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Farmers' Dynamic Pathway Model of Objective (OWB) and Subjective Well-Being (SWB): An Exploratory Framework from a SPAR-4-SLR

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ABSTRACT: The economic dimension is well documented in the SWB literature. However, this study goes beyond the Easterlin paradox by proposing the Dynamic Pathways Model, which transforms OWB into SWB. Hence, the Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR) protocol and the TCCM (Theory, Context, Characteristics, and Methodology) framework have been used across 58 empirical studies to theorise complex and nonlinear mechanism that governs farmer satisfaction. Specific attention has been given to conversion and transition pathways, as well as to contextual moderators. This study found that happiness is a nonlinear outcome of agricultural productivity, shaped by a highly context-dependent evaluation process that filters through psychological and institutional factors. In the same policy intervention, the development focus may shift from pure income growth to mediating and moderating pathways of social, ecological, and psychological domains.

1. INTRODUCTION

The enhancement of farmers' quality of life has emerged as a central focus in emerging markets, driven by the multiple imperatives of improving agricultural productivity, fostering climate resilience, and steering sustainable rural transformation (Diener et al., 2018; Li et al., 2024; Liu et al., 2024; Luo et al., 2021). However, farmers' SWB frequently lags even with rapid economic growth driven by technological interventions. This is highly relevant to the Easterlin paradox, which doesn't guarantee that happiness rises over time with rising absolute income (Easterlin, 1974; Knight & Gunatilaka, 2010). For example, smallholders in the Brazilian Amazon continue to engage in low-income cattle ranching not because it maximises their net returns, but because of a sense of perceived safety, autonomy, and social status (Garrett et al., 2017).

Prior empirical studies have identified six primary dimensions associated with farmer SWB: economic (income, land, technology), social (networks, trust, participation), physical (health, nutrition, housing), political (policy, institutions, compensation), ecological (environmental quality, hazard exposure), and cultural (identity, tradition, relational values). Despite this, previous reviews remain restricted and narrowly focused on urban/peri-urban farming and herd health decision-making (Kristensen & Jakobsen, 2011; Rao et al., 2022; Mukherjee et al., 2024). Hence, the domain is characterised by fragmentation

with descriptive studies only. This lacks a unified framework for understanding the mechanism of the nonlinear transformation from objective to subjective evaluation (Das et al., 2020; Pekrun, 2024). As it is evident in the non-simplistic model of welfare, i.e., non-poor but unhappy" outcomes within environmentally vulnerable deltas (Cannings et al., 2024). Similarly, farmers report that life satisfaction is strongly shaped by social ties, outdoor space, and localised safety, underscoring the mediating role (Jung & Kim, 2024; Simons et al., 2026; Fan et al., 2022).

Therefore, this study addresses the gap by proposing a Dynamic Pathways Model to theorise how OWB transforms into SWB. The identifies capability bases (economic, cultural, and human assets), conversion pathways (social and physical dimensions), and contextual filters (political and ecological conditions). It transcends the descriptive OWB–SWB linear relationship to a multi-layer non-linear relationship in emerging markets.

The following sections cover methodology (Section 2), results (Section 3), framework (Section 4), discussion (Section 5), limitations (Section 6), and conclusion (Section 7).

2. MATERIALS AND METHODS

This study adhered to the SPAR-4-SLR protocol (Paul et al., 2021), incorporating the TCCM framework to ensure thorough coverage and analytical precision in theoretical and conceptual development (see Figure 1). This protocol encompasses three main stages: assembling, organizing, and evaluating, with six subphases: identification, acquisition, organization, purification, evaluation, and reporting (Paul et al., 2021).

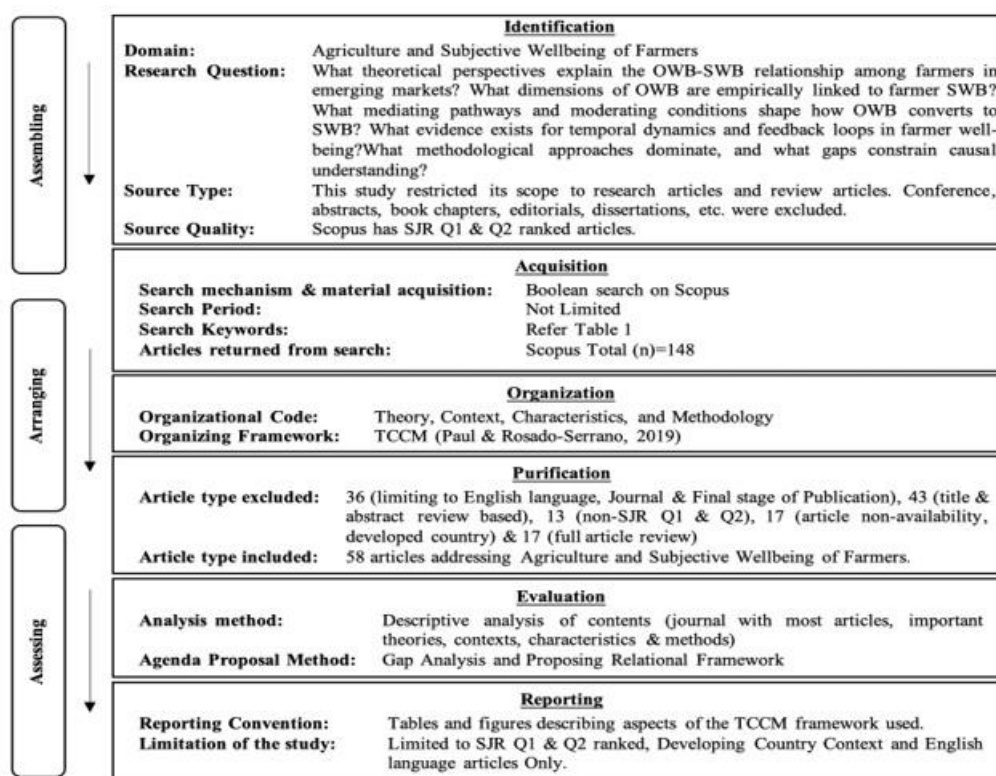


Figure 1. SPAR-4-SLR Protocol (Paul et al., 2021)

2.1. Assembling

At the Identification sub-stage, the scope, research questions, and criteria for source type and quality were established. The research involved extracting research and review articles from the Scopus database with a top-two-quartile SJR ranking (Lee et al., 2021; Memon et al., 2022; Stephen, 2020). The top quartile papers undergo a critical review process. Hence, they are well-suited to conceptual and theoretical review papers. Relevant terms (Keywords) with logical operators (AND and OR) were searched in the titles, abstracts, and keywords of the articles from the database (see Table 1). Further, the search was limited to

English-language results, and no time limit was set to capture the broadest possible relevant collection. As a result, 148 studies were extracted after filtering.

Table 1. Search criteria

Data Source	Key Words	Search Area
Scopus	“Agriculture” or “Farmer” and “Subjective Well-being” or “SWB”	Title, Abstract, and Keywords

2.2 Arranging

The second stage involves organizing and refining the extracted literature using inclusion and exclusion criteria (Paul et al., 2021). A total of 126 sources were excluded that did not meet the objective. The screening process involved identification of relevant records, removal of studies that did not address farmer/agricultural SWB, and assessment against the predefined source-quality and relevance criteria. Eligible studies were retained for final synthesis when their primary focus was on factors influencing subjective well-being in agricultural contexts. As a result, 58 research and review articles have been retained for the final comprehensive review based on factors influencing SWB in agriculture.

2.3 Assessing

The final step involves synthesizing and reporting the reviewed literature (Paul et al., 2021). To enhance credibility, the findings and discussion section were evaluated and structured using the TCCM framework (Paul & Rosado Serrano, 2019). The study presents its findings through tables, graphs, and associated subthemes drawn from the literature (see Tables 2–5; Figures 2–3). The gap analysis has identified new avenues for research and discussed the review's limitations and their practical implications.

3. RESULTS

This section presents findings on current theories, yearly publication numbers, countries, journals, research methods, study settings, and main constructs.

3.1 Extant Theories

Previous research employs a variety of theories; however, it lacks a broader logical framework connecting conditions to evaluations. Table 2 organizes theories by source and reference, with further details summarized.

Table 2. Extracted theories in this study

Sl. No	Theories	Source	Extracted Cited Literature
1.	Belief-System (BST)	(Rokeach, 1983)	(Kristensen & Jakobsen, 2011)
2.	Adaptation Level (ALT)	(Helson, 1948)	(Chen <i>et al.</i> , 2024)
3.	Amartya Sen’s Capabilities (CAT)	(Sen, 1993)	(Liu <i>et al.</i> , 2024a)
4.	Chatman’s Small World	(Chatman, 1991)	(Wei & Li, 2024)
5.	Human Needs (HNT)	(Max-Neef, 1991)	(Liu <i>et al.</i> , 2024b)
6.	Land Market (LMT)	(Alonso, 1960)	(Abokyi <i>et al.</i> , 2022)
7.	Maslow’s Hierarchical Needs (MHNT)	(Maslow, 1954)	(Minkin & Reyes-García, 2017; Cheng & Zhang, 2022; Tomar <i>et al.</i> , 2024)
8.	Rational Choice (RCT)	(March, 1994)	(Kristensen & Jakobsen, 2011)

9. Relative Deprivation (RDT)	(Stouffer <i>et al.</i> , 1949)	(Niu <i>et al.</i> , 2023; Wei & Li, 2024; Fluhner & Kraehnert, 2022)
10. Search	(Diamond, 1989)	(Wei & Li, 2024)
11. Self-Determination (SDT)	(Deci & Ryan, 1985)	(Markussen <i>et al.</i> , 2018)
12. Social Comparison	(Festinger, 1954)	(Niu <i>et al.</i> , 2023)
13. Leisure Economy (LET)	(Wei & Lü, 2018)	(Cheng & Zhang, 2022)

3.1.1 Integrating Theoretical Foundation

This study sought to address previous shortcomings through the multi-stage Dynamic Pathways Model, which explains farmers’ well-being. The Capabilities Approach by Amartya Sen (1993) serves as the basis for Layer 1 of the framework. Economic assets, land, technology, and human capital increase farmers’ opportunities. However, capable people do not always experience well-being – there is variation in how they use their resources to achieve a suitable outcome. The transition pathways are expanded through the use of Self-Determination Theory (Deci & Ryan, 1985), which helps explain how autonomy, competence, and relatedness shape subjective perceptions of objective conditions. Theories of relative deprivation (Stouffer *et al.*, 1949) and social comparison (Festinger, 1954) account for SWB effects that go beyond the objective level of resources to processes of comparative evaluation. Farmers’ SWB depends on how they experience themselves compared to other farmers, how they compare with what they had hoped, and how they perceive they are treated. Further, the temporal logic can be explained using Adaptation Level Theory (Helson, 1948); current satisfaction or SWB is a function of past experiences, shocks, expectations, future actions, investment choices, and asset accumulation.

3.2 Contexts

Figure 2 shows important trends in publications from 2006 to 2024: five in 2006-11 and six in 2012-17. However, a significant rise has been seen in 2018-2024 with 47 publications, reflecting a multi-domain analysis (*i.e.*, shift from the economic domain only).

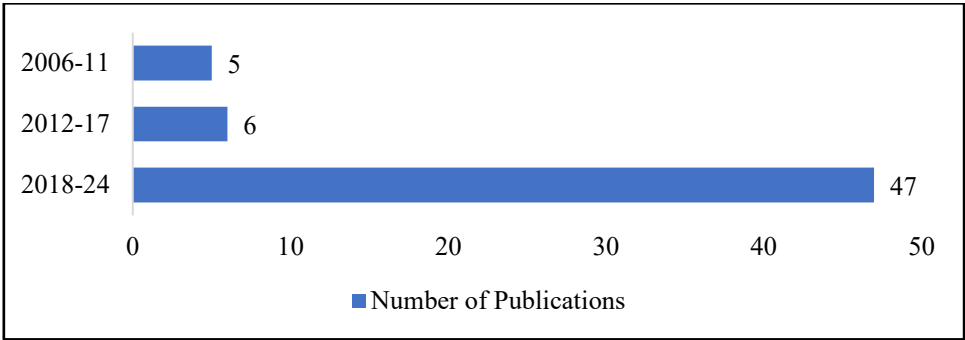


Figure 2. Publications over the period

The publications are spread across different publishers (*i.e.*, 15) and journals (*i.e.*, 42), which highlights the multidisciplinary. MDPI is the publisher with 11 publications, followed by Springer, Elsevier, Taylor & Francis, Wiley, and other publishers. Similarly, 58 studies (including 2 review papers) are concerned to developing economies like Africa, Asia, and South America. China dominates with 45 publications, indicating significant agricultural growth and research infrastructure (Huang, 2022b).

3.3 Characteristics

Table 3 outlines the key variables across six dimensions of OBW, which lead to SWB. Economic well-being (reported in 45 studies) includes farm income, off-farm income, land assets, technology adoption (*e.g.*, mechanization, internet use), and market participation. Social well-being (33 papers) focuses on social network size, community involvement, trust, and reciprocity. Physical well-being (31 papers) covers self-rated health, access to health care, food security, and housing quality. Additionally, 19 papers on political well-being that include trust in government, fairness of government policies, compensation, and institutional performance. The ecological well-being (16 papers) comprises environmental quality, hazard exposure, and pro-

environmental behaviors. Lastly, Cultural well-being (six papers) focuses on traditional identity, intergenerational issues, relational land values, and farming pride.

Table 3. Variables by Well-Being Dimension and Frequency of Use

Dimension	Variables	Frequency	Representative Papers
Economic	Farm income	38	(Abokyi et al., 2022; Chen et al., 2024; Hu et al., 2023; Li et al., 2023; Liu et al., 2024b; Niu et al., 2023; Qiu et al., 2021; Wei & Li, 2024).
	Off-farm income	31	(Hu et al., 2023; Li et al., 2023; Liu et al., 2024b; Nie et al., 2021; Rahman et al., 2023; Wei & Li, 2024)
	Land owned/operated	29	(Hu et al., 2023; Qiu et al., 2021; Vath et al., 2019; Zhao et al., 2021)
	Technology adoption index	24	(Jin et al., 2020; Lei et al., 2023; Liu et al., 2024b; Nie et al., 2021; Rahman et al., 2023; Wei & Li, 2024; Zhou et al., 2023)
	Market participation intensity	18	(Kimkong et al., 2023; Li et al., 2023; Rahman et al., 2023)
Social	Social network size	25	(Ding et al., 2023; Li et al., 2022; Qi et al., 2022; Reyes García et al., 2009; Zhang, 2022)
	Community participation frequency	22	(Ding et al., 2023; Li et al., 2022; Li et al., 2024; Qi et al., 2022)
	Trust in neighbors	19	(Ding et al., 2023; Li et al., 2022; Zhang, 2022)
	Reciprocity / mutual help	15	(Li et al., 2022; Qi et al., 2022; Woodhouse & McCabe, 2018)
	Cooperative membership	14	(Ding et al., 2023; Li et al., 2024; Wijayanto et al., 2022; Zhang, 2022)
Physical	Self-rated health	28	(Liu et al., 2024a; Qi et al., 2022; Sinha et al., 2022; Zhao et al., 2021)
	Healthcare access	20	(Ding et al., 2023; Qi et al., 2022; Sinha et al., 2022; Wu, 2024)
	Food security	19	(Ahmed et al., 2019; Patel et al., 2015; Tomar et al., 2024)
	Housing quality	17	(Liu et al., 2024a; Wu, 2024; Zhao et al., 2021)
	Dietary diversity	12	(Ahmed et al., 2019; Patel et al., 2015; Tomar et al., 2024)
Political	Trust in local government	16	(Chen et al., 2024; Ding et al., 2023; Liang et al., 2022; Vath et al., 2019)
	Perceived policy fairness	14	(Chen et al., 2024; Ding et al., 2023; Liang et al., 2022; Zhao et al., 2021)
	Compensation adequacy	11	(Chen et al., 2024; Liang et al., 2022; Vath et al., 2019; Zhao et al., 2021)
	Institutional performance	10	(Ding et al., 2023; Liang et al., 2022)
	Political participation	8	(Ding et al., 2023; Liang et al., 2022)
Ecological	Perceived environmental quality	14	(Adams et al., 2019; Adams et al., 2020; Cannings et al., 2024; Huang, 2022a; Wu et al., 2022; You et al., 2022)
	Hazard exposure	12	(Cannings et al., 2024; Fluhrer & Kraehnert, 2022; Huang, 2022a; Zhao et al., 2021)
	Pro-environmental behavior	11	(Lei et al., 2023; Li et al., 2024; Qi et al., 2022; Wijayanto et al., 2022; You et al., 2022)

	Ecosystem service dependence	9	(Adams et al., 2020; Liu et al., 2024a)
	Perceived pollution	8	(Cannings et al., 2024; Huang, 2022a)
Cultural	Traditional farmer identity	5	(Llopis et al., 2022; Markussen et al., 2018; Tomar et al., 2024)
	Intergenerational concern	4	(Llopis et al., 2022; Qiu et al., 2021)
	Relational land value	4	(Llopis et al., 2022; Qiu et al., 2021)
	Pride in farming	3	(Llopis et al., 2022; Markussen et al., 2018; Tomar et al., 2024)
	Spiritual / religious values	2	(Tomar et al., 2024)
SWB	Life satisfaction	58	All papers
	Happiness	42	Most papers
	Optimism / future expectations	15	(Cheng & Zhang, 2022; Liu & Cheng, 2022; Qi et al., 2022)
	Positive / negative affect	8	(Adams et al., 2019; Qi et al., 2022; Tomar et al., 2024)

3.4 Methods

Table 4 shows the methods used in the 58 studies, including quantitative methods (42 papers, 72.4%), mixed methods (11 papers, 19.0%), and 2 review papers (3.4%).

The methods span from simple correlations to more sophisticated methods, including ordinary least squares (18 papers), ordered probit/logit (15 papers), structural equation modelling (8 papers), and propensity score matching (6 papers). Only one Longitudinal study has been reported, while 72.4% were cross-sectional. This makes it very difficult to draw causal inferences.

Table 4. Methodological Approaches Across the 58 Studies

Methodology	Number of Papers	Percentage
Quantitative	42	72.4%
OLS regression	18	31.0%
Ordered probit/logit	15	25.9%
Structural equation modeling	8	13.8%
Propensity score matching	6	10.3%
Instrumental variables / 2SLS	5	8.6%
Multilevel / hierarchical models	4	6.9%
Mixed-methods	11	19.0%
Qualitative	2	3.4%
Longitudinal / panel data	3	5.2%

4. FRAMEWORK DEVELOPMENT: THE DYNAMIC PATHWAYS MODEL

This paper proposes a Dynamic Pathways Model of farmer subjective well-being as a three-layer process, based on an analysis of 58 studies. Foundational assets constitute the resource base; conversion and transition pathways explain how these resources are transformed into social, physical, and subjective well-being; and contextual filters determine the extent to which these pathways generate positive or negative SWB outcomes. It shows that objective factors of well-being affect SWB indirectly via

conversion, transition, and moderation. Conversion pathways transform assets into social and physical conditions, while transition pathways transform the conditions into subjective evaluations. The process is moderated by political and ecological contexts. There are three levels of hierarchy (see Figure 3). The first level is the Foundational Assets (economic, human, and cultural). The second layer consists of mediation (Conversion and Transition) pathways, which include social and physical objective well-being. The third layer consists of moderating pathways, which are determined by political and ecological processes. This either increases benefits in supportive environments or decreases benefits in periods of instability.

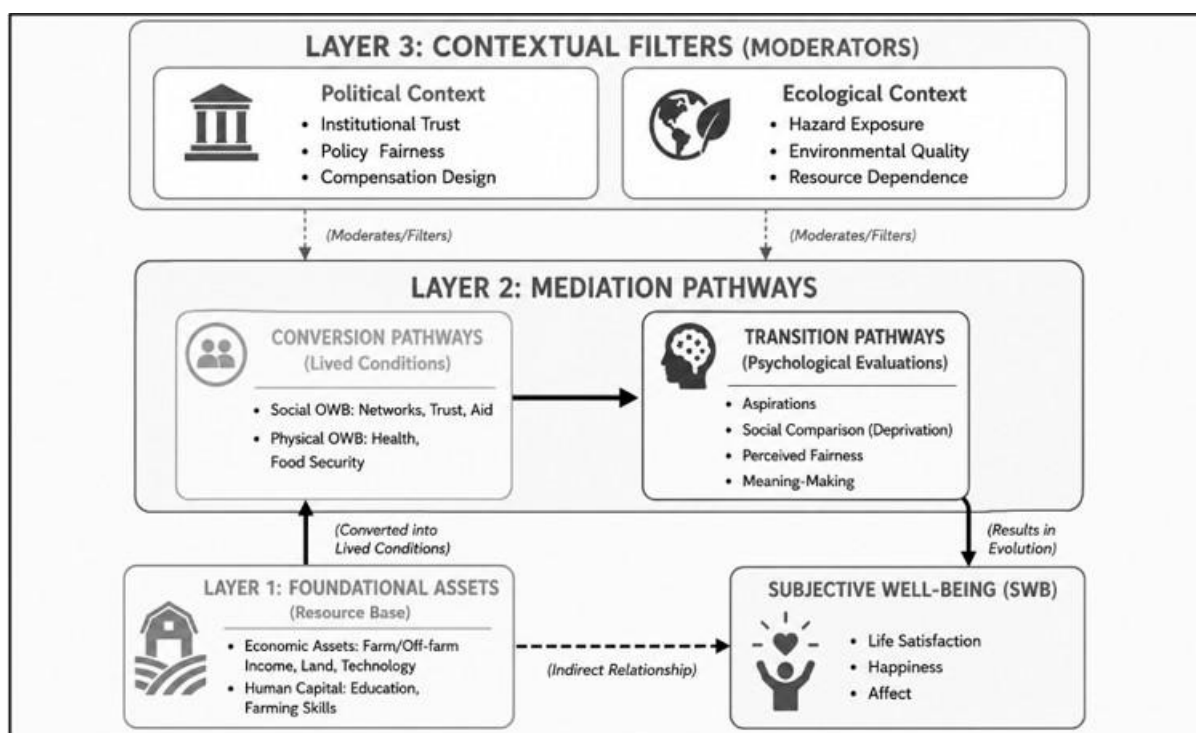


Figure 3. Dynamic Pathways Model of Farmer Well-Being

In this framework, OWB refers to observable economic, social, physical, and material conditions; SWB refers to individuals' subjective evaluation of their life and well-being. Conversion pathways refer to the transformation of foundational assets into intermediate well-being conditions, whereas transition pathways describe the movement from these conditions to subjective evaluations. Political and ecological conditions function as contextual filters.

The proposed pathway model is not a causal model directly tested by the reviewed studies. Accordingly, findings supported by the reviewed literature are presented as evidence, whereas the proposed relationships and pathway structure represent the authors' theoretical interpretation and synthesis of that evidence.

4.1 Layer 1: Foundational Assets – Economic, Human, and Cultural Endowments

This layer comprises three interconnected asset bases that collectively constitute the resources available to farmers for mobilization.

1. **Economic assets:** Core endowments of economic dimension have been identified in the literature: household farm income (Abokyi et al., 2022; Chen et al., 2024; Hu et al., 2023; Li et al., 2023; Liu et al., 2024b; Niu et al., 2023; Qiu et al., 2021; Wei & Li, 2024); off-farm income (Hu et al., 2023; Li et al., 2023; Liu et al., 2024b; Nie et al., 2021; Rahman et al., 2023; Wei & Li, 2024); total land owned or managed (Hu et al., 2023; Qiu et al., 2021; Vath et al., 2019; Zhao et al., 2021); a technology adoption index including mechanization, smartphone use, and internet access (Jin et al., 2020; Lei et al., 2023; Liu et al., 2024; Nie et al., 2020; Rahman et al., 2023; Wei & Li, 2024; Zhou et al., 2023); and market participation intensity (Kimkong et al., 2023; Li et al., 2023; Rahman et al., 2023).

2. **Human capital** includes education, farming skills, access to information, and innovation capacity, serving as a key foundational asset. Education boosts economic resources and social and physical well-being (Liu et al., 2024a; Niu et al., 2023); skills and innovation facilitate adaptation to changing circumstances (Lei et al., 2023; Rahman et al., 2023). It is an enabling capacity that helps convert economic resources into subjective, social, and physical well-being. Access to knowledge, education, farming skills, and adaptive capacity all boost farmers' ability to effectively mobilize economic assets amid evolving environmental and institutional contexts.
3. **The cultural lens** encompasses variables that capture the cultural associations of farming and land: 1) the strength of the traditional farmer identity (Llopis et al., 2022; Markussen et al., 2018; Tomar et al., 2024); 2) the intergenerational concern to next generation (Llopis et al., 2022; Qiu et al., 2021); 3) the relational value of land, which prioritises heritage rather than a commodity (Llopis et al., 2022; Qiu et al., 2021); and 4) pride in the farming occupation (Llopis et al., 2022; Markussen et al., 2018; Tomar et al., 2024).
4. **Dynamic tension:** Economic and cultural assets are interrelated. Cultural identity can be reinforced or diminished by economic modernization, including land sales and technological adoption. However, it has been found that renting land to strangers does not improve SWB because it disrupts culturally established social attachments (Qiu et al., 2020). Further, accordingly, the model proposes a bidirectional link between economic and cultural variables, with the overall effect on SWB being either positive or negative, depending on whether economic activities are congruent or incongruent with cultural values.

4.2 Layer 2: Conversion Pathways – Mediating the Asset-to-SWB Relationship

This framework delineates both conversion pathways and transition pathways. Conversion pathways are the ways in which objective assets are transformed into the social and physical conditions experienced in everyday life. Transition pathways are psychological processes that transform lived conditions into subjective well-being outcomes.

1. **The social pathway involves** variables that mediate the relationship between economic status and subjective well-being (SWB): the size of one's social network (Ding et al., 2023; Li et al., 2022; Qi et al., 2022; Reyes-García et al., 2009; Zhang, 2022), how often individuals participate in community activities (Ding et al., 2023; Li et al., 2024; Li et al., 2022; Qi et al., 2022), and the level of trust in neighbors (Ding et al., 2023; Li et al., 2022; Zhang, 2022).
2. **Physical pathways** involve self-rated health (Liu et al., 2024a; Qi et al., 2022; Qi et al., 2022; Sinha et al., 2022; Zhao et al., 2021), healthcare access (Ding et al., 2023; Qi et al., 2022; Sinha et al., 2022; Wu, 2024), and food security (Ahmed et al., 2019; Patel et al., 2015; Tomar et al., 2023). According to Li et al. (2024), ecological farming enhances SWB by promoting “neighborhood communication,” a social pathway.

Qi et al. (2022) demonstrate that pro-environmental behavior boosts SWB by improving self-rated health. Qiu et al. (2021) showed that land rental positively affects SWB only when it has social connections with acquaintances. Physical health is an important mediating factor: adverse health impacts are part of the reason that land expropriation is associated with decreased SWB (Zhao et al., 2021); better irrigation infrastructure is associated with reduced health risks, contributing to increased SWB (Sinha et al., 2022).

4.2.1 Transition Pathways: From Objective Conditions to Subjective Evaluations

Social and physical changes are pathways to change, but the SWB change is through a psychological interpretation and personal evaluation pathway. The reviewed studies all show that other factors are involved in the objective assessment of conditions, which are not sufficient to explain SWB, because farmers understand these conditions cognitively and emotionally in different ways and across different contexts, using a range of evaluative processes.

1. **Aspirations:** Cheng and Zhang (2022) show that rising expectations of social insurance and prosperity can affect satisfaction levels regardless of changes in actual income.
2. **Social Comparison:** Niu et al. (2023) and Fluhrer and Kraehnert (2022) show that farmers evaluate their own well-being relative to their neighbors, peer groups, and communities.
3. **Fairness:** Chen et al. (2024) demonstrate that the evaluation of policy outcomes is contextualized by an assessment of the policy implementation process and whether it is seen as fair and legitimate.

4. **Meaning-making:** Tomar et al. (2024) show that farming activities associated with cultural pride, peace of mind, spirituality, and identity are linked to better SWB than activities focused solely on income.

Therefore, the same objective circumstances can produce different SWB outcomes because farmers culturally assess, compare, interpret, and emotionally respond to them in different ways. As farmers encounter new situations, goals, and conditions in their livelihoods, they continually reinterpret their circumstances.

The framework identifies two types of pathways: conversion pathways, which refer to the ways in which objective assets are converted into lived social and physical conditions, and transition pathways, which refer to the ways in which the lived conditions are cognitively and emotionally converted into subjective evaluations. The main differences are described in Table 5.

Table 5. Distinguishing conversion pathways from transition pathways in the Dynamic Pathways Model

Feature	Conversion Pathways	Transition Pathways
Function	Transform objective assets into lived conditions	Transform lived conditions into subjective evaluations
Examples	Social capital, physical health, food security	Aspirations, social comparison, perceived fairness
Measured by	Observable indicators (network size, health status)	Psychological scales (relative deprivation, fairness perception)
Role in model	Mediators (Layer 2)	Post-mediation evaluative processes
Temporal nature	More stable, slower-changing	More dynamic, context-sensitive

4.3 Layer 3: Contextual Filters – Political and Ecological Moderation

Political and ecological factors predominantly operate as contextual factors that shape the magnitude, trajectory, and transformation of conversion and transition pathways. They are not direct, independent causes of SWB; rather, situational factors. On the most basic level, they serve as moderators, shaping the nature and strength of relationships in Layer 2.

1. **The political context** involves trust in local government (Chen et al., 2024; Ding et al., 2023; Liang et al., 2022; Vath et al., 2019), perceived policy fairness (Chen et al., 2024; Ding et al., 2023; Liang et al., 2022; Zhao et al., 2021), and compensation policy (Chen et al., 2024; Liang et al., 2022; Vath et al., 2019; Zhao et al., 2021; Fan et al., 2022).
2. **Ecological context** involves perceived environmental quality (Adams et al., 2019; Adams et al., 2020; Cannings et al., 2024; Huang, 2022a; Wu et al., 2022; You et al., 2022); exposure to natural hazards (Cannings et al., 2024; Fluhner & Kraehnert, 2022; Huang, 2022a; Zhao et al., 2021); and participation in pro-environmental behaviors (Lei et al., 2023; Li et al., 2024; Qi et al., 2022; Wijayanto et al., 2022; You et al., 2022).

Chen et al. (2024) demonstrate that the negative impact of subsidy expiration on SWB is more pronounced among low-income farmers. As Cannings et al. (2024) note, in less favorable environmental settings in deltas, even non-poor farmers are unhappy, while in more stable agricultural settings, the poor farmers can be happy. According to Ding et al. (2023), the positive effects of social capital on SWB are strengthened by trust in government. Liang et al. (2022) show that the ‘index replacement model,’ which preserves social networks, produces the largest positive impact.

4.4 The Cultural Overarching Lens

Cultural variables are not only considered as standalone moderators but throughout all the layers of the framework as a broad interpretative lens (Bruno et al., 2021). Factors such as cultural identity, relational land values, farming pride, spirituality, and intergenerational responsibility shape a farmer’s sense of economic opportunities, social relations, interpretation of environmental issues, and subjective well-being. Therefore, culture influences how objective conditions are defined and their effectiveness in conversion and transition pathways.

Llopis et al. (2022) demonstrate that the relational values linked to land significantly influence how farmers respond to economic opportunities. Tomar et al. (2024) link organic farming to greater peace of mind and better interpersonal relationships. Markussen et al. (2018) find that self-employed farmers experience higher SWB, which is attributed to feelings of autonomy, competence, and relatedness values shaped by culture.

5. DISCUSSION

The Dynamic Pathways Model outlines several interconnected mechanisms that connect objective and subjective well-being (Dodge et al., 2012). The upcoming subsections explore the evidence supporting each mechanism in detail.

5.1 The Mediating Role of Social and Physical Well-Being

In China, Li et al. (2024) find that ecological farming can improve SWB, mainly through “neighborhood communication” (a social pathway). Qi et al. (2022) found that improved self-perceived health has the greatest impact on SWB (via the physical pathway). A quasi-natural experiment showed that renting land to friends rather than to strangers had a positive effect on SWB, even when the income from the land was the same (Qiu et al., 2021). In Indonesia, Wijayanto et al. (2022) demonstrate that agroforestry positively affects SWB. Mediation is supported by Markussen et al. (2018), who found that self-employed farmers feel more autonomous, and by Niu et al. (2023), who found that livelihood capital influences SWB through perceived income fairness. Ding et al. (2023) note a two-way reinforcement in rural China: trust is positively associated with health outcomes, and healthy people are more likely to participate in society. In Vietnam, Duc (2009) showed that both job satisfaction and cash earnings from fish culture increase farmers’ happiness, and that better-educated farmers who are more satisfied with fish farming have a 0.23% higher probability of happiness for each one-level increase in job satisfaction.

5.2 The Moderating Role of Political Context

The political context plays a crucial role in shaping the economic, social, and subjective well-being (SWB) pathway, influenced by factors such as trust in government, perceived fairness of policies, and the adequacy of compensation. Chen et al. (2024) find that when subsidies in China’s Sloping Land Conversion Program expire, low-income farmers experience a greater decrease in SWB. Ding et al. (2023) show that institutional performance and trust in government enhance the impact of social capital on SWB. A study by Liang et al. (2022) demonstrates that an index-replacement model (preserving social networks) yields higher SWB than monetary compensation alone. Ding et al. (2019) highlight the role of institutional trust, and Vath et al. (2019) show that SWB increases more in Ghana when farmers perceive institutional arrangements as fair. Further, negative emotions are associated with perceived unfair compensation of landless peasants (Liang and Zhu, 2015). Adams et al. (2020) show that improved governance and property rights strengthen the relationship between natural resource dependence and SWB in Bangladesh. This provides evidence that political context (policy fairness) operates as a moderator through affective channels.

5.3 The Moderating Role of Ecological Context

Ecological contexts moderate the economic-SWB relationship, as evidenced in the Volta Delta, where ecological degradation causes anxiety even with high income (Cannings et al., 2024). Huang (2022a) shows that exposure to natural hazards in rural China reduces SWB. Fluhrer and Kraehnert (2022) illustrate how a harsh winter event in Mongolia negatively affects SWB through social comparison. Adams et al. (2019) and Adams et al. (2020) show that dependence on ecosystem services has complex effects on SWB in coastal Bangladesh. You et al. (2022) demonstrate that China’s Grain for Green Program affects SWB (Uchida et al., 2005). Wu et al. (2022) report that ecological factors are significant in the agro-pastoral ecotone of northern China.

5.4 The Cultural Lens and Dynamic Tension

Cultural values do not add another dimension; rather, they serve as a framework that can shape perceptions and priorities for all other factors. Markussen et al. (2017) capture the “happy farmer” phenomenon, driven by culturally shaped feelings of autonomy. According to Xiang et al. (2025) and Tomar et al. (2024), organic farming in China and India has a positive impact on SWB. The tension between economic and cultural assets is captured in Qiu et al. (2021): Land rental to acquaintances raises SWB, but renting to strangers does not.

5.5 Temporal Dynamics and Path Dependence

Most studies are cross-sectional, but longitudinal research shows that well-being is influenced by persistence over time. Adams et al. (2019) found that past failures negatively impact current SWB. Fluhner and Kraehnert (2022) show extreme weather harms SWB beyond income effects. Cross-sectional data reveal that SWB and future behaviors reinforce one another: Niu et al. (2023) and Li et al. (2022) link higher SWB to greater investment. Similarly, Wijayanto et al. (2022) found that agroforestry boosts SWB and encourages sustainable practices.

Therefore, well-being is dynamic: past experiences persist, and current SWB influences future actions. However, causality and feedback need more longitudinal research, which is limited (only three of 58 studies).

6. LIMITATIONS AND GENERALIZABILITY

This study has several limitations. Firstly, the evidence base is predominantly focused on China (30 of 58 papers; 51.7%), limiting generalizability to South Asian and sub-Saharan African agrarian systems. Secondly, only six studies examined cultural variables. Thirdly, 72.4% of the studies examined were cross-sectional, limiting the ability to make strict causal inferences. Fourthly, non-English and lower-tier journals were excluded. There is a need to expand to underrepresented areas (South Asia, Sub-Saharan Africa, Latin America) using longitudinal approaches. Furthermore, measurement error can attenuate observed wealth-SWB correlations, suggesting that future studies should consider structural equation modeling across diverse cultural contexts.

7. CONCLUSION

This paper presents a Dynamic Pathways Model of farmers' SWB in developing countries, which does not assume a direct connection between OWB and SWB. It suggests that SWB is affected by a set of economic, cultural, and human assets processed through social, physical, and psychological pathways. Social and physical well-being are key factors for mediation. Political and environmental factors act as vital moderators, while cultural values provide a general interpretive lens. The framework underscores that holistic interventions will be more effective for policymakers than focusing on a single economic aspect. The model provides a strong theoretical basis for guiding future research directions in longitudinal, comparative, and context-sensitive agricultural studies.

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AUTHOR CONTRIBUTIONS

Lokesh Kumar Jena and Dukhabandhu Sahoo: Conceptualization, Investigation.

Lokesh Kumar Jena: Methodology.

Lokesh Kumar Jena, Pintu Majhi, Seemarani Meher, and Valavadra Sahu: Data Curation, Formal Analysis.

Lokesh Kumar Jena and Dukhabandhu Sahoo: Supervision, Writing—Review & Editing.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ETHICS STATEMENT

Ethical approval was not required for this study.

DATA AVAILABILITY STATEMENT

Not Applicable.

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