

Designing Strategic Agility in Inclusive Digital Business Models: A Conceptual Framework for Resilient Agri-Entrepreneurship in Himalayan Economies

Dolendra Paudel

PhD Scholar

Kathmandu University School of Management, Nepal

25mc804_dolendra@kusom.edu.np

<https://orcid.org/0009-0004-1321-6019>

Received: April 19, 2026

Revised & Accepted: June 16, 2026

Copyright: Author(s) (2026)



This work is licensed under a [Creative Commons Attribution-Non Commercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

Abstract

Agricultural entrepreneurship in Himalayan economies faces compounding challenges such as geographic isolation, fragmented markets, institutional voids, climate variability and limited infrastructure. Inclusive Business Models (IBMs) have emerged as a promising response, however most inclusive agri enterprises struggle to scale because they lack the strategic flexibility needed to respond to a rapidly shifting environment. This study addresses that gap by developing the Strategic Agility in inclusive Digital Business Models (SA-IDBM) framework, a conceptual model that integrates strategic agility theory dynamic capabilities, and inclusive innovation literature to explain how agri-enterprises in resource constrained mountain economies can build multidimensional resilience. Based in an integrative conceptual synthesis of interdisciplinary literature, the framework identifies four mutually reinforcing enablers which are digital sensing capabilities, adaptive strategic decision-making, inclusive value co-creation, and learning-reconfiguration mechanisms. These enablers operate recursively by forming an agility loop and are more moderated by the distinctive Himalayan context. Four theoretically grounded propositions are advanced to guide future empirical research. A key conceptual contribution is the reconceptualization of digital technologies not as efficiency tools but as strategic-social enablers that simultaneously strengthen organizational adaptability and social inclusivity. The framework extends strategic agility theory into subsistence-oriented and inclusive market contexts largely overlooked in mainstream strategy literature, and offers actionable guidance for entrepreneurs, policymakers, cooperatives and development organizations working in the vulnerable Himalayan region.

Keywords: Agri-entrepreneurship; Digital transformation; Inclusive business models; Resilience; Strategic Agility

Introduction

Agricultural entrepreneurship remains a key driver of economic activities in the context of Himalayan economies (Bhatnagar et al., 2026) such as Nepal and Bhutan, where agriculture provides employment to over 60% of the population (Gautam & Dhakal, 2022, p. 89) and somehow contributing to their food security and rural income generation (Halvorson et al., 2024). Yet, those agri-enterprises in these regions contend with a cluster of structural vulnerabilities such as geographic remoteness (Yogi et al., 2025), weak or inadequate infrastructure (Shrivastava et al., 2024), fragmented markets (Mwakatwila et al., 2025, p. 2). Climatic variability compound these constraints (Reddy & Rahut, 2025), as do weak institutional frameworks that limit access to credit and contract enforcement (Baumgartner et al., 2020; Schreefel et al., 2022). These vulnerabilities are further intensified by increasing market volatility and the pace of technological change in the digital era (Edgar et al., 2026). However, Inclusive business models (IBMs) have become a prominent tools to include women (Khatibu & Kissoka, 2025), smallholder farmers (Asante et al., 2025), and marginalized communities (Nyamolo et al., 2026) in value chains while creating commercial and social value (Pralhad, 2011; Reficco & Márquez, 2009; Simanis et al., 2008). Rooted in the Base of Pyramid (BoP) perspective and inclusive innovation research, these frameworks emphasize participation, equity, and cocreation in entrepreneurial setting, Inclusive Business Model frequently operate through cooperatives, social enterprises and community based organizations (Fischer & Qaim, 2011; Wadkar et al., 2025; Weng et al., 2024). However, these models are widely adopted as pathway towards rural transformation and poverty reduction, prevalence studies suggest that majority of inclusive agricultural enterprises struggle to scale because of weak governance (Wangu et al., 2021), dependence of donor-driven interventions (Geburu et al., 2022), low digital technology adoption (Lashitew et al., 2019; London et al., 2009) and restricted strategic responsiveness in highly uncertain environments (Agcaoili et al., 2023, p. 2035).

However, digital technologies are gradually transforming agricultural entrepreneurship in emerging and subsistence markets. Digital payment systems, e-commerce platforms, data analytics (Keerthana & J., 2025), mobile technologies (Fausiyat, 2025), and climate advisory systems are creating new opportunities for market access, information exchange, coordination, and resilience building (Deichmann et al., 2016; Hamill, 2017). In Himalayan setting, such technologies hold particular importance because they can help overcome geographic isolation and reduce transaction costs across dispersed communities (Apostolopoulos et al., 2025; Dey et al., 2024). At the same time, digital transformation in resource-constrained mountain economies differs substantially from that of technologically advanced markets because of persistent digital literacy gaps, infrastructure limitations, affordability concerns, and trust-related barriers (Raji et al., 2024, p. 740; Shah et al., 2025). Existing studies have largely treated

digital technologies as operational tools for efficiency enhancement rather than as strategic enablers capable of strengthening agility, adaptation, and resilience within inclusive business systems (Judijanto, 2026; Karakeçe, 2026).

The concept of strategic agility provides an important theoretical lens for addressing these vulnerabilities. Strategic agility is defined as the organization's ability to sense environmental changes, make timely and informed decisions, and continuously reconfigure resources in response to uncertainty (Diego et al., 2022, p. 600, 2024, p. 1937; Shawabkeh, 2024, p. 448; Tarpey et al., 2023, p. 2). Based on dynamic capabilities perspective (Dubey et al., 2019, p. 107606), strategic agility emphasizes sensing, seizing, and reconfiguring capabilities as essential organizational processes for long-term resilience. Although strategic agility has been extensively examined in large organizations and technology-intensive firms in developed countries (Hurel et al., 2026; Wajid & Tayşir, 2026; Wilopo et al., 2026), its application within inclusive and subsistence-oriented agricultural entrepreneurship remains significantly underexplored (Jayampathi, 2025; Vrontis et al., 2022, p. 1365). This limitation is particularly evident in Himalayan economies, where enterprises operate under conditions of environmental vulnerability, institutional fragility, social complexity, and emerging digital ecosystems (Gonibeed et al., 2023, p. 1274; Nyaupane, 2022).

Similarly, resilience has become a central concern in agricultural entrepreneurship research because agricultural enterprises increasingly face market disruptions, climate risks and socio-economic uncertainties. In mountain economies, resilience extends beyond economic survival to environmental adaptation, social inclusion, and community sustainability (Rashid et al., 2026; Raza, 2026a, 2026b). Existing studies suggest that resilience in such contexts depends heavily on social networks, learning systems, participatory governance, and adaptive capabilities embedded within organizational and business model structures (Fuentes et al., 2024, p. 2; Kassier, 2024, p. 20; Kaus & Entsminger, 2026). However, the relationship between inclusive business models, strategic agility, and digital transformation in generating multidimensional resilience outcomes has not been sufficiently theorized (Hurel et al., 2026; Malik & Terzidis, 2026; Sánchez et al., 2026).

Despite the growing literature on inclusive business models, strategic agility, digital transformation, and resilience, these research streams largely remain disconnected. First, strategic agility research has rarely been integrated with inclusive business model research, particularly in agricultural entrepreneurship contexts. Second, digital technologies are largely conceptualized as instruments of operational efficiency rather than as mechanisms that enhance sensing, adaptive decision-making, stakeholder co-creation, and organizational learning (Chen et al., 2025, p. 21; Olan et al., 2024, p. 235; Raza et al., 2024, p. 15). Third, mountain economies remain underrepresented in management and entrepreneurship research despite their distinctive socio-ecological conditions and growing importance in discussions of sustainability, climate adaptation, and rural transformation. Accordingly, this study seeks to address the following central research problem: How can strategic agility be integrated into IBMs to strengthen resilience among agricultural entrepreneurship initiatives in Himalayan Economics?

This paper aims to address these theoretical and contextual gaps by developing the Strategic Agility in Inclusive Digital Business Models (SA-IDBM) Framework for resilient agri-entrepreneurship in Himalayan economies. Based on strategic agility theory, dynamic capabilities, inclusive innovation, and digital transformation literature, the study conceptually explains how digital sensing capabilities, adaptive strategic decision-making, inclusive value co-creation, and learning-reconfiguration mechanisms collectively contribute to multidimensional resilience outcomes. This paper further conceptualizes digital technologies not merely as operational tools but as strategic-social enablers that strengthen both inclusivity and organizational adaptability. In doing so, the study extends strategic agility theory into resource-constrained and subsistence-oriented contexts while offering a theoretically grounded framework for future empirical research and practical interventions in Himalayan and other vulnerable mountain economies.

Literature Review

Strategic Agility and Dynamic Capabilities

Strategic agility refers to an organization's competence to sense changes in the environment, pivotal moves, and reacting changes through resource configuration (Asghar et al., 2025; Doz & Kosonen, 2008, 2009; Malik & Terzidis, 2025, p. 4). Rooted in the dynamic capabilities perspective of Teece et al. (1997), strategic agility emphasizes reconfiguration and adaptability over long-term static planning (Silva et al., 2023, p. 55). The dynamic capabilities model proposes three underlying micro-foundations, which are; sensing (identifying and shaping opportunities and threats), seizing (mobilizing resources to seize opportunities), and reconfiguring (continuous renewal of the enterprise's asset base) (Asghar et al., 2025).

Previous studies suggest that there are three underlying dimensions to strategic agility: environmental sensing, strategic decision-making speed, and resource fluidity (Çavuşgil & Deligonul, 2024; Ljungkvist et al., 2024, p. 396; Sambamurthy et al., 2003; Weber & Tarba, 2014). Sambamurthy et al. (2003) were one of the first researchers to explicitly connect digital technology with organizational agility through three channels: digitizing processes, supporting process integration, and supporting business partner integration. Nowadays, researchers have extended this literature to cover platformized digital ecosystems (Nambisan et al., 2017) and crisis management situations (Teece et al., 2016). Yet, majority of studies have focused on large organizations or digitally advanced institutions in developed countries (Eisenhardt & Martin, 2000; Kale & Singh, 2007; Tao & Shi, 2025), undermine small or resource-constraint organizations operating within informal institutional settings such as Himalayan agri-markets (Baumgartner et al., 2020; Krishnan, 2025, p. 90; Lashitew et al., 2019).

The strategic agility literature provides a strong theoretical basis for understanding adaptation under uncertainty; yet, its dominant focus on large firms and technologically advanced markets limits its applicability to inclusive agricultural entrepreneurship in Himalayan economies. Thus, there is a need to reinterpret strategic agility through the realities of informal institutions, resource constraints, and community centered entrepreneurial systems.

Inclusive Business Models in Agri-Entrepreneurship

Inclusive business models (IBMs) emphasize to integrate low-income populations into value chains as producers, consumers, or partners (Baltenweck et al., 2022, p. 2; Kumar et al., 2025; Mangnus, 2023; Prahalad, 2011; Simanis et al., 2008). This concept is built on the "Base of the Pyramid" (BoP) tradition and has evolved toward a mutual value creation logic that foregrounds equity, dignity and community agency (Dellevoet & Jones, 2023, p. 100; Santos & Facca-Miess, 2024). In the agricultural setting, IBMs often involve contract farming, social enterprises, cooperatives, and community-based organizations (Anseeuw, 2017, p. 13; Schoneveld, 2022). Despite their prescriptive appeal, inclusive agricultural enterprises often face structural limitations (Geza et al., 2020, p. 10) such as dependence on funding agencies or donors, weak governance systems, and limited strategic flexibility (Orr et al., 2018, p. 23). Therefore, social science researchers increasingly argue that inclusivity alone does not guarantee resilience (Gebru et al., 2022) by ignoring the need for an adaptive and agile business model (Verwaal et al., 2021, p. 609). A growing strand of literature investigates gender dimensions of inclusive business in mountain and vulnerable economies (Resurrección et al., 2019, p. 494), which demand for the need for co-creation and participatory mechanisms embedded within the business model architecture itself (Nahi, 2016).

Although inclusive business models have advanced discussions on equity and participation in agricultural value chains, existing approaches often remain structurally rigid and externally driven. Consequently, inclusiveness alone is insufficient for long term sustainability unless these business models also integrate strategic flexibility, adaptive governance, and resilience oriented capabilities.

Digital Transformation in Emerging and Subsistence Markets

Digital technologies are also effective in breaking down distances (Lloyd & Vengrouskie, 2019, p. 3), reducing transactional costs (Bindeeba et al., 2026), and expanding market access for rural entrepreneurs (Mweha, 2025). For instance, mobile applications, digital payment systems, and data-driven decision tools are increasingly adopted in agriculture (Zhang et al., 2025) through digital financial and technology solutions in Asian and African countries (Rayhan et al., 2024; Saxena et al., 2026). However, the trajectory of digital transformation in subsistence markets is significantly different from that in other markets (Baumüller, 2025, p. 1; Manzoor et al., 2025, p. 1), mainly because of the issues of digital literacy, infrastructure, trust, and costs (Dumo, 2026; Saxena et al., 2026). In the literature, these technologies are treated in isolation rather than as part of an overall strategic system (Aryeh-Adjei et al., 2025; Sambamurthy et al., 2003; Viswanathan et al., 2024, p. 1280), which is inhibiting the potential of these technologies to bring about transformation in inclusive agri-business markets (Aranguri et al., 2025; Lububu & Twum-Darko, 2025).

Digital transformation and Himalayan economies should not be interpreted merely as technology advancement. Rather digital technologies must be conceptualized as strategic and social enablers capable of strengthening sensing, collaboration, learning, and adaptive decision-making within an inclusive entrepreneurial ecosystem.

Resilience in Agri-Entrepreneurship

Organizational resilience is described as the capacity to anticipate problems (Wang et al., 2025), adapt to change (Bullock et al., 2025, p. 11), and recover from adversity while keeping basic functions operational (Shamieh & Bastian, 2025, p. 5; Tete et al., 2026). In the context of agri-entrepreneurship, resilience encompasses multiple dimensions, including economic, social, and environmental aspects (Moumenihelali et al., 2023, p. 2; Stone & Rahimifard, 2018, p. 230). Similarly, research on mountain regions and critical ecosystems indicates that diversification, social networks, and deep integration into social institutions are critical elements of resilience (Baumgartner et al., 2020; Blanco et al., 2023, p. 1; Schreefel et al., 2022). Critically, resilience in these contexts is not merely reactive but a proactive design orientation requiring purposeful embedding of sensing, learning, and adaptation mechanisms within the business model (Doz & Kosonen, 2009; Edgar et al., 2026; Eisenhardt & Martin, 2000; Rashed et al., 2025). This relationship has not yet been fully explored, although it is critical for inclusive agri-entrepreneurship.

Resilience in Himalayan agricultural entrepreneurship should be viewed as a proactive and embedded organizational capability rather than a reactive recovery mechanism. In this regard, resilience emerges through continuous learning, stakeholder participation, strategic agility, and adaptive business model design operating simultaneously within vulnerable social-ecological systems.

Research Methodology

Research Design

This study employs an integrative conceptual synthesis approach to construct a theoretically grounded framework for strategic agility in inclusive digital business models within Himalayan agri-entrepreneurship contexts. Integrative conceptual synthesis represents a methodology for theory development that explicates conceptual underpinnings and builds enhanced conceptualizations by integrating different perspectives (Jaakkola, 2020, p. 21). As Jaakkola (2020, p. 25) identifies, conceptual papers can be of four types: Theory Synthesis, Theory Adaptation, Typology, and Model. This study primarily focuses on model-building in its intent, with an embedded agenda-setting function directed toward stimulating empirical research in under-theorised mountain economy contexts.

Literature Search and Scope

The review outlined from five interdisciplinary bodies of scholarship: (1) strategic agility and dynamic capabilities, (2) inclusive business models and Bottom of the Pyramid literature, (3) digital transformation in emerging and subsistence markets, (4) resilience in agri-entrepreneurship, and (5) mountain and Himalayan development contexts. Literature searches were conducted in the following databases: Web of Science, Scopus, Google Scholar, and EBSCOhost Business Source Complete. The search combined terms such as “strategic agility,” “inclusive business models,” “agri-entrepreneurship,” “digital transformation,” “resilience,” “Himalayan economies,” “Nepal agriculture,” “subsistence markets,” and “Base of Pyramid.” Boolean operators (AND, OR) were used to construct compound queries across theoretical streams. No strict date range was imposed, given the need to capture seminal foundational work

(e.g., Teece et al., 1997; Prahalad, 2011), although the primary focus centred on work published between 2015 and 2025 to ensure currency.

Inclusion and Exclusion Criteria

Articles were included if they: (a) addressed one or more of the five literature streams identified above; (b) were published in peer-reviewed academic journals, edited academic volumes, or constituted well-established theoretical texts; and (c) offered conceptual, empirical, or methodological insights applicable to the research problem. Grey literature, including World Bank and development agency reports, was included selectively where it provided contextual evidence unavailable in academic sources ([Raghunatha et al., 2025, p. 4](#)). Articles were excluded if they were purely descriptive regional reports without theoretical grounding, or if they addressed agri-entrepreneurship in contexts with no relevant parallel to mountain or resource-constrained economies.

Framework Development Process

Following Torraco's (2005) guidelines for integrative literature reviews, the conceptual synthesis proceeded through three stages. In the first stage, relevant constructs from each literature stream were identified and coded thematically: sensing capabilities, adaptive decision-making, co-creation, learning and reconfiguration, and resilience dimensions. In the second stage, cross-stream relationships were analysed to identify theoretical convergences, gaps, and tensions. In particular, the apparent disconnect between the strategic agility literature which predominantly addresses large firms in technologically advanced markets and the inclusive business model literature — which foregrounds equity and participation in resource-constrained contexts was identified as the central theoretical gap motivating the SA-IDBM framework. In the third stage, the framework was constructed deductively by assembling theoretically justified relationships between constructs, and four propositions were derived to operationalise the framework for future empirical testing.

Limitations of the Approach

Conceptual synthesis carries innate limitations that should be acknowledged. First, the absence of a formal systematic review protocol means that the scope of literature reviewed may reflect the authors' judgments about theoretical relevance rather than an exhaustive listing of all available evidence. Second, the model's assumptions are theoretical rather than empirically verified, and their generalisability remains to be tested across diverse Himalayan and comparable mountain economy settings. These limitations do not reduce the contribution of the framework, which is to provide a theoretically grounded, actionable conceptual model for a nascent and underserved area of management and entrepreneurship scholarship.

Results

Conceptual Framework: The SA-IDBM Model (Proposed)

Framework Overview

The SA-IDBM Framework is rooted in three underlying literature streams: inclusive business model design (London et al., 2009; Prahalad, 2011), dynamic capabilities & strategic agility (Doz & Kosonen, 2009; Teece et al., 1997) and digital transformation in subsistence markets.

Scholars theorize that the mutually reinforcing interplay of digital adaptive strategic decision-making, sensing capabilities, inclusive value co-creation, and learning and reconfiguration mechanisms are theorized to enable inclusive agri-enterprises to foster multidimensional resilience (Farace & Tarabella, 2025; Sengupta et al., 2024, p. 563; Wang et al., 2025, p. 2). The Himalayan region which is characterized as a geographical isolation, institutional voids, climate vulnerability, and nascent digital infrastructure acts as a moderator influencing the interrelations among the framework's core components (Edgar et al., 2026; Niraula et al., 2026; Phartiyal & Sharma, 2025).

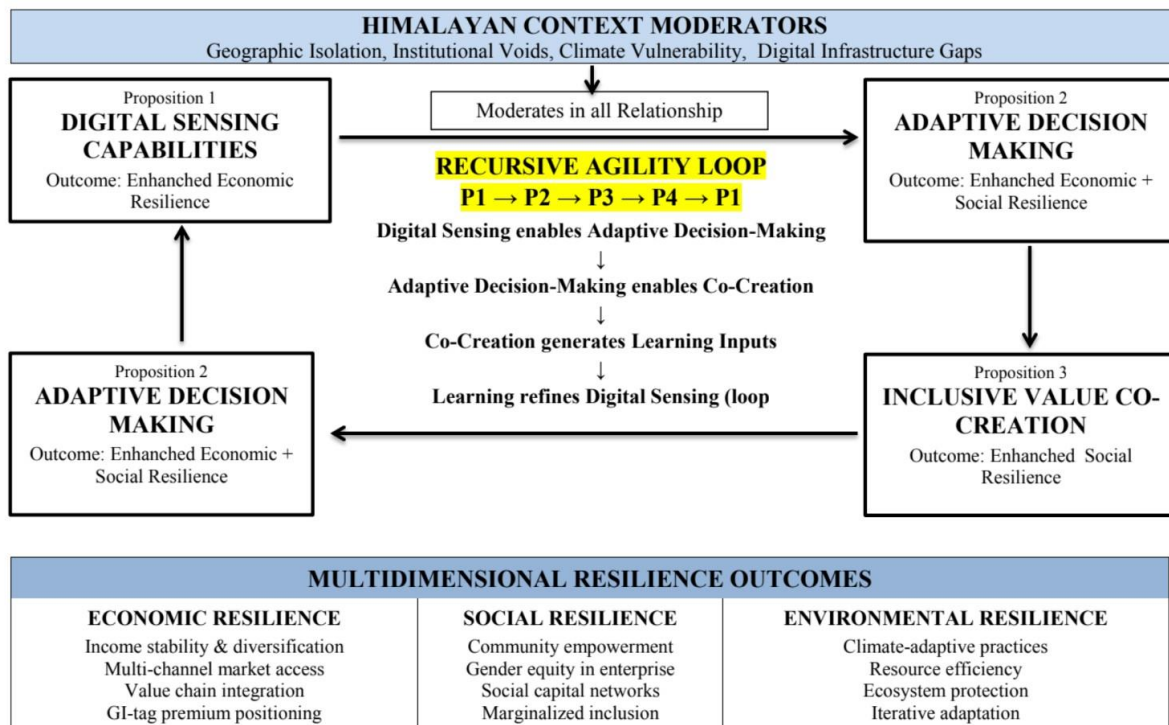


Figure 1. The SA-IDBM Framework: Strategic Agility in Inclusive Business Models
Note: The framework incorporates four mutually reinforcing enablers which collectively generates multidimensional resilience outcomes across economic, social, and environmental dimensions. Directional arrows represent primary theoretical influences and lateral interdependencies among components forming a recursive agility loop (P1→P2→P3→P4→P1). The Himalayan-context moderates all relationships within the framework.

Digital Sensing Capabilities

Digital sensing capabilities embrace digital tools & technologies, and data systems to continually monitor and interpret signals from the external environment (Dixit et al., 2025). In the context of Himalayan agricultural entrepreneurship, digital sensing involves various activities, including monitoring market prices via SMS-based price services or smartphone/mobile apps, climate and weather data via satellite-linked advisory systems, consumer demand signals via e-commerce data, and supply chain disruptions via logistics

tracking systems (Grewal et al., 2024, p. 1417; Lashitew et al., 2019; Nchimbi et al., 2021, p. 3; Sridhar et al., 2023, p. 797; Subramanian & Tomas, 2019). Digital sensing capability may differentiate strategically agile inclusive agri-enterprises from those relying solely on informal information networks, which are inherently slower, more prone to distortion, and geographically bounded (Alzate et al., 2025; Nambisan, 2016; Utama et al., 2025, p. 11). Even simple mobile technologies can generate useful data to improve decision-making in smallholder farming systems.

Proposition 1 (P1): *Inclusive agri-enterprises in Himalayan economies that develop digital sensing capabilities will demonstrate greater responsiveness to market, climate, and supply chain disruptions, thereby enhancing their economic resilience.*

Boundary Conditions. *The association between digital sensing capability and economic resilience is likely to be moderated by several circumstances. First, digital infrastructure accessibility is a prerequisite — in regions where mobile connectivity remains unreliable or prohibitively expensive, even basic SMS-based market information systems may be inaccessible (Ke et al., 2026; Li, 2025; Zhang et al., 2026). Second, digital literacy among cooperative managers and farmers shapes how effectively sensing outputs are interpreted and acted upon; where literacy gaps are severe, raw data may not translate into actionable insight (Choruma et al., 2024, p. 101291; Paget et al., 2025). Third, the risk of information overload in data-dense environments may paradoxically reduce rather than enhance decision quality (Han et al., 2025, p. 3; Kahan & Worth, 2026). Accordingly, Proposition one is expected to hold most strongly where baseline digital infrastructure and literacy have been established and where sensing systems are appropriately simplified for the local context.*

Adaptive Strategic Decision-Making

Adaptive strategic decision-making is connected with how institutions interpret their environment and translate these interpretations into timely (Priambada & Puterisari, 2025; ПAJИЄВ et al., 2025, p. 239) and well-informed decisions that are made close to the action (Priambada & Puterisari, 2025; Shahzad et al., 2026). In agricultural entrepreneurship setting, adaptive strategic decision-making means governance structures that empower local farmers, cooperatives, and women's group to make autonomous decisions about their production, pricing, and market channel selection without requiring lengthy escalation to central authorities (Claeys et al., 2025; Harrington et al., 2023; Ibourk & Hninou, 2025; London et al., 2009). This component addresses a critical weakness of many development-oriented inclusive business ventures where external funders or senior management make strategic decisions far removed from ground realities (Mozheiko & Sund, 2024, p. 46; Mulder, 2023). Therefore, adaptive decision-making means designing governance architecture that is simultaneously inclusive and agile (Eisenhardt & Martin, 2000; Weber & Tarba, 2014).

Proposition 2 (P2): *Inclusive agri-enterprises that adopt decentralized, participatory governance structures will exhibit higher adaptive decision-making speed and quality under conditions of market and environmental uncertainty, enhancing both economic and social resilience outcomes.*

Boundary Conditions. *The association between decentralised governance and adaptive decision-making may be qualified by several conditions. In contexts characterised by deep social stratification — including caste dynamics, gender hierarchies or ethnic differentiation — authority decentralisation may reproduce rather than redress existing power asymmetries unless deliberate*

inclusion mechanisms are embedded in governance design (Nightingale, 2024, p. 23; Siangulube et al., 2023, p. 2; Zhang et al., 2023, p. 567). Furthermore, decentralisation without adequate support systems such as training, and financial management capacity may expose local leaders to decision burdens that exceed their capacity, reducing rather than improving outcomes. The proposition is expected to hold most strongly where participatory governance is accompanied by capacity-building investments and culturally contextualised facilitation.

Inclusive Value Co-Creation

Inclusive value co-creation is defined as the active participation of small holder farmers, women, indigenous communities, agricultural cooperatives and local stakeholders in the design, delivery, and continuous improvement of business models and their components, assisted by digital platforms (Combe & Camaréna, 2025; Ewijk et al., 2024; Sengupta et al., 2024, p. 562). Similarly it treats beneficiaries as co-producers of value, not just recipients, which is different from the conventional top-down enterprise model (Kramer & Porter, 2011; Prahalad, 2011). Consequently, digital platforms are considered as powerful enablers of co-creation in Himalayan region (Arora et al., 2025) because they bridge geographic distances that would otherwise render face-to-face co-design prohibitively costly (Nambisan, 2016; Nambisan et al., 2017). For instance, WhatsApp-based farmer collectives co-developing market strategies (Kudryavtsev, 2025, p. 15), mobile survey tools gathering community input on designing business model (Richmond et al., 2023), and e-cooperative platforms aggregating smallholder preferences for input procurement (Kimotho, 2025; Nyamolo et al., 2026).

Proposition 3 (P3): *Inclusive agri-enterprises that embed digital platforms for stakeholder co-creation will develop stronger social resilience outcomes—including empowerment, gender equity, and community cohesion—that in turn reinforce the enterprise's overall strategic agility.*

Boundary Conditions. *The anticipated association between digital platform-enabled co-creation and social resilience rests on assumptions about participation, access and trust that may not uniformly hold. In highly heterogeneous societies, digital platforms may intensify the voices of more connected or educated members while systematically excluding older farmers, women with limited smartphone access, or indigenous communities with low digital familiarity (Hoffmann et al., 2025, p. 4; Martinez-Gil et al., 2025, p. 206). Furthermore, co-creation facilitated by externally designed platforms may unknowingly reproduce extractive research or data capture logics that conflict with community agency (Amar et al., 2026; Thaher et al., 2025, p. 2). The proposition is therefore expected to operate most effectively where co-creation platforms are locally co-designed, linguistically accessible, and governed by community rather than outsider interest.*

Learning and Reconfiguration Mechanisms

Learning and reconfiguration mechanisms are the systematic processes by which inclusive agri-enterprises generate, capture, and apply knowledge from operational experience to continuously adapt their business models (Mehrabi et al., 2024 ; Zubaedah, 2025 ; Sulemana et al., 2026). These mechanisms include regular structured feedback from farmers and customers (Kadzamira et al., 2024, p. 4), investigations with new products and distribution channels (Manyise et al., 2023, p. 40), after-implementation reviews, and networks that transfer learning across communities (Rohrbaugh et al., 2026). Formal knowledge management systems are confined in the Himalayan regions (Qureshi et al., 2022, p. 100412); digital

technologies can institutionalize accessible learning (Negi et al., 2025). In addition, mobile data collection through platforms like KoBo Toolbox or ODK can systematically gather farm-level performance data that inform seasonal business model adjustments (Schreefel et al., 2022). Furthermore, learning mechanisms in that particular region must be culturally appropriate and linguistically accessible (Kale et al., 2025, p. 13), particularly for women and indigenous farmers with limited formal education (Baumgartner et al., 2020; Fischer & Qaim, 2011).

Proposition 4 (P4): *Inclusive agri-enterprises that institutionalize digital-enabled learning and reconfiguration mechanisms will achieve superior environmental resilience through iterative adaptation to climate variability, resource scarcity, and ecosystem change.*

Boundary Conditions. *The relationship between digital-enabled learning mechanisms and environmental resilience may be enervated in contexts where knowledge systems are primarily oral, relational, and place-based rather than data-driven (Chaigneau et al., 2021, p. 302; Crabtree et al., 2022, p. 102603). Imposing standardised digital learning tools without adaptation to local epistemologies and cultural practices risks generating data that is technically collected but institutionally dormant. Furthermore, the iterative adaptation implied by Proposition 4 requires seasonal stability sufficient to permit learning across cycles; where climate shocks are so acute or irregular as to prevent season-to-season comparison, the learning mechanism may be disrupted. Therefore, P4 is expected to hold most reliably where digital learning tools are adapted for cultural and linguistic appropriateness and where community institutions possess sufficient continuity to act on accumulated knowledge*

The Himalayan Environment as a contextual moderators

The Himalayan context also offers moderating factors such as geographic remoteness, institutional voids, climate sensitivity, and digital infrastructure gaps (Parthiban et al., 2020, p. 634; Thapa et al., 2019, p. 1), which may, in turn, influence the role of enablers in generating resilience outcomes (Parthiban et al., 2020, p. 634; Thapa et al., 2019, p. 1). Similarly, significant connectivity gaps (Akhtar et al., 2023) may limit digital sensing platforms, necessitating hybrid digital-analog systems to address such challenges (Morichetti, 2025, p. 1). However, deep institutional voids may require agri-enterprises to act as quasi-institutional functions (Abi et al., 2026) such as offering credit, extension services, conflict resolution (Hu et al., 2025; Luiz et al., 2021, p. 700), thereby making adaptive decision-making more intricate (Fiorini & Kaufmann, 2026).

It is important to acknowledge that the Himalayan region constitutes a heterogeneous context, and the SA-IDBM framework's applicability varies across Himalayan settings. For instance, Nepal and Bhutan also differ substantially in governance structure, digital infrastructure maturity, and development philosophy. Bhutan's Gross National Happiness (GNH)-oriented governance framework creates a distinctive institutional environment in which social and ecological wellbeing are embedded in state policy (Tashi et al., 2025; Vajpayee, 2024), potentially creating more favourable conditions for the co-creation and environmental resilience propositions (P3, P4) than exist in Nepal's more fragmented federal governance context (Ansell et al., 2026; Dahal et al., 2025, p. 40). Nepal, by contrast, has pursued more aggressive digital infrastructure expansion (Chalaune, 2026; Dawadi et al., 2026), which may strengthen the operating conditions for P1 and P2. Within each country, moreover,

heterogeneity between high-altitude pastoral systems, mid-hill smallholder agriculture, and peri-urban market-linked enterprises further conditions how the framework's components interact. Future empirical research should treat Himalayan sub-contexts as distinct units of analysis rather than collapsing variation into a single regional category. The framework is also intended to travel conceptually: the Himalayan context serves as an illustrative extreme case of the conditions under which inclusive agri-enterprises operate, but analogous conditions exist in the Andes, the Hindu Kush, and the East African Highlands (Matthys et al., 2023, p. 250; Palau & Claramunt-López, 2024, p. 1704).

Significantly, these contextual moderators are also generative conditions which may be leveraged digitally to achieve premium market positioning for such products (Hu et al., 2025, p. 5; Sinha et al., 2025; Subramanian & Tomas, 2019; Zhao et al., 2026). This dichotomy of context as both constraint and opportunity differentiates the SA-IDBM framework from agility models developed for flat, well-connected markets.

Discussion

Extending Strategic Agility Theory

The SA-IDBM framework broadens the applicability of strategic agility theory to resource constrained, small-scale, and socially embedded agri-enterprises via three pivotal conceptual adaptations to the foundational model. Firstly, the speed imperative of traditional theory yields to contextual suitability tailored to Himalayan agri-markets. Secondly, resource fluidity gives way to agility via network automation, harnessing community social capital in Himalayan agri-markets in lieu of internal resource reallocation. Thirdly, the stakeholder dimension of conventional strategic agility is augmented to stipulate that inclusive agri-enterprises must evince agility toward their social constituencies, whose backing is vital for upholding organizational legitimacy and ensuring enterprise longevity.

The SA-IDBM framework promotes the strategic agility literature in ways that go beyond contextual extension. Existing agility frameworks including original Nokia-derived model (Doz & Kosonen, 2008) and Weber and Tarba's state-of-the-art formulation (Ghezzi & Cavallo, 2018, p. 543) were developed primarily in the context of huge, technology-intensive firms in institutionally dense environments. In this context, agility is operationalised through rapid resource reallocation, top-management team sensitivity, and strategic unity (Diego et al., 2022, p. 601; Ghezzi & Cavallo, 2018, p. 543). The SA-IDBM model challenges the assumption that agility is a top-down managerial property. In inclusive agri-enterprises, sensing occurs not only in boardrooms but in cooperative assemblies, community meetings, and farmer feedback loops. Decision-making speed is less about executive responsiveness and more about the design of governance architectures that empower local stakeholders. Reconfiguration is less about shifting financial capital and more about redirecting relational networks, social capital, and adaptive practices embedded in community knowledge systems. This reorientation advances a more distributed and socially embedded conception of strategic agility that may be generalisable to other informal-sector and community-based enterprise forms beyond the Himalayan settings.

Reconceptualizing Digital Technologies as Strategic-Social Enablers

Previous studies on agribusiness development in the Himalayan region conventionally frames digital technologies as instruments for enhancing efficiency, reducing transaction cost, facilitating market access, and enabling price discovery. In contrast, the SA-IDBM framework emphasizes digital technologies as strategic-social enablers of heightened significance in this context, empowering agri-enterprises to simultaneously attain greater strategic agility and social inclusivity owing to their dual functionality.

This reconceptualization also has implications for the Bottom of Pyramid (BoP) and inclusive innovation research. Existing BoP literature tends to present digital technologies instrumentally as tools that reduce transaction costs, extend market access, and facilitate price discovery (Soni et al., 2021, p. 120843; Sridhar & Fang, 2019, p. 978). The SA-IDBM model argues that this positioning highlights digital technology's transformative potential in inclusive agri-systems. By functioning as a substrate for sensing, co-creation, and learning simultaneously, digital tools in the SA-IDBM framework are theorised as constitutive of the agility system rather than merely supportive of it. This aligns with and broaden the digital innovation management literature, which incorporates platform-level and ecosystem-level theorising (Mukhopadhyay et al., 2023; Senyo et al., 2019, p. 54), while applying it to a social-ecological context where the dominant theoretical conversation has been about participation, equity and poverty rather than innovation management.

The Recursive Agility Loop

The four propositions collectively constitute a recursive agility loop which is defined as a dynamic cycle in which each enabling component generates conditions favourable to the next. Digital sensing (P1) provides the environmental intelligence that informs adaptive decision-making (P2); decentralised, well-informed decision-making enables the co-creation processes (P3) through which stakeholders participate meaningfully in enterprise adaptation; co-creation, in turn, generates the experiential and relational learning inputs (P4) that refine sensing capabilities over time. This dynamic mirrors the "agility spiral" described by Teece et al. (2016) for crisis-response contexts, but extends it in two important ways. First, the loop is socially embedded in which each transition between components passes through community relationships, trust, and participation rather than through managerial decision hierarchies. Second, the loop is moderated by settings with severe digital infrastructure gaps, the loop may be initiated through analog or hybrid means and progressively digitised as infrastructure matures. This creates a developmental pathway logic: enterprises do not need to have fully digitised all four components simultaneously to benefit from agility gains; partial activation of the loop may still generate resilience dividends. Future empirical research should test whether the loop generates more resilience as a complete cycle than as a set of discrete, unconnected interventions a question with direct implications for programme design in development organisations.

Theoretical Contributions

This study extends strategic agility theory, as originally articulated in the extant literature to the domain of inclusive and subsistence-oriented markets. In this augmentation, it elucidates

that, although agility manifests differently in resource-constrained settings, the core sense-decide-reconfigure process continues to constitute its foundational mechanism. Similarly, digital technology is conceptualized as a strategic-social enabler that synthesizes the literature on digital transformation with that of inclusive innovation thereby offering a holistic perspective on technology's role in socially embedded entrepreneurial systems. Furthermore, this study bridges a significant theoretical void by examining Himalayan settings, which amalgamate subsistence-oriented systems, institutional voids, climate vulnerability, and cultural heterogeneity, rendering them resistant to simple categorization as either emerging markets or paradigmatic development economics cases. Thus, SA-IDBM framework furnishes a robust, contextually embedded analytical lens, amenable to elaboration in prospective empirical investigations across Nepal, Bhutan, and comparable settings in global south.

Practical Implications

Agricultural entrepreneurs and leaders of cooperatives should prioritize the development of affordable digital sensing technologies, positioning these as an initial pathway to cultivating strategic agility. Similarly, decentralized governance structures, wherein community representatives hold decision-making authority, are recommended to embed strategic agility as an intrinsic organizational process rather than one dependent exclusively on entrepreneurial agency. Mountainous regions should accord primacy to investments in last-mile digital infrastructure as a foundational enabler of agility in inclusive agri-enterprises. Moreover, public procurement policies that favor Geographical Indication (GI)-tagged and organic highland products can establish enduring demand signals, mitigating vulnerabilities pending the maturation of agility mechanisms. Development agencies funded initiatives should integrate strategic agility tenets explicitly into the architecture of inclusive agri-businesses, transitioning from rigid project-cycle paradigms to dynamic adaptive management approaches.

Future Research Directions

The four propositions proposed here require empirical examination across multiple Himalayan agri-enterprise types. Mixed-method designs combining participatory action research and quantitative resilience measures are particularly appropriate for complex, context-sensitive phenomena (Ivankova & Wingo, 2018). However, researchers need to be cautious about imposing standardized survey instruments on communities with limited formal literacy that reflect indigenous knowledge and local language will be critical to validity. A specific methodological challenge concerns how multidimensional resilience outcomes (economic, social, and environmental) can be measured in subsistence contexts without imposing extractive research designs on vulnerable communities. Participatory resilience assessments represent a promising alternative to researcher-imposed constructs, generating locally relevant indicators and enhancing community resilience (Jere et al., 2026; Singh-Peterson & Underhill, 2016). Future researchers should develop and validate such instruments for Himalayan settings. As inclusive agri-enterprises grow in that particular setting, the decentralised governance and participatory co-creation mechanisms central to the SA-IDBM framework may come under pressure from efficiency imperatives. Research on how enterprises can scale agility mechanisms without eroding the inclusive foundations that generate social resilience is

urgently needed. This framework is theorised for Himalayan settings but advanced as applicable to analogous mountain economy contexts globally. Comparative research across the globe (Andes, the Hindu Kush, the East African Highlands, and the Himalayas) would allow identification of universal versus context-specific components of the SA-IDBM framework, building a more robust generalisation of strategic agility theory in resource-constrained settings. As AI tools are becoming more affordable in South Asian agricultural contexts, a critical question arises: does AI-assisted sensing enhance or displace the community-based knowledge networks that are central to social resilience in P3 and P4? This tension between social embeddedness and technological acceleration represents a key boundary condition for the framework as it encounters the next phase of digital transformation.

Conclusion

To conclude, strategic agility is a crucial, yet overlooked, competency for inclusive agri-entrepreneurship. Importantly, this work and conceptual model provides a solid theoretical foundation along with practical steps for embedding digital technologies into inclusive business models, thereby laying a strong groundwork for robust agri-enterprises in the Himalayan economies and beyond. At its core, the SA-IDBM approach integrates the theoretical pillars of strategic agility, inclusive innovation, and digital transformation to form a unique conceptual model tailored to the specific challenges of these resource-scarce economies. Moreover, as these economies navigate the twin transitions of climate change and the digital age, the ability of agri-enterprises to sense, adapt, co-create, and learn will prove critical to their survival and the prosperity of the economies they serve.

Acknowledgments: This research was conducted as part of the Seminar Series by the author at Kathmandu University School of Management under the Ph.D. (Marketing and Entrepreneurship) program. The authors acknowledge the Norway Research Council (Grant Number 352437) for the scholarship, the Rurális-Institute for Rural and Regional Research for participating into their Solarfood project as a Social Science PhD student, Kathmandu University School of Engineering, Lund University, Gedu College of Business Studies and Jigme Namgyel Engineering college, Bhutan for their unwavering support. I also extend humble gratitude to Associate Prof. Dr. Roshee Lamichhane (supervisor) and Prof. Dr. Pia Piroshka Otte (Solarfood project head and co-supervisor), and all team of solarfood project for their support during the conceptualization and development of this paper.

Institutional Review Board Statement: Ethical review and approval were waived for this study due to not involving sensitive information. There was no collection of data related to personal health or procedures that poses risk to human subjects.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- Abi, M., Tolossa, D., FeyeraSenbeta, Terefe, G., Fentaw, T., & Abate, E. (2026). Enhancing smallholder farmers' resilience to climate change through integrated farm management in Northern Ethiopia. *Discover Sustainability*, 7(1). <https://doi.org/10.1007/s43621-026-02715-x>
- Agcaoili, D. C., Cabral, J. S., Nuñez, C. L. R., Castro, M. M. E. D., Manuben, J. J. P., Herrera, M. N. Q., & Labios, R. J. D. (2023). Initiatives towards inclusive trading practices of rice value chain in Pila, Laguna, Philippines. *E3S Web of Conferences*, 444, 2033–2033. <https://doi.org/10.1051/e3sconf/202344402033>
- Akhtar, M. D. S., Mathur, G., Kravchenko, O., & Rakhra, M. (2023). Connecting the Unconnected: Bridging the Digital Divide with Affordable Satellite Through Enabled Smartphones. *E3S Web of Conferences*, 453, 1054–1054. <https://doi.org/10.1051/e3sconf/202345301054>
- Alzate, I. C., Gallo, S. M. Á., & Boada, A. (2025). Supply chain resilience through collaborative networks and dynamic capabilities: evidence from an agri-food productive chain in Colombia. *Discover Sustainability*, 6(1). <https://doi.org/10.1007/s43621-025-02094-9>
- Amar, S., Bori, N., & Cörvers, R. (2026). From collection to control: Data governance, digital technologies, and the politics of inclusion in the digitalisation of smallholder agriculture. *Outlook on Agriculture*. <https://doi.org/10.1177/00307270251410944>
- Anseuw, W. (2017). Inclusive Businesses in Agriculture. In *African Sun Media eBooks*. <https://doi.org/10.18820/9781928355090>
- Ansell, C., Sørensen, E., & Torfing, J. (2026). The Generativity of Governance Configurations: How Governance Factors Coalesce to Spur Local Green Co-Creation. *Governance*, 39(2). <https://doi.org/10.1111/gove.70115>
- Apostolopoulos, N., Triantos, A., Deirmentzoglou, G. A., & Apostolopoulos, S. (2025). E-Commerce Within Small Businesses Headquartered in Mountainous Areas. In *IGI Global eBooks* (pp. 95–120). IGI Global. <https://doi.org/10.4018/979-8-3373-0214-0.ch004>
- Arangurí, M., Mera, H., Noblecilla, W., & Lucini, C. (2025). Digital Literacy and Technology Adoption in Agriculture: A Systematic Review of Factors and Strategies. *AgriEngineering*, 7(9), 296–296. <https://doi.org/10.3390/agriengineering7090296>
- Arora, M., Chopra, M., Shrivastav, R., Venkateshmurthy, N. S., Oli, N., Rao, N. L., Gupta, M., Cassambai, S., Highton, P., Vaidya, A., Singh, K., Crompton, A., Mohan, S., Khunti, K., & Prabhakaran, D. (2025). Co-creating community engagement and involvement strategies: understanding challenges and needs of people living with multiple long-term conditions and stakeholders' perspectives in India and Nepal. *BMJ Global Health*, 10(9). <https://doi.org/10.1136/bmjgh-2025-018968>
- Aryeh-Adjei, A. A., Adu, K. K., Adu-Marfo, A. O., & Awuku, G. (2025). Digital technology use and adoption in informal entrepreneurship: evidence from Okere District, Ghana. *Journal of Innovation and Entrepreneurship*, 14(1). <https://doi.org/10.1186/s13731-025-00611-8>
- Asante, B. O., Prah, S., Akutinga, S., Akusaki, E. T., & Ofosuhene, A. D. (2025). Climate resilience in the palm of a hand: digital financial inclusion and cocoa farmers' adoption of

- climate smart agricultural technologies in Ghana. *Future Business Journal*, 11(1). <https://doi.org/10.1186/s43093-025-00624-5>
- Asghar, J., Kanbach, D. K., & Kraus, S. (2025). Toward a multidimensional concept of organizational agility: a systematic literature review. *Management Review Quarterly*, 76(1), 885–911. <https://doi.org/10.1007/s11301-025-00497-6>
- Baltenweck, I., Ouma, E. A., & Nagujja, J. (2022). Gender-inclusive business models in livestock value chains in low- and middle-income countries: What can we learn from the literature? *Frontiers in Sustainability*, 3. <https://doi.org/10.3389/frsus.2022.958251>
- Baumgartner, P., Braun, J. von, & Gatzweiler, F. W. (2020). *Marginality: Addressing the nexus of poverty, exclusion and ecology*. Springer.
- Baumüller, H. (2025). Science for Africa’s future food security: Valuing tradition and embracing innovation to accelerate the digital transformation of African food and agriculture systems. *Food Security*. <https://doi.org/10.1007/s12571-025-01570-4>
- Bhatnagar, S. K., Chaudhary, R., Janjhua, Y., Kashyap, A., Thakur, P., & Sharma, P. (2026). Mitigating Livelihood Vulnerability of Farm Households Through Climate-Smart Agriculture in North-Western Himalayan Region. *Resources*, 15(1), 14–14. <https://doi.org/10.3390/resources15010014>
- Bindeeba, D. S., Bakashaba, R., & Tukamushaba, E. K. (2026). Harnessing digital–relational synergies for sustainable SME performance: exploring the interplay between digital marketing and network capital in resource-constrained settings. *Journal of Sustainable Business*, 11(1). <https://doi.org/10.1186/s40991-026-00137-6>
- Blanco, V. M. F., Luthe, T., Bruley, E., & Grêt-Regamey, A. (2023). Aligning social networks and co-designed visions to foster systemic innovation in the Alps. *Regional Environmental Change*, 23(3). <https://doi.org/10.1007/s10113-023-02099-y>
- Bullock, C., Richard, T., & Muldoon, J. (2025). The Development of Inclusive Agriculture Entrepreneurship Education Ecosystems for Young Entrepreneurs in Uganda. *Journal of Small Business Strategy*, 35(3). <https://doi.org/10.53703/001c.138475>
- Çavuşgil, S. T., & Deligonul, S. (2024). Dynamic capabilities framework and its transformative contributions. *Journal of International Business Studies*, 56(1), 33–42. <https://doi.org/10.1057/s41267-024-00758-8>
- Chaigneau, T., Coulthard, S., Daw, T. M., Szaboova, L., Camfield, L., Chapin, F. S., Gasper, D., Gurney, G. G., Hicks, C. C., Ibrahim, M., James, T., Jones, L., Matthews, N., McQuistan, C., Reyers, B., & Brown, K. (2021). Reconciling well-being and resilience for sustainable development. *Nature Sustainability*, 5(4), 287–293. <https://doi.org/10.1038/s41893-021-00790-8>
- Chalaune, T. B. (2026). Status of E-government and Public Service Delivery in Nepal. *Karnali Outlook Knowledge Across Disciplines*, 1(1), 183–192. <https://doi.org/10.3126/kokad.v1i1.91782>
- Chen, H., Popaitoon, S., & Mumi, A. (2025). Investigating corporate entrepreneurship strategy through digital transformation: a dynamic capabilities perspective. *Journal of Innovation and Entrepreneurship*, 14(1). <https://doi.org/10.1186/s13731-025-00570-0>

- Choruma, D. J., Dirwai, T. L., Mutenje, M., Mustafa, M. A., Chimonyo, V. G. P., Jacobs-Mata, I., & Mabhaudhi, T. (2024). Digitalisation in agriculture: A scoping review of technologies in practice, challenges, and opportunities for smallholder farmers in sub-saharan africa [Review of *Digitalisation in agriculture: A scoping review of technologies in practice, challenges, and opportunities for smallholder farmers in sub-saharan africa*]. *Journal of Agriculture and Food Research*, 18, 101286–101286. Elsevier BV. <https://doi.org/10.1016/j.jafr.2024.101286>
- Claeys, P., Dumont, A., & Saxena, L. P. (2025). Linking food sovereignty and social economy: rebalancing farmers' position and addressing power relations in multi-stakeholder food cooperatives. *Agricultural and Food Economics*, 13(1). <https://doi.org/10.1186/s40100-025-00357-7>
- Combe, C. G., & Camaréna, S. (2025). Data sovereignty and valuation model for sustainable agriculture innovation and equity. *Npj Sustainable Agriculture*, 3(1). <https://doi.org/10.1038/s44264-025-00102-z>
- Crabtree, S. A., Kahn, J. G., Jackson, R., Wood, S. A., McKechnie, I., Verhagen, P., Earnshaw, J., Kirch, P. V., Dunne, J. A., & Dugmore, A. (2022). Why are sustainable practices often elusive? The role of information flow in the management of networked human-environment interactions. *Global Environmental Change*, 78, 102597–102597. <https://doi.org/10.1016/j.gloenvcha.2022.102597>
- Dahal, G. R., Pokharel, B., Khanal, D. R., Aryal, S. R., Gupta, M., & Malla, Y. B. (2025). The politics of policy evolution. In *Routledge eBooks* (pp. 39–55). Informa. <https://doi.org/10.4324/9781032705613-5>
- Dawadi, B. R., Pokhrel, C., & Ghimire, R. (2026). Towards robust digital infrastructure for sustainable digital economy development of Nepal. *Digital Economy and Sustainable Development*, 4(1). <https://doi.org/10.1007/s44265-026-00077-w>
- Deichmann, U., Goyal, A., & Mishra, D. K. (2016). Will digital technologies transform agriculture in developing countries? *Agricultural Economics*, 47, 21–33. <https://doi.org/10.1111/agec.12300>
- Dellevoet, A., & Jones, S. (2023). 7 Inclusiveness and small businesses in emerging markets. In *De Gruyter eBooks* (pp. 97–130). De Gruyter. <https://doi.org/10.1515/9783111071251-008>
- Dey, A., Sharma, S., Patel, C. M., Patel, R., Nadeem, M., Abhijit, & Gupta, A. K. D. (2024). Towards a Robust and Inclusive Entrepreneurial Ecosystem: Insights from the Himalayas. *The Journal of Entrepreneurship*, 33(4), 925–939. <https://doi.org/10.1177/09713557241308014>
- Diego, E. de, Almodóvar, P., & Birkinshaw, J. (2024). The effects of a firm's internationalization, age, and environmental turbulence on the capabilities that comprise strategic agility. *International Entrepreneurship and Management Journal*, 20(3), 1935–1961. <https://doi.org/10.1007/s11365-024-00971-9>
- Diego, E. de, Almodóvar, P., & Valle, I. D. del. (2022). What drives strategic agility? Evidence from a fuzzy-set qualitative comparative analysis (FsQCA). *International Entrepreneurship and Management Journal*, 19(2), 599–627. <https://doi.org/10.1007/s11365-022-00820-7>

- Dixit, S., Sen, S., Yasmin, T., Khamis, K., Sen, D., Buytaert, W., & Hannah, D. M. (2025). *Integrating SMART Principles in Flood Early Warning System Design in the Himalayas*. <https://doi.org/10.5194/egusphere-2025-2081>
- Doz, Y., & Kosonen, M. (2008). The Dynamics of Strategic Agility: Nokia's Rollercoaster Experience. *California Management Review*, 50(3), 95–118. <https://doi.org/10.2307/41166447>
- Doz, Y., & Kosonen, M. (2009). Embedding Strategic Agility. *Long Range Planning*, 43, 370–382. <https://doi.org/10.1016/j.lrp.2009.07.006>
- Dubey, R., Gunasekaran, A., Childe, S. J., Bryde, D., Giannakis, M., Foropon, C., Roubaud, D., & Hazen, B. T. (2019). Big data analytics and artificial intelligence pathway to operational performance under the effects of entrepreneurial orientation and environmental dynamism: A study of manufacturing organisations. *International Journal of Production Economics*, 226, 107599–107599. <https://doi.org/10.1016/j.ijpe.2019.107599>
- Dumo, W. M. (2026). The role of digital connectivity in reshaping financial inclusion in East Africa: a panel data analysis (2014–2023). *Humanities and Social Sciences Communications*. <https://doi.org/10.1057/s41599-026-07170-7>
- Edgar, S. L., Embry, E., Brownell, K. M., & Kickul, J. (2026). Community resilience through rural entrepreneurship: the case of Tribal Textiles. *Small Business Economics*. <https://doi.org/10.1007/s11187-026-01206-7>
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21, 1105–1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::aid-smj133>3.0.co;2-e](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::aid-smj133>3.0.co;2-e)
- Ewijk, E. van, Ataa-Asantewaa, M., Asubonteng, K. O., Leynseele, Y. V., Derkyi, M., Laven, A., & Ros-Tonen, M. (2024). Farmer-Centred Multi-stakeholder Platforms: From Iterative Approach to Conceptual Embedding. *Journal of the Knowledge Economy*, 15(4), 17077–17107. <https://doi.org/10.1007/s13132-023-01661-7>
- Farace, B., & Tarabella, A. (2025). Leveraging Digital Platforms to Enhance Global Agrifood Systems Resilience: Implications for Social Sustainability. *International Journal of Academic Research in Business and Social Sciences*, 15(5). <https://doi.org/10.6007/ijarbss/v15-i5/24642>
- Fausiyat, A. T. (2025). Assessing digital market access and mobile finance tools in boosting agribusiness growth among rural farming communities. *World Journal of Advanced Research and Reviews*, 27(1), 659–676. <https://doi.org/10.30574/wjarr.2025.27.1.2579>
- Fiorini, N., & Kaufmann, H. R. (2026). Smart Agribusiness: Governance Change, Hybridisation, and New Entrepreneurship. *CORPORATE GOVERNANCE AND RESEARCH & DEVELOPMENT STUDIES*, 2, 117–129. <https://doi.org/10.3280/cgrds2-2025oa20604>
- Fischer, E., & Qaim, M. (2011). Linking Smallholders to Markets: Determinants and Impacts of Farmer Collective Action in Kenya. *World Development*, 40(6), 1255–1268. <https://doi.org/10.1016/j.worlddev.2011.11.018>
- Fuentes, M., Cárdenas, J. P., Olivares, G., Rasmussen, E., Urbina, C., Salazar, S., & Vidal, G. R. (2024). Harnessing Network Science for Urban Resilience: The CASA Model's Approach

- to Social and Environmental Challenges. *arXiv (Cornell University)*.
<https://doi.org/10.48550/arxiv.2411.08015>
- Gautam, S., & Dhakal, S. C. (2022). SHARE OF AGRICULTURE ON EMPLOYMENT, INCOME AND TRADE. *Food and Agri Economics Review*, 2(2), 88–91.
<https://doi.org/10.26480/faer.02.2022.88.91>
- Gebbru, K. M., Rammelt, C., & Leung, M. W. H. (2022). Paradoxes of Inclusion: Adverse Effects of Inclusive Interventions in Northern Ethiopia. *European Journal of Development Research*, 34(5), 2324–2345. <https://doi.org/10.1057/s41287-022-00518-0>
- Geza, W., Caister, K., & Mabhaudhi, T. (2020). What is the contribution of agricultural finance to farmer livelihoods? *Suid-Afrikaanse Tydskrif Vir Landbouvoortligting/South African Journal of Agricultural Extension*, 48(2). <https://doi.org/10.17159/2413-3221/2020/v48n2a543>
- Ghezzi, A., & Cavallo, A. (2018). Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches. *Journal of Business Research*, 110, 519–537.
<https://doi.org/10.1016/j.jbusres.2018.06.013>
- Gonibeed, A., Kah, S., & Wanjiru, R. (2023). How small organisations develop sustainability-oriented strategies: evidence from northwest Himalayas. *International Journal of Entrepreneurial Behaviour & Research*, 29(6), 1269–1289. <https://doi.org/10.1108/ijeb-08-2022-0716>
- Grewal, D., Guha, A., Noble, S. M., & Bentley, K. (2024). The food production–consumption chain: Fighting food insecurity, loss, and waste with technology. *Journal of the Academy of Marketing Science*, 52(5), 1412–1430. <https://doi.org/10.1007/s11747-024-01040-x>
- Halvorson, S. J., Chhetri, R., Tashi, S., & Yangchen, U. (2024). Mountain Farming and Resilience in Pemagatshel, Eastern Bhutan. *Focus on Geography*, 67.
<https://doi.org/10.21690/foge/2024.67.3p>
- Hamill, S. (2017). Strengthening Agricultural Market Access with ICT. In *The World Bank eBooks* (pp. 225–265). https://doi.org/10.1596/978-1-4648-1002-2_module9
- Han, M., Benson, A., & Abon, J. E. O. (2025). Navigating ethics in wireless sensor networks for sustainable agriculture. *Frontiers in Sustainable Food Systems*, 9.
<https://doi.org/10.3389/fsufs.2025.1634643>
- Harrington, T. S., Narain, N., Rao, N., Rengalakshmi, R., Sogani, R., Chakraborty, S., & Upadhyay, A. (2023). A needs-based approach to promoting gender equity and inclusivity: insights from participatory research with farmer–producer organisations (FPOs). *Journal of Social and Economic Development*, 26(2), 409–434. <https://doi.org/10.1007/s40847-023-00280-x>
- Hoffmann, M., Chen, C., Butterbach-Bahl, K., Ewert, F., Holz, M., Kiese, R., Augustin, J., & Dubbert, M. (2025). Advancing sustainable agricultural transformation through the synergy of automated experimental platforms and living labs. *Nature Communications*, 16(1).
<https://doi.org/10.1038/s41467-025-64450-7>
- Hu, S., Jie, Y., & Zhu, S. (2025). Digitalization and configurational effects on regional income inequality: analysis of panel data from 134 economies. *Technological and Economic Development of Economy*, 1–34. <https://doi.org/10.3846/tede.2025.23950>

- Hu, X., Lin, B., Liu, H., & Xu, X. (2025). Institutional voids and business group dynamics: Evidence from judicial reform in China. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5761462>
- Hurel, M. M. I., Herrera, A. A. M., & Durango, J. N. R. (2026). Organizational resilience and agility in SMEs: a systematic review with global perspectives for emerging economies. *Journal of Organizational Change Management*, 1–23. <https://doi.org/10.1108/jocm-06-2025-0580>
- Ibourk, A., & Hninou, S. (2025). Empowering women through agricultural cooperatives: a multilevel analysis in Morocco's Marrakech-Safi region. *Discover Sustainability*, 6(1). <https://doi.org/10.1007/s43621-025-01245-2>
- Ivankova, N. V., & Wingo, N. P. (2018). Applying Mixed Methods in Action Research: Methodological Potentials and Advantages. *American Behavioral Scientist*, 62(7), 978–997. <https://doi.org/10.1177/0002764218772673>
- Jaakkola, E. (2020). Designing conceptual articles: four approaches. *AMS Review*, 10, 18–26. <https://doi.org/10.1007/s13162-020-00161-0>
- Jayampathi, E. K. (2025). Organizational Agility: A Systematic Literature Review. *South Asian Journal of Business Insights*, 5(1), 90–110. <https://doi.org/10.4038/sajbi.v5i1.77>
- Jere, Z. D., Mpanje, D. L. E., Mandoloma, L., Fole, W. S., & Mlowoka, B. (2026). Perspectives of Disaster Resilience in Africa: Towards a Participatory Framework for Conceptualising and Measuring Resilience in Malawi. *Climate Resilience and Sustainability*, 5(1). <https://doi.org/10.1002/cli2.70036>
- Judijanto, L. (2026). Bibliometric Analysis of Agricultural Entrepreneurship. *West Science Interdisciplinary Studies*, 4(1), 228–236. <https://doi.org/10.58812/wsis.v4i01.2619>
- Kadzamira, M., Chege, F., Suntharalingam, C., Bundi, M., Likoko, L., Magero, D., Romney, D. L., Kansime, M. K., & Mulema, J. (2024). African women and young people as agriculture service providers—business models, benefits, gaps and opportunities. *CABI Agriculture and Bioscience*, 5(1). <https://doi.org/10.1186/s43170-024-00229-y>
- Kahan, D., & Worth, S. (2026). Data and Information for Farm Management Decision Making: A Challenging Frontier. In *CABI eBooks* (pp. 206–231). <https://doi.org/10.1079/9781836990536.0010>
- Kale, M., Krūmiņa, M., Keledorme, L. A., & Numafu, M. (2025). M-Learning for Climate Resilience: A Case Study of Latvia's Indigenous Crop Initiative in Ghana. *Baltic Journal of Modern Computing*, 13(3). <https://doi.org/10.22364/bjmc.2025.13.3.07>
- Kale, P., & Singh, H. (2007). Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal*, 28(10), 981–1000. <https://doi.org/10.1002/smj.616>
- Karakeçe, E. (2026). Rethinking The Relationship Between Agriculture and Entrepreneurship. *Kahramanmaraş Sütçü İmam Üniversitesi Tarım ve Doğa Dergisi*, 1013–1025. <https://doi.org/10.18016/ksutarimdog.vi.1730810>
- Kassier, L. (2024). Interconnected or Disconnected? A Review of Sustainability, Resilience, and Sustainable Business Model Constructs in the Academic Business Literature [Review of *Interconnected or Disconnected? A Review of Sustainability, Resilience, and Sustainable*

- Business Model Constructs in the Academic Business Literature*]. *Journal of the Knowledge Economy*. Springer Science+Business Media. <https://doi.org/10.1007/s13132-023-01712-z>
- Kaus, J., & Entsminger, J. S. (2026). Sustainable business model innovation in rural entrepreneurial ecosystems: a conceptual framework and research agenda. *Small Business Economics*. <https://doi.org/10.1007/s11187-026-01181-z>
- Ke, X., Huang, Y., Ke, L., & Dong, B. (2026). Research on the impact of digital-intelligence integration on agricultural industry resilience: evidence from China. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1677559>
- Keerthana, R., & J., S. (2025). Analysing the Nexus of Data and International Trade. In *Advances in business strategy and competitive advantage book series* (pp. 33–46). IGI Global. <https://doi.org/10.4018/979-8-3693-6592-2.ch002>
- Khatibu, S., & Kissoka, G. (2025). Gender dynamics in climate information services: a systematic review of intersectional influences and strategies for smallholder farmers in Sub-Saharan Africa. *Frontiers in Climate*, 7. <https://doi.org/10.3389/fclim.2025.1681671>
- Kimotho, J. (2025). Roles of a WhatsApp group in fostering a Kenyan agricultural community of practice (CoP). *The African Journal of Information and Communication (AJIC)*, 36, 1–11. <https://doi.org/10.23962/ajic.i36.20902>
- Kramer, M. R., & Porter, M. E. (2011). Creating Shared Value. In *Issue Lab (Candid)*. Candid. <https://issuelab.org/permalink/resource/5806>
- Krishnan, N. (2025). Essays in Social Networks, Behavior Change and Technology Adoption. *Deep Blue (University of Michigan)*. <https://doi.org/10.7302/27041>
- Kudryavtsev, A. (2025). VALUE CREATION FACTORS IN DIGITAL PLATFORMS FOR AGRICULTURAL PRODUCERS. *International Agricultural Journal*, 8(1), 14–35. https://doi.org/10.55186/25880209_2025_9_1_2
- Kumar, A., Divyanshu, Prashar, R. S., Chandel, R. S., Dev, I., Sharma, S. C., Mehta, P. M., & Vashishat, R. K. (2025). Market performance and supply chain selection dynamics for vegetables grown through sustainable practices in the Northwest Himalayan region. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1558481>
- Lashitew, A. A., Tulder, R. van, & Liasse, Y. (2019). Mobile phones for financial inclusion: What explains the diffusion of mobile money innovations? *Research Policy*, 48(5), 1201–1215. <https://doi.org/10.1016/j.respol.2018.12.010>
- Li, Z. (2025). Digital rural development and agricultural economic resilience. *International Review of Economics & Finance*, 106, 104851–104851. <https://doi.org/10.1016/j.iref.2025.104851>
- Ljungkvist, T., Boers, B., & Axell, C. (2024). Managerial dynamic capabilities of family firm retail managers: strategic enabling in a context of economic uncertainty. *International Journal of Entrepreneurial Behaviour & Research*, 30(11), 394–419. <https://doi.org/10.1108/ijebr-11-2023-1175>
- Lloyd, R., & Vengrouskie, E. F. (2019). Digital Circumvention as a Means to Overcome Geographic Limitations: Defining the New Rural Entrepreneurial Ecosystem. *Journal of Strategic Innovation and Sustainability*, 14(4). <https://doi.org/10.33423/jsis.v14i4.2166>

- London, T., Anupindi, R., & Sheth, S. (2009). Creating mutual value: Lessons learned from ventures serving base of the pyramid producers. *Journal of Business Research*, 63(6), 582–594. <https://doi.org/10.1016/j.jbusres.2009.04.025>
- Lububu, S., & Twum-Darko, M. (2025). Digital transformation in South Africa’s agri-business sector: Opportunities and challenges. *International Journal of Business Ecosystem and Strategy (2687-2293)*, 7(5), 74–79. <https://doi.org/10.36096/ijbes.v7i5.858>
- Luiz, J., Magada, T., & Mukumbuzi, R. (2021). Strategic Responses to Institutional Voids (Rationalization, Aggression, and Defensiveness): Institutional Complementarity and Why the Home Country Matters. *Management International Review*, 61(5), 681–711. <https://doi.org/10.1007/s11575-021-00457-8>
- Malik, F. S., & Terzidis, O. (2025). Thriving in turbulence: resilience and strategic adaptation in global business. *Review of Managerial Science*. <https://doi.org/10.1007/s11846-025-00940-8>
- Malik, F. S., & Terzidis, O. (2026). The metamorphosis of organizational resilience: a strategic roadmap for SMEs in the digital age. *Review of Managerial Science*. <https://doi.org/10.1007/s11846-026-01002-3>
- Mangnus, E. (2023). An assessment of “Inclusive” Business Models: Vehicles for Development, or Neo-Colonial Practices? *Journal of Agricultural and Environmental Ethics*, 36(3). <https://doi.org/10.1007/s10806-023-09911-z>
- Manyise, T., Dentoni, D., & Trienekens, J. (2023). A more grounded view of ‘farmer entrepreneurship’: how Zimbabwean smallholder farmers fundamentally differ in their entrepreneurial behaviours. *Journal of Entrepreneurship in Emerging Economies*, 17(7), 25–50. <https://doi.org/10.1108/jeece-02-2023-0044>
- Manzoor, F., Wei, L., Siraj, M., Lu, X., & Qiyang, G. (2025). Digital agriculture technology adoption in low and middle-income countries—a review of contemporary literature. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1621851>
- Martinez-Gil, J., Pichler, M., Lechat, N., Lentini, G., Cvar, N., Trilar, J., Bucchiarone, A., & Marconi, A. (2025). An overview of civic engagement tools for rural communities. *Open Research Europe*, 4, 195–195. <https://doi.org/10.12688/openreseurope.18077.2>
- Matthys, M.-L., Illien, P., Acharya, S., Amacker, M., Bieri, S., Musafili, I., & Sanesathid, O. (2023). The Role of High-Value Agriculture in Capability Expansion: Qualitative Insights into Smallholder Cash Crop Production in Nepal, Laos and Rwanda. *European Journal of Development Research*, 36(1), 243–262. <https://doi.org/10.1057/s41287-023-00600-1>
- Mehrabi, S., Mahdad, M., Bijman, J., Cholez, C., Mesa, J. C. P., & Giagnocavo, C. (2024). Microfoundations of dynamic capabilities enabling scaling pathways of sustainability-oriented innovation business models. *Business Strategy and the Environment*, 34(1), 849–871. <https://doi.org/10.1002/bse.4004>
- Morichetti, F. (2025). High-performance analog signal processing with photonic integrated circuits. *Light Science & Applications*, 14(1). <https://doi.org/10.1038/s41377-025-01806-0>
- Moumenihelali, H., Abbasi, E., & Karbasioun, M. (2023). Comprehensive motivational framework to drive paddy farmers towards pluriactivity. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-35368-1>

- Mozheiko, S., & Sund, K. J. (2024). Managing the Dual Business Model Trade-off in Multinational Corporations. *Journal of Business Models*, 12(3), 42–52. <https://doi.org/10.54337/jbm.v12i3.8471>
- Mukhopadhyay, S., Whalley, J., Pandey, R., & Ranganathan, V. (2023). Platform ecosystem research in the technology and innovation management discipline: a multi-method literature review. *Benchmarking An International Journal*, 31(5), 1826–1850. <https://doi.org/10.1108/bij-09-2022-0573>
- Mulder, F. (2023). The paradox of externally driven localisation: a case study on how local actors manage the contradictory legitimacy requirements of top-down bottom-up aid. *Journal of International Humanitarian Action*, 8(1). <https://doi.org/10.1186/s41018-023-00139-0>
- Mwakatwila, A., Ochieng, J., Cheyo, E., Kimisha, J., Mchau, D., Ndunguru, A., Kadege, E., Bujiku, A., Kabyemela, A., Mbapila, S., Mbiu, J., Kessy, R., & Rubyogo, J. C. (2025). Women at the forefront: raising awareness of climate-resilient varieties to transform the informal seed trade in Tanzania. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1638748>
- Mweha, M. (2025). Digital Transformation and Strategic Resilience: A Framework for Sustainable Women Entrepreneurship in Zimbabwe's Post-Covid Economy. *International Journal of Research and Innovation in Social Science*, 1269–1281. <https://doi.org/10.47772/ijriss.2025.914mg0096>
- Nahi, T. (2016). Cocreation at the Base of the Pyramid. *Organization & Environment*, 29(4), 416–437. <https://doi.org/10.1177/1086026616652666>
- Nambisan, S. (2016). Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055. <https://doi.org/10.1111/etap.12254>
- Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital Innovation Management: Reinventing Innovation Management Research in a Digital World. *MIS Quarterly*, 41(1), 223–238. <https://doi.org/10.25300/misq/2017/41:1.03>
- Nchimbi, S. A., Dida, M. A., Janssens, G. K., Marwa, J., & Kisangiri, M. (2021). MAGITS: A Mobile-based Information Sharing Framework for Integrating Intelligent Transport System in Agro-Goods e-Commerce in Developing Countries. *International Journal of Advanced Computer Science and Applications*, 12(6). <https://doi.org/10.14569/ijacsa.2021.0120684>
- Negi, B., Negi, V. S., Rana, S. K., Bhatt, I. D., Manasi, S., & Nautiyal, S. (2025). Role of traditional ecological knowledge in shaping climate resilient villages in the Himalaya. *Journal of Environmental Management*, 376, 124325–124325. <https://doi.org/10.1016/j.jenvman.2025.124325>
- Nightingale, A. J. (2024). Participating or Just Sitting In? The Dynamics of Gender and Caste in Community Forestry. *Journal of Forest and Livelihood*, 2(1), 17–24. <https://doi.org/10.3126/jfl.v2i1.59671>
- Niraula, P., Pandey, C. L., & Pariyar, R. K. (2026). Community resilience to multi-hazard risks: Insights from Narayani Basin, Nepal. *Progress in Disaster Science*, 29, 100523–100523. <https://doi.org/10.1016/j.pdisas.2026.100523>

- Nyamolo, V. O. O., Ayuya, O. I., Cosmas, K. L., & Nchanji, E. B. (2026). Effect of socio-technical innovation bundles on male and female smallholder farmers' empowerment in selected counties in Kenya. *Frontiers in Sustainable Food Systems*, 10. <https://doi.org/10.3389/fsufs.2026.1654751>
- Nyaupane, G. P. (2022). *Himalayan Vulnerabilities and Resilience* (pp. 39–54). <https://doi.org/10.4324/9781003030126-5>
- Olan, F., Troise, C., Damij, N., & Newbery, R. (2024). Guest editorial: Emerging issues in digital entrepreneurship – challenges and opportunities. *International Journal of Entrepreneurial Behaviour & Research*, 30, 233–237. <https://doi.org/10.1108/ijebr-03-2024-062>
- Orr, A., Donovan, J., & Stoian, D. (2018). Smallholder value chains as complex adaptive systems: a conceptual framework. *Journal of Agribusiness in Developing and Emerging Economies*, 8(1), 14–33. <https://doi.org/10.1108/jadee-03-2017-0031>
- Paget, N., McCampbell, M., Ba, B., Bamba, M., Cesaro, J., Ferrari, S., Notaro, M., Okry, F., Richebourg, C., & Bonnet, P. (2025). Achieving inclusive digital development: A frugal strategy based on lessons from three West African smallholder agriculture value chains. *Technological Forecasting and Social Change*, 220, 124287–124287. <https://doi.org/10.1016/j.techfore.2025.124287>
- Palau, A. Z., & Claramunt-López, B. (2024). Mountain research for sustainability: where are we and where to go? *Sustainability Science*, 19(5), 1693–1707. <https://doi.org/10.1007/s11625-024-01530-5>
- Parthiban, R., Qureshi, I., Bandyopadhyay, S., Bhatt, B., & Jaikumar, S. (2020). Leveraging ICT to Overcome Complementary Institutional Voids: Insights from Institutional Work by a Social Enterprise to Help Marginalized. *Information Systems Frontiers*, 22(3), 633–653. <https://doi.org/10.1007/s10796-020-09991-6>
- Phartiyal, M., & Sharma, S. (2025). Socioecological Vulnerability to Climatic and Nonclimatic Stressors across Different Agroclimatic Zones in the Indian Himalaya. *Weather Climate and Society*, 17(4), 593–611. <https://doi.org/10.1175/wcas-d-25-0004.1>
- Prahalad, C. K. (2011). Bottom of the Pyramid as a Source of Breakthrough Innovations. *Journal of Product Innovation Management*, 29(1), 6–12. <https://doi.org/10.1111/j.1540-5885.2011.00874.x>
- Priambada, Y., & Puterisari, D. U. (2025). Analysis of Companies' Adaptive Strategies in Facing Global Economic Uncertainty. *Oikonomia*, 3(1), 59–70. <https://doi.org/10.61942/oikonomia.v3i1.507>
- Qureshi, I., Bhatt, B., Parthiban, R., Sun, R., Shukla, D. M., Hota, P. K., & Xu, Z. (2022). Knowledge Commoning: Scaffolding and Technoficing to Overcome Challenges of Knowledge Curation. *Information and Organization*, 32(2), 100410–100410. <https://doi.org/10.1016/j.infoandorg.2022.100410>
- Raghunatha, A., Hilletofth, P., & Thollander, P. (2025). Exploring the dynamics of public acceptance factors and drone transport planning towards sustainable transitions. *European Transport Research Review*, 17(1). <https://doi.org/10.1186/s12544-025-00748-3>
- Raji, M. A., Olodo, H. B., Oke, T. T., Addy, W. A., Ofodile, O. C., & Oyewole, A. T. (2024). THE DIGITAL TRANSFORMATION OF SMES: A COMPARATIVE REVIEW

- BETWEEN THE USA AND AFRICA [Review of *THE DIGITAL TRANSFORMATION OF SMES: A COMPARATIVE REVIEW BETWEEN THE USA AND AFRICA*]. *International Journal of Management & Entrepreneurship Research*, 6(3), 737–751. Fair East Publishers. <https://doi.org/10.51594/ijmer.v6i3.884>
- Rashed, Md., Uddin, Md. K., Islam, M. F., Faisal-E-Alam, Md., Tushar, H., & Ahmed, Md. R. (2025). Building Resilient Organizations: The Role of Technological Capability, Innovation Leadership, and Sustainability. *Global Journal of Flexible Systems Management*, 26(4), 963–995. <https://doi.org/10.1007/s40171-025-00471-x>
- Rashid, M., Sultan, A., Shaheen, F. A., Gul, A., Majid, M., & Majeed, U. (2026). *Agricultural entrepreneurship in operational management* (pp. 208–222). <https://doi.org/10.1201/9781003562627-11>
- Rayhan, Md. J., Rahman, S. M. M., Mamun, A. A., Saif, A. N. M., Islam, K. M. A., Alom, Md. M., & Hafiz, N. (2024). FinTech solutions for sustainable agricultural value chains: A perspective from smallholder farmers. *Business Strategy & Development*, 7(2). <https://doi.org/10.1002/bsd2.358>
- Raza, G. (2026a). from smallholder constraints to collective actions with insights from the Highland communities. In *Open MIND*.
- Raza, G. (2026b). Understanding the dynamics of agri-entrepreneurship in developing countries. *DepositOnce*. <https://doi.org/10.14279/depositonce-25033>
- Raza, G., Jan, K., & Kazmi, S. Z. A. (2024). Agri-entrepreneurship in developing countries – a systematic review of smallholders’ constraints [Review of *Agri-entrepreneurship in developing countries – a systematic review of smallholders’ constraints*]. *Journal of Agribusiness in Developing and Emerging Economies*. Emerald Publishing Limited. <https://doi.org/10.1108/jadee-06-2024-0185>
- Reddy, V. R., & Rahut, D. B. (2025). Smallholder viability and food security in South Asia: constraints and policy options. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1657409>
- Reficco, E., & Márquez, P. (2009). Inclusive Networks for Building BOP Markets. *Business & Society*, 51(3), 512–556. <https://doi.org/10.1177/0007650309332353>
- Resurrección, B. P., Goodrich, C. G., Song, Y., Bastola, A., Prakash, A., Joshi, D., Liebrand, J., & Shah, S. A. (2019). *In the Shadows of the Himalayan Mountains: Persistent Gender and Social Exclusion in Development* (pp. 491–516). https://doi.org/10.1007/978-3-319-92288-1_14
- Richmond, R. C., Sweeney, D. J., Frey, D., & Baliga, S. (2023). *Co-Design in the Himalaya: Embracing Local Knowledge and User Innovation to Address Household Energy Challenges*. <https://doi.org/10.1115/detc2023-115082>
- Rohrbaugh, K., Liao, C., Lacoste, M., & Longchamps, L. (2026). Farmer-centric on-farm experimentation as everyday transformative change for climate adaptation: a systematic review. *Ecology and Society*, 31(2). <https://doi.org/10.5751/es-16962-310211>
- Sambamurthy, Bharadwaj, A., & Grover. (2003). Shaping Agility through Digital Options: Reconceptualizing the Role of Information Technology in Contemporary Firms¹. *MIS Quarterly*, 27(2), 237–263. <https://doi.org/10.2307/30036530>

- Sánchez, P., Nieto, N. R., & Mayo, A. R. P. (2026). Organizational Resilience and Sustainability: The Role of Proactive and Reactive Capabilities in Uncertain Environments. *Prisma ODS Revista Multidisciplinaria Sobre Desarrollo Sostenible*, 4(2), 614–633. <https://doi.org/10.65011/prismaods.v4.i2.121>
- Santos, N. J. C., & Facca-Miess, T. M. (2024). Love and Organizing in the Context of the Base of the Pyramid: An Integrative Justice Perspective. *Humanistic Management Journal*, 9(2), 155–165. <https://doi.org/10.1007/s41463-024-00176-w>
- Saxena, Dr. S., Niranjana, R. P., & Khare, G. (2026). Role of Digital Financial Services in Increasing Market Participation of Smallholder Farmers in India. *International Scientific Journal of Engineering and Management*, 5(3), 1–9. <https://doi.org/10.55041/isjem05610>
- Schoneveld, G. C. (2022). Transforming food systems through inclusive agribusiness. *World Development*, 158, 105970–105970. <https://doi.org/10.1016/j.worlddev.2022.105970>
- Schreefel, L., Boer, I. J. M. de, Timler, C. J., Groot, J. C. J., Zwetsloot, M. J., Creamer, R., Pas, A., Zanten, H. H. E. van, & Schulte, R. P. O. (2022). How to make regenerative practices work on the farm: A modelling framework. *Agricultural Systems*, 198, 103371–103371. <https://doi.org/10.1016/j.agsy.2022.103371>
- Sengupta, S., Choudhary, S., Obayi, R., & Nayak, R. (2024). Reducing food loss through sustainable business models and agricultural innovation systems. *Supply Chain Management An International Journal*, 29(3), 540–572. <https://doi.org/10.1108/scm-01-2023-0059>
- Senyo, P., Liu, K., & Effah, J. (2019). Digital business ecosystem: Literature review and a framework for future research [Review of *Digital business ecosystem: Literature review and a framework for future research*]. *International Journal of Information Management*, 47, 52–64. Elsevier BV. <https://doi.org/10.1016/j.ijinfomgt.2019.01.002>
- Shah, B., Sah, K. K., & Jha, M. (2025). Digital transformation in Nepal: Navigating opportunities and challenges in the Digital Era. *Rajarshi Janak University Research Journal*, 3(1), 104–115. <https://doi.org/10.3126/rjurj.v3i1.80720>
- Shahzad, F., Poudel, D., & Ferreira, J. J. (2026). Innovation as a resilience-building strategy in micro-, small-, and medium-sized enterprises: An interpretative phenomenological analysis. *The International Journal of Entrepreneurship and Innovation*. <https://doi.org/10.1177/14657503261421099>
- Shamieh, S., & Bastian, B. L. (2025). Resilience Reimagined: Advancing a Gender-Sensitive Framework in Entrepreneurship Studies. *Journal of Small Business Strategy*, 35(3). <https://doi.org/10.53703/001c.142292>
- Shawabkeh, K. A. (2024). The impact of strategic agility on sustainable competitive advantage: The mediating role of strategic renewal at Jordanian telecommunication companies. *Problems and Perspectives in Management*, 22(1), 446–461. [https://doi.org/10.21511/ppm.22\(1\).2024.36](https://doi.org/10.21511/ppm.22(1).2024.36)
- Shrivastava, B., Topgay, P. D., Topgay, P. L., Dema, L., & Dave, S. (2024). EXPLORING THE NEXUS BETWEEN ENTREPRENEURSHIP AND INTERNATIONAL BUSINESS: A CASE STUDY OF BHUTAN. *AGORA INTERNATIONAL JOURNAL OF ECONOMICAL SCIENCES*, 18(2), 276–299. <https://doi.org/10.15837/ajjes.v18i2.6957>

- Siangulube, F. S., Ros-Tonen, M., Reed, J., Djoudi, H., Gumbo, D., & Sunderland, T. (2023). Navigating power imbalances in landscape governance: a network and influence analysis in southern Zambia. *Regional Environmental Change*, 23(1). <https://doi.org/10.1007/s10113-023-02031-4>
- Silva, R. D., Perera, G. D. N., & Tharanganie, M. G. (2023). Change Agility: A Paradigm of Change Acceptance for Organization Sustainability. *Management Journal for Advanced Research*, 3(6), 51–69. <https://doi.org/10.54741/mjar.3.6.6>
- Simanis, E., Hart, S. L., & Duke, D. (2008). The Base of the Pyramid Protocol: Beyond “Basic Needs” Business Strategies. *Innovations Technology Governance Globalization*, 3(1), 57–84. <https://doi.org/10.1162/itgg.2008.3.1.57>
- Singh-Peterson, L., & Underhill, S. J. R. (2016). A multi-scalar, mixed methods framework for assessing rural communities’ capacity for resilience, adaptation, and transformation. *Community Development*, 48(1), 124–140. <https://doi.org/10.1080/15575330.2016.1250103>
- Sinha, R. K., Singhanian, S., & Kumar, S. (2025). Strategic positioning and digital technologies in the dairy industry: The case of Kesar Farm. *Journal of Information Technology Teaching Cases*. <https://doi.org/10.1177/20438869251383103>
- Soni, G., Mangla, S. K., Singh, P., Dey, B. L., & Dora, M. (2021). Technological interventions in social business: Mapping current research and establishing future research agenda. *Technological Forecasting and Social Change*, 169, 120818–120818. <https://doi.org/10.1016/j.techfore.2021.120818>
- Sridhar, A., Ponnuchamy, M., Kumar, P. S., Kapoor, A., Vo, D. N., & Rangasamy, G. (2023). Digitalization of the agro-food sector for achieving sustainable development goals: a review [Review of *Digitalization of the agro-food sector for achieving sustainable development goals: a review*]. *Sustainable Food Technology*, 1(6), 783–802. Royal Society of Chemistry. <https://doi.org/10.1039/d3fb00124e>
- Sridhar, S., & Fang, E. (2019). New vistas for marketing strategy: digital, data-rich, and developing market (D3) environments. *Journal of the Academy of Marketing Science*, 47(6), 977–985. <https://doi.org/10.1007/s11747-019-00698-y>
- Stone, J. A., & Rahimifard, S. (2018). Resilience in agri-food supply chains: a critical analysis of the literature and synthesis of a novel framework. *Supply Chain Management An International Journal*, 23(3), 207–238. <https://doi.org/10.1108/scm-06-2017-0201>
- Subramanian, A., & Tomas, G. M. H. (2019). Digital platforms and inclusive business models: Evidence from agricultural value chains in South Asia. *World Development*, 114, 233–249.
- Sulemana, M. A., Tutu-Boahene, B., Owusu, S., & Akrofi, B. (2026). The role of absorptive capacity in strengthening entrepreneurial innovation and agribusiness competitiveness among food processing SMEs in Ghana. *Discover Agriculture*, 4(1). <https://doi.org/10.1007/s44279-025-00466-3>
- Tao, Z., & Shi, Y. (2025). The dynamic collaboration in crisis communication: a complex adaptive systems perspective. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-06155-2>

- Tarpey, R. J., Manley, S. C., Zeiser, A. J., & Williams, R. I. (2023). Is Paper Stationery or Agile? An Investigation of Dynamic Capabilities in the Printing Paper Supply Chain. *Journal of Small Business Strategy*, 33(2). <https://doi.org/10.53703/001c.83934>
- Tashi, D., Angus, M.-S., & David, B. (2025). Implementing gross national happiness in Bhutan as a development model and governance tool – Perspectives of policy influencers. *Australasian Journal of Paramedicine*. <https://ro.ecu.edu.au/cgi/viewcontent.cgi?article=8029&context=ecuworks2022-2026>
- Teece, D. J., Peteraf, M. A., & Leih, S. (2016). Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy. *California Management Review*, 58(4), 13–35. <https://doi.org/10.1525/cmr.2016.58.4.13>
- Teece, D. J., Pisano, G. P., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(sici\)1097-0266\(199708\)18:7<509::aid-smj882>3.0.co;2-z](https://doi.org/10.1002/(sici)1097-0266(199708)18:7<509::aid-smj882>3.0.co;2-z)
- Tete, F., Murendo, C., & Chikoko, L. (2026). Impact of resilience on performance of agricultural and retail micro, small and medium enterprises in Midlands Province, Zimbabwe. *BMC Agriculture*, 2(1). <https://doi.org/10.1186/s44399-026-00033-1>
- Thaher, N., Shibli, R. A., Pesce, V., & Al-Ghosoun, A. (2025). Drivers and barriers in embracing digital farming: Insights from the smallholder farmers in the NENA region. *Emirates Journal of Food and Agriculture*, 37, 1–18. <https://doi.org/10.3897/ejfa.2025.151184>
- Thapa, R. B., Matin, M. A., & Bajracharya, B. (2019). Capacity Building Approach and Application: Utilization of Earth Observation Data and Geospatial Information Technology in the Hindu Kush Himalaya. *Frontiers in Environmental Science*, 7. <https://doi.org/10.3389/fenvs.2019.00165>
- Torraco, R. J. (2005). Writing Integrative Literature Reviews: Guidelines and Examples. *Human Resource Development Review*, 4(3), 356–367. <https://doi.org/10.1177/1534484305278283>
- Utama, I. M. S., Widia, I. W., Arthawan, I. G. K. A., Parker, J. F., Arya, N. N., Sayaka, B., Widyastuti, S., Dahlanuddin, D., Djarkasi, G. S. S., Sumual, M. F., & Sumendap, A. L. (2025). From farm to HORECA: advancing sustainable value chains for tourism-driven agribusiness in Indonesia. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1639384>
- Vajpayee, A. (2024). Integration of Buddhist Values in Bhutan’s Governance: A Sustainable Development Model Based on Gross National Happiness (GNH). *SMARATUNGA JOURNAL OF EDUCATION AND BUDDHIST STUDIES*, 4(2), 77–90. <https://doi.org/10.53417/sjeb.v4i2.122>
- Verwaal, E., Klein, M., & Falce, J. L. L. (2021). Business Model Involvement, Adaptive Capacity, and the Triple Bottom Line at the Base of the Pyramid. *Journal of Business Ethics*, 181(3), 607–621. <https://doi.org/10.1007/s10551-021-04934-w>
- Viswanathan, M., Sreekumar, A., Sridharan, S., & Sinha, G. (2024). Addressing grand challenges through the bottom-up marketing approach: Lessons from subsistence marketplaces and marketplace literacy. *Journal of the Academy of Marketing Science*, 52(5), 1279–1300. <https://doi.org/10.1007/s11747-024-01022-z>

- Vrontis, D., Belás, J., Thrassou, A., Santoro, G., & Christofi, M. (2022). Strategic agility, openness and performance: a mixed method comparative analysis of firms operating in developed and emerging markets. *Review of Managerial Science*, 17(4), 1365–1398. <https://doi.org/10.1007/s11846-022-00562-4>
- Wadkar, S. K., Tripathy, K. K., Goswami, V., & Singh, N. K. (2025). Transforming the Food System Through PACS: A Policy-Driven Path Toward Sustainable and Fair Value Chains. *International Journal of Global Business and Competitiveness*, 20, 127–141. <https://doi.org/10.1007/s42943-025-00128-7>
- Wajid, I., & Tayşir, N. K. (2026). STRATEGIC ORIENTATIONS IN CONTINUUM: RESILIENCE AND AGILITY PATHWAYS TO COMPETITIVE ADVANTAGE. *İstanbul Ticaret Üniversitesi Girişimcilik Dergisi*, 9(19), 1–19. <https://doi.org/10.55830/tje.1675706>
- Wang, D., Li, M., Kong, R., & Hong, Y. (2025). The impact of financial resilience on farmers' entrepreneurial decision-making. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-05895-5>
- Wang, J., Wan, J., & Wu, Z. (2025). Seeking competitive advantage of farmers' cooperatives through organizational resilience: examining the role of chairpersons' self-efficacy and environmental dynamism. *Frontiers in Sustainable Food Systems*, 9. <https://doi.org/10.3389/fsufs.2025.1554308>
- Wangu, J., Mangnus, E., Westen, A. C. M. van, & Vocht, A. de. (2021). Inclusive Business for Smallholders' Household Food and Nutrition Security: Disconcerting Results from an Analysis of a French Bean Agri-investment in Kenya. *Journal of Development Policy and Practice*, 6(1), 108–127. <https://doi.org/10.1177/2455133321994209>
- Weber, Y., & Tarba, S. Y. (2014). Strategic Agility: A State of the Art Introduction to the Special Section on Strategic Agility. *California Management Review*, 56(3), 5–12. <https://doi.org/10.1525/cmr.2014.56.3.5>
- Weng, X., Pokorny, B., Schoneveld, G. C., & Mutayoba, G. (2024). Inclusive business and partnerships: Enhancing value creation for producers in the global south. *Business Strategy & Development*, 7(3). <https://doi.org/10.1002/bsd2.410>
- Wilopo, W., Nuralam, I. P., Said, A., & Dahana, W. D. (2026). Strategic agility, marketing agility, and market-driving capability: a dynamic capability perspective on SME performance in emerging markets. *Journal of Entrepreneurship in Emerging Economies*, 1–31. <https://doi.org/10.1108/jeee-02-2025-0085>
- Yogi, L. N., Thalal, T., & Bhandari, S. (2025). The role of agriculture in Nepal's economic development: Challenges, opportunities, and pathways for modernization. *Heliyon*, 11(2). <https://doi.org/10.1016/j.heliyon.2025.e41860>
- Zhang, L., You, C., Guo, Z., Liu, S., Ning, C., & Zhu, S. (2026). The impact of digital infrastructure construction on grain production resilience: evidence from the “Broadband China” pilot policy. *Frontiers in Sustainable Food Systems*, 10. <https://doi.org/10.3389/fsufs.2026.1735312>
- Zhang, Y., Lin, Z., Zhang, R., & Zhao, K. (2025). The impact of digital capabilities on farmers' choice of marketing channels: evidence from rural areas of the Yellow River Basin in

- China. *Humanities and Social Sciences Communications*, 12(1).
<https://doi.org/10.1057/s41599-025-05934-1>
- Zhang, Y., West, P., Thakholi, L., Suryawanshi, K., Supuma, M., Straub, D., Sithole, S. S., Sharma, R., Schleicher, J., Ruli, B., Rodríguez-Rodríguez, D., Rasmussen, M. B., Ramenzoni, V. C., Qin, S., Pugley, D. D., Palfrey, R., Oldekop, J. A., Nuesiri, E., Nguyen, V. T. H., ... Agyei, F. K. (2023). Governance and Conservation Effectiveness in Protected Areas and Indigenous and Locally Managed Areas. *Annual Review of Environment and Resources*, 48(1), 559–588. <https://doi.org/10.1146/annurev-environ-112321-081348>
- Zhao, J., Jia, L., Liu, Z., Li, C., & Zhang, W. (2026). Do geographical indications for agricultural products enhance farmers' incomes? Evidence from the moderating effects of brand premium and traceability-based reputation incentives. *Frontiers in Sustainable Food Systems*, 10. <https://doi.org/10.3389/fsufs.2026.1669806>
- Zubaedah, S. (2025). Agile Strategy Formation: Knowledge-Creation Capability for Entrepreneurial Success in Bio-Based Commodities. In *Advances in economics, business and management research/Advances in Economics, Business and Management Research* (pp. 146–161). Atlantis Press. https://doi.org/10.2991/978-94-6463-692-5_9
- ПІАЛІЄВ, B. I., Kozlovskiy, D., Tuhai, V., Bagirzadeh, M., & Zhosan, H. (2025). Antifragility and Crisis Resilience in Strategic Management of Agricultural Enterprises Under Global Risks. *Business Ethics and Leadership*, 9(3), 237–254. [https://doi.org/10.61093/bel.9\(3\).237-254.2025](https://doi.org/10.61093/bel.9(3).237-254.2025)

Views and opinions expressed in this article are the views and opinions of the author(s), *International Journal of Atharva* shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.