coalitions at regional and national levels to push through policy resistance (Hess, 2016). This study supports the notion that social movements can have a significant impact on creating fundamental shifts in the food regime, as argued by other scholars (Friedman and McMichael, 1989; McMichael, 2014; Song, 2018). Through scaling up and expanding co-learning opportunities, grassroots activists in school food movements have effectively mobilized resources from both the civic sector and government, influencing policy shifts by forming alliances and networks with

favorable regime players such as politicians and governmental officials. In some cases, school food activists have even become part of regime institutions, creating niche-regime interactions that provide opportunities for other grassroots actors (Diaz et al., 2013; Ingram, 2018). These hybrid actors played a critical role in bridging the gap between the niche and regime levels by incorporating grassroots ideas into public policy and implementing niche-driven institutional reforms through political instruments. The UCPM, which resulted from decades of grassroots food movements, is a testament to the cumulative potential of diverse bottom-up initiatives as collective power. As argued by Lutz and Schachinger (2013), niche innovations cannot exist in isolation from dominant regime and landscape practices. Rather, niche actors actively leverage regime resources to achieve breakthroughs within niche-regime dynamics as mutual interactions. The findings of this study are also in line with the recent notion suggesting that regime shifts may occur "from within," rather than relying solely on external means (Mattioni et al., 2022; Runhaar et al., 2020).

6. Policy implications and conclusion

This study has utilized the MLP framework to examine the paths of public food procurement programs in Korea, focusing on the intersections of landscape factors (external pressures), regime practices (government, institutions), and niche movements (grassroots actions). Through the evolution of grassroots school food initiatives into municipal efforts to reshape regional food systems, the Korean case highlights the potential of niche-driven development as a catalyst for food systems transformation. Niche actors have the ability to respond to environmental pressures, frame their innovations as political tools, and engage in partnerships and coalition building to impact and participate in the policy process (Gaddis and Jeon, 2020). These niche activities can be fostered and embraced by regime players through niche-regime interactions. In the context of pre- and post-development of niche innovations in public food services in Korea, a niche innovation is an ongoing process in which niche players remain open to new experimentation, adapt to institutions, and create new opportunities to influence public policy. Institutionalization can serve as a strategy for niche actors to consolidate change and achieve policy continuity, demonstrating the potential for collaborative approaches to drive meaningful transformation in the food system.

The trajectory of Korean public food procurement programs suggests a transitional process characterized by dual configurations of spatial scale. Rather than being a fixed concept based on geographic terms, a unit of space is understood as a flexible notion that can be used by both niche and regime players to achieve their political agendas. While grassroots food activism and recent public food procurement programs share a common agenda of shortening and re-localizing food systems (from global to local), Korean school food movements have scaled up to form national-level governance of local actions, thereby gaining more voice and power (from local to national). Seoul's food master plan signals the city's readiness to extend responsibility for regional food systems beyond its city-based locus (from local to regional). This multifaceted approach to spatial conceptualization highlights the emergence of a relational market as a niche-in-the-making, which the UCPM envisions as a network of niche actors in urban and rural areas. The study emphasizes the need for a spatial perspective that strengthens urban-rural linkages and eliminates urban-rural dichotomies in sustainable food planning practices.

Finally, it is crucial to recognize that institutional reforms, which grassroots activists may rely on to ensure policy continuity, can be disrupted by political leadership changes, thereby affecting the trajectory of transformative initiatives. Recent scholarly work emphasizes the need to understand the politics of sustainability transitions (Dutt, 2022; Novalia et al., 2021; van Oers et al., 2021), offering opportunities or threats to niche innovations, when informing policy decision-making (Luederitz et al., 2017; Williams and Robinson, 2020). A comprehensive understanding of niche-regime interactions is vital in grasping the transitional mechanisms towards sustainable food governance. To promote permanent structural change, we must pay attention to the roles of both grassroots and state agencies and develop robust evaluation methods to assess transformative efforts. By doing so, we can pave the way for a more sustainable and equitable food system that meets the needs of present and future generations.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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