

The Humanistic Cycle of Sustainable Empowerment: Integrating Smart Technology, Cross-Sectoral Synergy, and Digital Social Justice for Sustainable Development

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Info Artikel	Abstract
Diajukan: 24 Desember 2026 Diterima: 16 Mei 2026 Diterbitkan: 30 September 2026 Keywords: Smart Technology Integration, Cross-Sectoral Synergy, Digital Social Justice, Community Empowerment, Humanistic Sustainability, Sustainable Development Goals Impact  Lisensi: cc-by-sa Copyright © 2026 Rachmad Y.E.	<i>In the era of rapid digital transformation, sustainable development demands more than technological innovation or institutional reform—it requires a humanistic consciousness that harmonizes knowledge, ethics, and collective empowerment. This study explores how smart technology, cross-sectoral collaboration, and digital social justice shape sustainable community empowerment in Indonesia. Using a Sequential Explanatory Mixed Methods design, the quantitative phase employed Partial Least Squares–Structural Equation Modeling (PLS-SEM) with 210 respondents from government, academia, industry, and community sectors. The results confirm significant relationships among Smart Technology Integration, Cross-Sectoral Synergy, Digital Social Justice, Community Empowerment, and Sustainable Development Goals Impact. Complementing this, qualitative analysis through in-depth interviews with 30 participants revealed five interrelated themes: technology as a social space, collaboration as a value relation, digital justice as moral awareness, empowerment as self-transformation, and sustainability as meaningful life. The integration of both phases produced the Humanistic Cycle of Sustainable Empowerment, a reflective framework that positions technology as a moral medium for justice and collaboration. This research contributes to the evolving paradigm of Humanistic Mixed Methods, providing a human-centered perspective for digital governance and reaffirming that sustainability is not built by smarter systems, but by wiser humans guided by moral awareness.</i>

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Introduction

Sustainable development in the digital era can no longer be defined merely by economic growth or technological efficiency. The complexity of today's social realities demands a more reflective approach one in which technological progress aligns with social justice, civic participation, and environmental balance.

Indonesia, as a nation rich in cultural and social diversity, faces a crucial challenge: how to integrate technological innovation with humanistic values in pursuing the Sustainable Development Goals (SDGs). In practice, many technology-based initiatives have failed to empower communities because they overlooked local ethical and social contexts. Conversely, socially grounded programs with strong moral foundations often lack the systemic and digital innovation

needed for scalability. Within this context, this study gains strong relevance as it seeks to: (1) present an integrative conceptual model combining technological, social, and ethical dimensions; (2) contribute a methodological advancement through the integration of quantitative and qualitative paradigms; and (3) offer a humanistic framework of development in which sustainability is measured not only by economic outcomes, but also by the growth of social and moral consciousness.

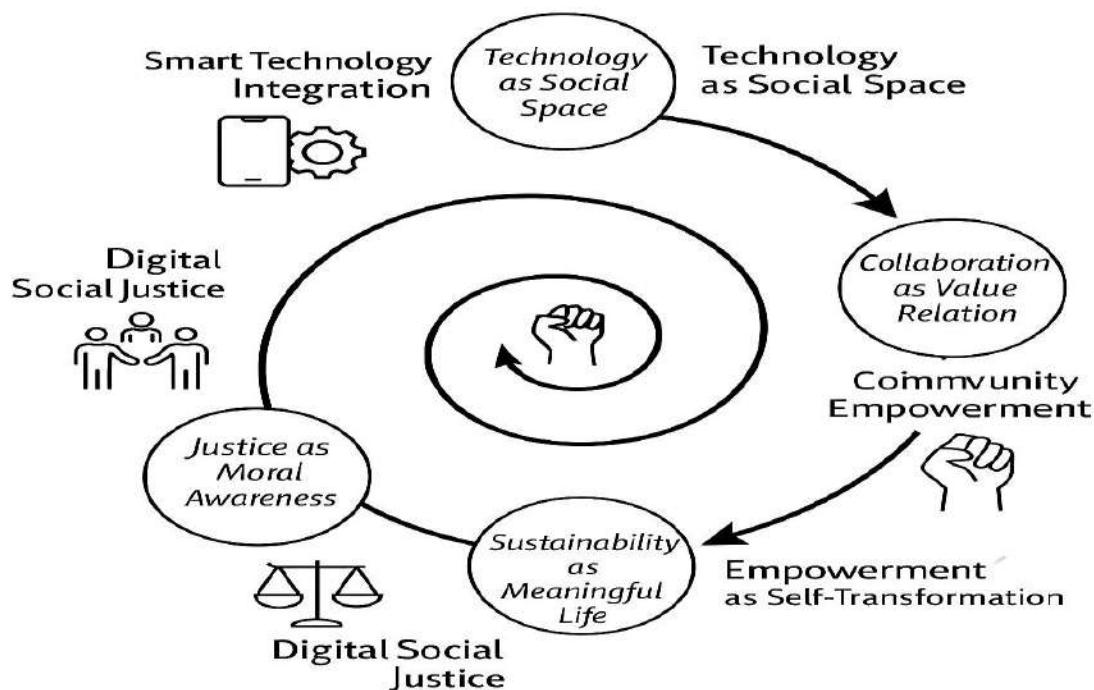


Figure 1. The Concept of Technological Innovation and Humanitarian Values in Achieving the Sustainable Development Goals (SDGs). **Source :** Yoesoep Edhie Rachmad, 2025.

This gap underscores the need for a synergistic, cross-sectoral, and multidisciplinary approach to achieve sustainable development. Smart technologies, when integrated with digital social justice, can serve as inclusive spaces for social participation. However, their success depends largely on the quality of collaboration among key actors government, academia, industry, and local communities.

The novelty of this research lies in three main dimensions: Epistemological: It bridges the positivist (quantitative) and interpretive-humanistic (qualitative) paradigms within a Sequential Explanatory Mixed Methods design. This approach provides new insight that development should be understood not only through data and causality, but also through social meaning and moral awareness.

Theoretical: It formulates the Humanistic Cycle of Sustainable Empowerment, a spiral model that illustrates the dynamic interaction between technology, collaboration, justice, empowerment, and sustainability as an ongoing social process.

Practical: It offers an applicable framework for governments, industries, and communities to implement digital transformation grounded in social justice, directing technology toward participation, ethics, and collective well-being.

This study combines two scientific perspectives quantitative and qualitative to provide a

holistic understanding of cross-sectoral synergy in community empowerment. The quantitative approach measures empirical relationships among key variables technology, collaboration, digital justice, and empowerment while the qualitative approach explores the underlying social meanings, moral experiences, and reflective processes. The study aims to: Analyze quantitatively the relationships among Smart Technology Integration (STI), Cross-Sectoral Synergy (CSS), Digital Social Justice (DSJ), Community Empowerment (CE), and Sustainable Development Goals Impact (SDGI).

Explore qualitatively the social meanings, values, and experiences of cross-sector actors in implementing fair and inclusive technological innovation; and Integrate both approaches into a humanistic model of sustainable development, illustrating a spiral process of social awareness from technology to values, from systems to humanity.

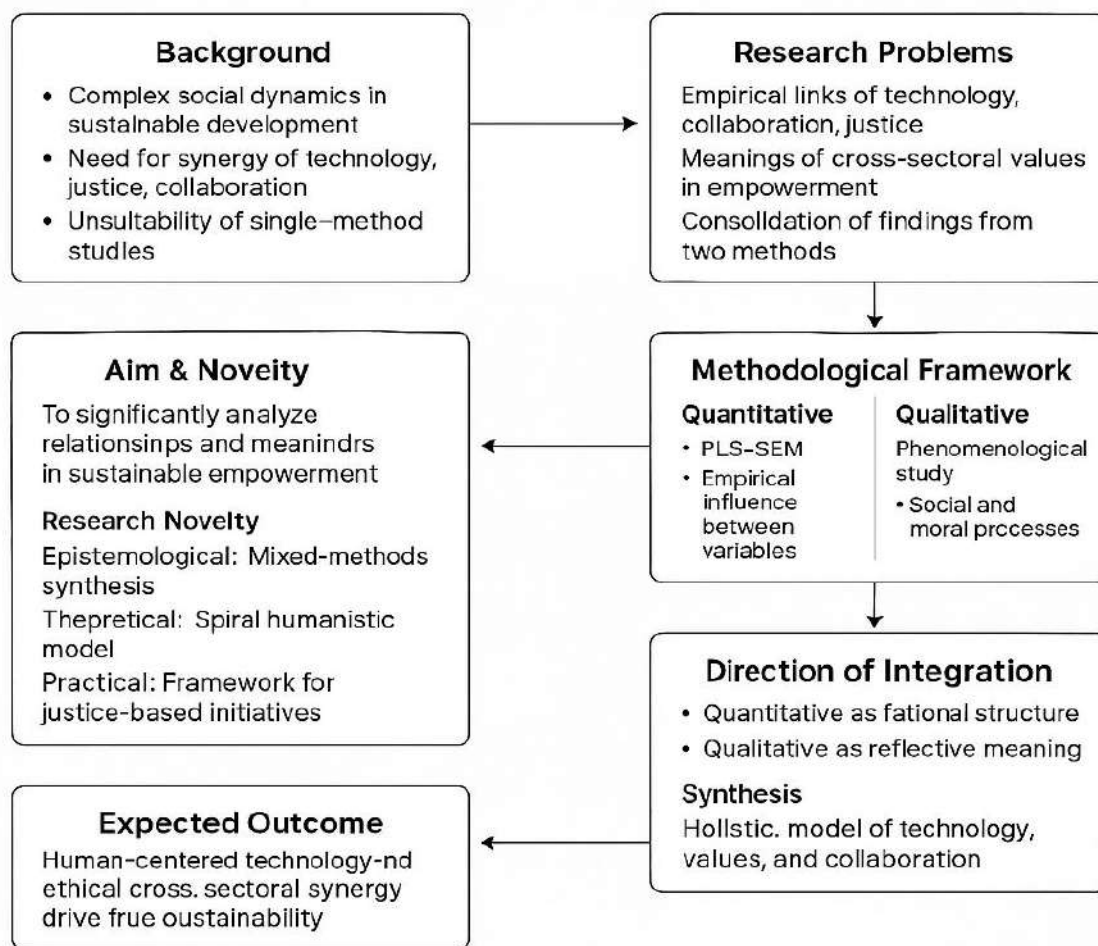


Figure 2. Sequential Explanatory Mixed Methods Design.

Source : Yoesoep Edhie Rachmad, 2025.

In the increasingly digital global landscape, inequality no longer manifests solely in economic access but also in access to meaning and digital justice. The divide between those who “control technology” and those who are “controlled by it” has created profound ethical challenges. As a response, the academic discourse has begun to shift from technological determinism toward human-centered innovation, positioning humans not merely as users of technology, but as reflective

subjects capable of guiding it toward moral and social purposes.

Based on this background, the research focuses on three fundamental questions:

1. How can the empirical relationships among smart technology integration, cross-sectoral synergy, digital social justice, community empowerment, and SDG impact be measured quantitatively?
2. How do cross-sector actors interpret and embody values of justice, collaboration, and humanity in technology-based empowerment practices?
3. How can both empirical and reflective findings be integrated into a humanistic model of sustainable development that harmonizes systemic logic with social meaning?

These questions affirm that this research moves beyond measuring relationships among variables it strives to uncover the harmony between numbers and meaning, between systems and human consciousness.

THEORETICAL REVIEW

Sustainable Development and Social Humanism

The concept of sustainable development is fundamentally rooted in the balance between economic growth, social justice, and environmental preservation (Brundtland Report, 1987). However, in the digital era, development can no longer be understood merely as system efficiency, but rather as a process of humanizing technology. Within this framework, technology should not be seen merely as a tool of production but as a moral medium capable of shaping social relationships, equality, and the meaning of human life (Sen, 1999; Sachs, 2015). The paradigm of social humanism positions human beings as the moral subjects of development. It rejects technological determinism, which views progress as an automatic result of technical innovation, and instead emphasizes that true progress depends on awareness, empathy, and social reflection (Nussbaum, 2011). Thus, sustainability is not only about “building intelligent systems” but about “becoming wiser human beings.”

Cross-Sectoral Synergy and Social Collaboration

In the context of modern development, cross-sectoral synergy is understood as a strategic collaboration between government, academia, industry, and society (the Quadruple Helix model). This theory was proposed by Etzkowitz and Leydesdorff (2000), who explained that social and economic innovation becomes effective when there is dynamic interaction among these four key actors. Cross-sectoral synergy is not only interpreted structurally but also as a relationship of shared values. Meaningful collaboration is not born from administrative agreements but from trust, empathy, and shared responsibility. This perspective aligns with Putnam’s (2000) theory of social capital, which highlights the importance of networks of trust as the social glue enabling sustainable collaboration.

Smart Technology Integration in Community Empowerment

The concept of Smart Technology Integration (STI) refers to the use of digital technologies, data, and intelligent systems to enhance social efficiency and public participation (Nam & Pardo, 2011). However, many recent studies emphasize that technology fails to achieve social impact when it is not accompanied by contextual understanding and human values (Brynjolfsson & McAfee, 2014). In this context, technology is no longer neutral but carries a moral dimension, as it shapes how humans interact, collaborate, and perceive justice. Therefore, genuine technology integration is not merely

the digitalization of processes but the transformation of values and social consciousness within the digital system itself.

Digital Social Justice

The theory of Digital Social Justice (DSJ) evolves from John Rawls' (1971) classical idea of justice as fairness, later adapted into the digital sphere by Graham (2019) and Couldry & Mejias (2020). Digital justice emphasizes equality in access, participation, and representation within digital spaces. DSJ functions as a moral moderating factor that strengthens the relationship between cross-sectoral collaboration and community empowerment. In other words, without digital justice, technology merely amplifies inequality rather than empowerment. DSJ represents a collective moral awareness that every innovation must be balanced with the ethics of inclusivity and social justice.

Community Empowerment and Self-Transformation

The theory of community empowerment finds its roots in Paulo Freire's (1970) *Pedagogy of the Oppressed*, which asserts that empowerment is not a transfer of power from external agents but a reflective process emerging from within the community. This approach aligns with Mezirow's (1997) transformative learning theory, where individuals and groups develop critical awareness through dialogue, experience, and reflection. This research demonstrates that genuine empowerment is a collective self-transformation, not merely the outcome of intervention programs. Communities become reflective subjects capable of directing social change autonomously and with dignity.

Sustainability as Awareness of Meaningful Living

Theoretically, sustainability concerns not only economic and ecological continuity but also existential sustainability—the pursuit of meaning and life balance (Vallance et al., 2011). True sustainability arises from social reflection, where communities perceive development as a moral journey toward harmony between technology, nature, and humanity. Thus, in this context, the theory of sustainability transforms into human-centered sustainability, a form of sustainability that cultivates ethical, spiritual, and social consciousness.

Research Methodology

By combining the quantitative approach of PLS-SEM and the qualitative approach of Thematic Analysis, this research not only verifies the relationships among development variables but also brings to life the moral meanings behind those relationships. The resulting final model, the Humanistic Cycle of Sustainable Empowerment, illustrates the integration between scientific rationality and social consciousness, in which every technological advancement is directed toward strengthening justice and humanity.

The research was conducted from June 2025 to October 2025 using a Mixed Methods Research (MMR) approach that integrates two major paradigms quantitative and qualitative to holistically understand both the empirical and interpretive dimensions of the studied phenomenon. This approach was selected because the issue being examined is multidimensional in nature: the cross-sectoral synergy in the implementation of technology and innovation for sustainable community empowerment.

Conceptually, this study believes that the quantitative method provides structure and rational validation, while the qualitative method provides soul, meaning, and reflective social understanding. The combination of both methods results in a model that not only explains what happens, but also why and how meaning is constructed within a social context.

The research design employed is the Sequential Explanatory Design, where the quantitative phase is

conducted first to test the relationships among variables, followed by a qualitative phase to interpret the findings more deeply.

The paradigm applied in this research is pragmatic-humanistic. This paradigm holds that scientific truth is derived not only from numerical verification (positivism) but also from understanding human experience (interpretivism). The pragmatic approach enables the researcher to combine deductive logic (quantitative) and inductive reasoning (qualitative) within a balanced methodological framework.

This research consists of three main stages:

1. Stage 1 – Quantitative (PLS-SEM): Analyzing the relationships among research variables and testing an empirical model of sustainable development based on technology and cross-sectoral collaboration.
2. Stage 2 – Qualitative (Thematic Analysis): Deepening the quantitative results through social interpretation, in-depth interviews, and analysis of the meanings behind the experiences of cross-sector actors.
3. Stage 3 – Integration (Meta-Inference): Integrating the quantitative and qualitative findings into a single conceptual model known as the Humanistic Cycle of Sustainable Empowerment.

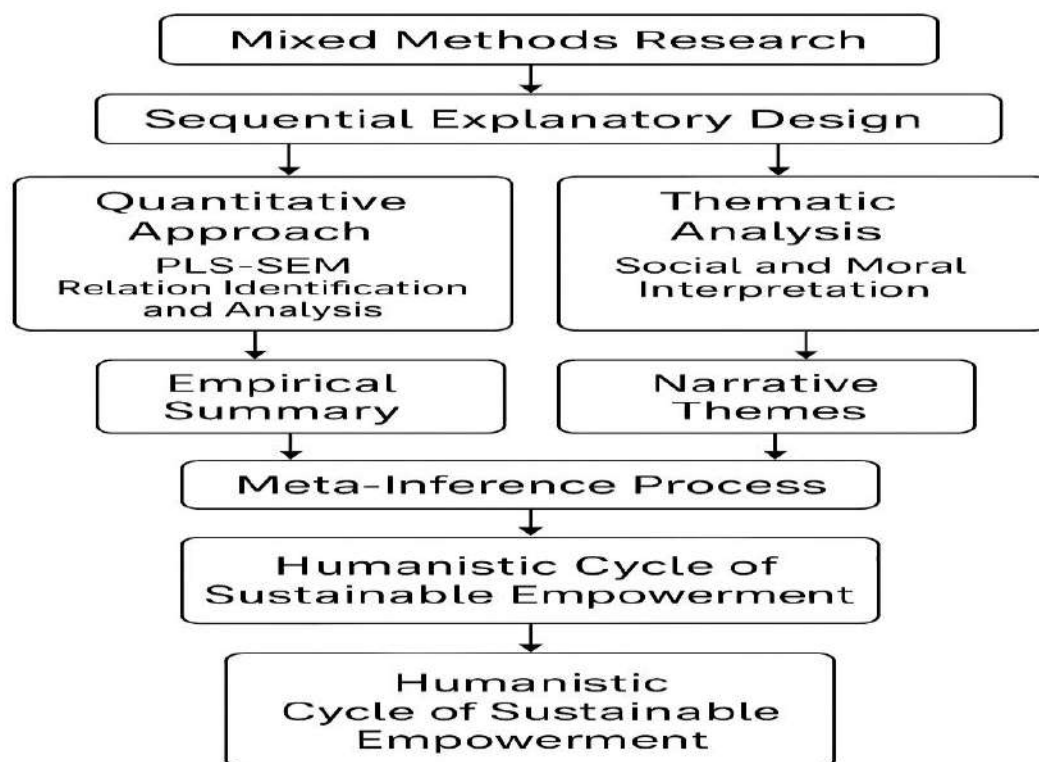


Figure 3. Humanistic Quant-Qual Integration Framework Model and Humanistic Cycle of Sustainable Empowerment Conceptual Model. **Source :** Yoesoep Edhie Rachmad, 2025.

Quantitative Phase

The quantitative phase aims to empirically test the relationships among the main variables: Smart Technology Integration (STI), Cross-Sectoral Synergy (CSS), Digital Social Justice (DSJ), Community Empowerment (CE), and Sustainable Development Goals Impact (SDGI).

The research population consists of cross-sectoral actors involved in technology-based and social empowerment programs, including government officials, academics and researchers, business practitioners and CSR actors, community members, and local leaders. The number of quantitative respondents is 210 people. The sampling technique used is purposive sampling, with the following criteria: Involved for at least one year in technology-based collaborative activities; and Having a sufficient understanding of SDGs program implementation at the local level.

The instrument used is a structured questionnaire with a Likert scale (1–5). Each variable includes several indicators:

1. STI: digital openness, efficiency, data transparency, ease of access.
2. CSS: trust, intersectoral coordination, participation, shared vision.
3. DSJ: equality of access, digital ethics, sense of justice, social representation.
4. CE: community participation, independence, local leadership, digital literacy.
5. SDGI: social welfare, environmental sustainability, social balance.

The analysis was conducted using Partial Least Squares – Structural Equation Modeling (PLS-SEM) with the software SmartPLS 4.0. The analysis involves two stages:

1. Outer Model: testing construct validity, reliability, and indicator convergence.
2. Inner Model: testing inter-variable relationships (path coefficients), R^2 values, and mediation/moderation effects.

Qualitative Phase

The qualitative phase aims to explain the social meaning and moral values behind the quantitative results by exploring the perceptions, experiences, and reflections of cross-sectoral actors. A total of 30 informants were selected using purposive sampling based on their active involvement in the implementation of technology and empowerment programs. The data collection methods included: in-depth interviews using semi-structured guides, participant observation of community activities and digital interactions, and document analysis of program reports and public policy documents.

The analysis was conducted using Thematic Analysis (Braun & Clarke, 2006) through six steps: data familiarization, initial coding, theme identification, theme reviewing, theme naming, and the development of an interpretative narrative. Five main themes were identified, aligned with the conceptual model: Technology as a new social space, Cross-sectoral collaboration as a value relationship, Digital justice as collective moral awareness, Empowerment as social self-transformation, and Sustainability as a form of meaningful living.

The validity of the data was ensured through method and source triangulation, member checking with informants, peer debriefing, and an audit trail to maintain analytical consistency throughout the process.

Meta-Inference Phase (Integration of Quantitative and Qualitative Findings)

The Meta-Inference Phase was conducted to integrate the statistical findings and social interpretations into a unified conclusion. The integration was carried out in three steps:

1. Connecting – the results of PLS-SEM were used to determine the focus of the interviews.
2. Building – the qualitative data deepened and clarified the quantitative findings.
3. Merging – both sets of results were combined into two final models: the Humanistic Quant–Qual Integration Framework and the Conceptual Model of the Humanistic Cycle of

Sustainable Empowerment.

The Humanistic Quant–Qual Integration Framework illustrates that technology, collaboration, social justice, and empowerment are not only empirically connected but also form a continuous cycle of social consciousness.

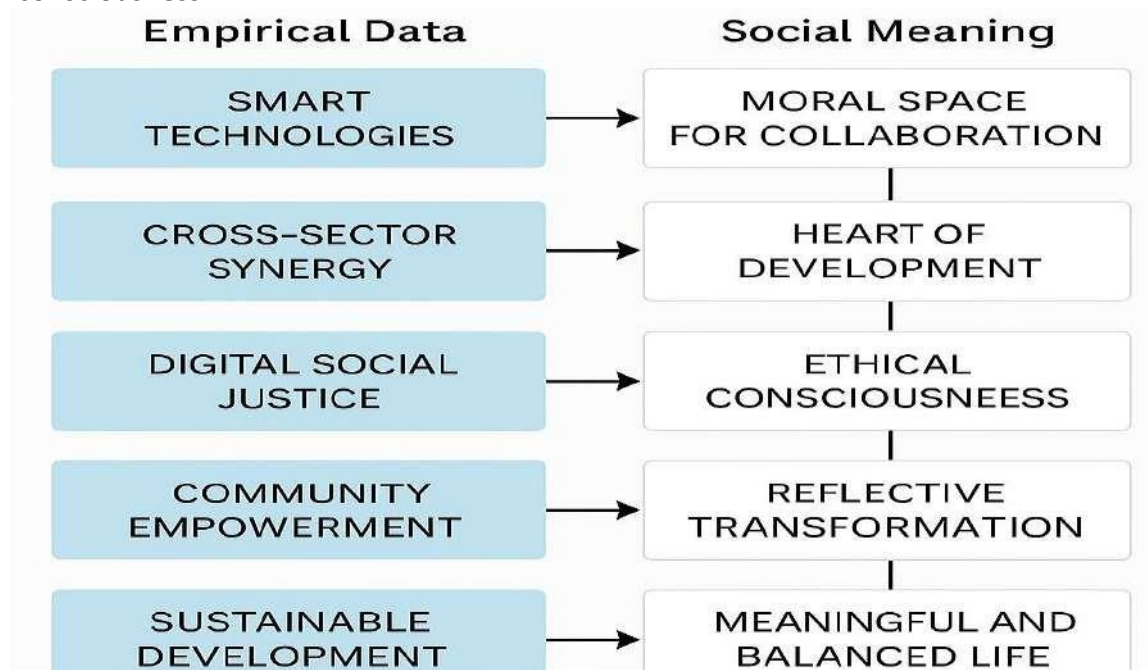


Figure 4. Flow of Quantitative and Qualitative Integration Stages-Meta-Inference Phase.
Source : Yoesoep Edhie Rachmad, 2025.

The Conceptual Model of the Humanistic Cycle of Sustainable Empowerment demonstrates that Smart Technology opens collaborative spaces, Cross-Sectoral Collaboration builds social justice, Digital Social Justice nurtures moral awareness, Moral Awareness drives empowerment, and Empowerment creates meaningful and sustainable living. This cycle is spiral and reflective, showing a two-way relationship between empirical data and social values.

This approach produces a balance between two scientific logics: data rationality, which generates objective verification, and value reflexivity, which generates human understanding. This integration transforms the research from being merely empirical into an ethical map of digital social development.

The research methodology bridges the gap between numbers and meaning, between theory and human experience. By combining two research methods, this study is able to: measure the empirical relationships among sustainable development variables, reveal the social and moral meanings behind these findings, and construct a humanistic framework that positions technology as a medium for human empowerment. Knowledge becomes holistic when logic meets ethics, and development becomes sustainable when technology advances hand in hand with human values.

Integrative Results And Discussion

Quantitative Results (PLS-SEM)

The first stage employed Partial Least Squares – Structural Equation Modeling (PLS-SEM) to examine the relationships among variables. The research model comprises five main constructs: STI (Smart Technology Integration), CSS (Cross-Sectoral Synergy), DSJ (Digital Social Justice), CE (Community Empowerment), and SDGI (Sustainable Development Goals Impact). The results of the Structural Model Test indicate a strong and statistically significant model:

Tabel 1. PLS-SEM Structural Model Test Results.			
Relationship	Coefficient (β)	Significance (p-value)	Description
STI → CSS	0.63	< 0.001	Significant
CSS → CE	0.58	< 0.001	Significant
DSJ → CE	0.22	< 0.05	Significant
CE → SDGI	0.49	< 0.01	Significant
R ² CE = 0.67	R ² SDGI = 0.73	Strong Model	

Source : Yoesoep Edhie Rachmad, 2025.

Statistical interpretation confirms that:

1. Smart Technology (STI) has a direct influence on the formation of Cross-Sectoral Synergy (CSS) — meaning that the better the integration of technology, the higher the effectiveness of collaboration.
2. Collaboration (CSS) has a significant impact on Community Empowerment (CE).
3. Digital Social Justice (DSJ) strengthens the relationship between collaboration and empowerment, showing that digital justice and inclusivity are moral factors reinforcing social participation.
4. Community Empowerment (CE) directly enhances the achievement of SDGs (SDGI).

Thus, technology and social justice become dual pillars supporting the success of sustainable development.

Qualitative Results (Thematic Analysis)

The second stage applied Thematic Analysis based on in-depth interviews and observations from 30 cross-sector informants (government, academia, CSR actors, and community leaders). The analysis yielded five main themes that align with the quantitative variables, yet provide deeper social and moral reflections.

Theme 1: Smart Technology as a New Social Space

Most informants stated that technology has transformed the way people interact, participate, and express aspirations. Technology is not merely an instrument of efficiency but a social space where trust and transparency are tested. “Technology makes us more connected, but more importantly, it brings a new sense of public responsibility.” (Participant No. 03 – Government Official). This meaning reinforces the quantitative result that STI positively influences CSS. However, the qualitative findings add another dimension — this relationship is not merely instrumental but grounded in social trust values.

Theme 2: Collaboration as a Value Relation

Cross-sector collaboration is understood not merely as working together but as a relationship of shared values among social actors. Genuine engagement emerges when all parties recognize equality of roles and responsibilities. "Collaboration is not about who leads, but who trusts and gives space to others." (Participant No. 17 – Academic). This finding expands the quantitative result (CSS → CE). Collaboration is effective because it is supported by moral values: trust, respect, and shared purpose.

Theme 3: Digital Social Justice as Moral Awareness

Almost all informants emphasized the importance of digital social justice as the moral foundation of development. Justice is not only about access to technology but also about equal recognition and participation in digital spaces. "Digital justice is not about who can go online, but whose voices are heard." (Participant No. 12 – Social Activist). This finding explains the quantitative result that DSJ moderates the CSS → CE relationship. Digital social justice strengthens the sense of belonging, enabling communities to feel empowered and heard.

Theme 4: Empowerment as Self-Transformation

Community empowerment is no longer interpreted as an external program but as a process of internal awareness. Communities feel empowered when they help determine the direction of change and engage in decision-making. "We no longer wait for aid; we create solutions together." (Participant No. 27 – Community Leader). This finding deepens the quantitative result (CE → SDGI), explaining that sustainability occurs through social reflection and collective responsibility.

Theme 5: Sustainability as Meaningful Life

Informants described sustainable development not merely as an economic target but as a moral journey toward life balance. "For us, development means living in harmony with nature, technology, and fellow human beings." (Participant No. 30 – Community Figure). This finding adds an existential dimension to the SDGI variable. Sustainability is understood as ethical and spiritual collective awareness, not just the achievement of global indicators.

Integrative Synthesis (Meta-Inference Analysis)

The integration of the two research results produces a spiral model of social consciousness, namely the Humanistic Cycle of Sustainable Empowerment. This model demonstrates that the relationships among variables are not linear but circular and reflective: > **Technology → Collaboration → Justice → Empowerment → Sustainability → returning to renew technological consciousness.**

This illustrates that: Quantitative data provide structural evidence, Qualitative data provide interpretive meaning, and Both converge within a sustained digital social awareness.

Quantitative–Qualitative Synergistic Relationships

Tabel 2.

Synergistic Relationship of Quantitative–Qualitative Humanistic Cycle of Sustainable Empowerment.

Dimension	Quantitative Evidence	Qualitative Meaning	Synthesis
Smart Technology	Influences Collaboration ($\beta = 0.63$)	New social space for trust	Technology as social mediator
Cross-Sectoral Collaboration	Influences Empowerment ($\beta = 0.58$)	Value relations and equal participation	Collaboration as social heart
Digital Social Justice	Moderates CSS–CE	Digital moral awareness	Ethics as collaboration compass
Empowerment	Influences SDGI ($\beta = 0.49$)	Self-transformation of society	Empowerment as value reflection
Sustainable Development	Systemic outcome	Meaningful and balanced life	Sustainability as social awareness

Source : Yoesoep Edhie Rachmad, 2025.

Conclusion

This study seeks to comprehensively understand how cross-sectoral synergy, smart technology, and digital social justice contribute to sustainable community empowerment within the framework of achieving the Sustainable Development Goals (SDGs). By combining two research methods, this study produces a holistic perspective—showing that sustainable development is not merely the result of efficient systems, but the outcome of social awareness, moral reflection, and humanistic collaboration.

General Conclusion of the Research

The main finding of this research reveals that effective and meaningful sustainable development can only occur when technological innovation and social collaboration are implemented within a framework of digital justice and human values. The quantitative approach (PLS-SEM) empirically proves the relationships among the main variables: Smart Technology Integration (STI) → Cross-Sectoral Synergy (CSS) → Community Empowerment (CE) → Sustainable Development Goals Impact (SDGI), with Digital Social Justice (DSJ) acting as a key moderating factor that strengthens the relationship between collaboration and empowerment.

The qualitative approach (Thematic Analysis) then explains the underlying dimensions of meaning behind these numbers, showing that every empirical relationship is rooted in social, moral, and reflective values. Thus, this study affirms that numbers provide evidence, while meaning provides direction. When both are integrated, a model of development emerges that is not only systemically intelligent but also socially wise.

Specific Conclusions Based on Findings

1. Smart Technology as a New Social Space. The findings show that technology is no longer merely a tool for bureaucratic efficiency or productivity, but a social space that mediates human relationships. The integration of technology (STI) significantly influences cross-sectoral collaboration (CSS) because technology fosters transparency, trust, and dialogue. Hence, technology serves as a moral mediator rather than a neutral entity.
2. Cross-Sectoral Collaboration as a Relationship of Values. Effective collaboration is formed not only through strong institutional structures but also through value-based relationships

among actors built on trust, empathy, and shared responsibility. Empirical results show CSS → CE ($\beta = 0.58$, $p < 0.001$), while qualitative findings deepen this by revealing that collaboration succeeds when grounded in mutual trust and role equality. Thus, cross-sectoral collaboration is not merely administrative cooperation but an ethical action and social dialogue.

3. Digital Social Justice as Collective Moral Awareness. Digital social justice (DSJ) functions as a moral balance in the digital transformation process. Quantitatively, DSJ strengthens the CSS–CE relationship ($\beta = 0.22$, $p < 0.05$), while qualitatively, it fosters social belonging and participation. Digital justice thus becomes the ethical spirit of the entire technology-based development system.
4. Community Empowerment as Self-Transformation. Empowerment is no longer perceived as an external intervention but as a reflective awareness process that emerges from within the community. Quantitatively, CE significantly influences SDGI ($\beta = 0.49$, $p < 0.01$). Qualitatively, this finding is expanded by showing that empowerment grows through learning by doing and mutual reflection between government and society. True empowerment is not merely an outcome of activities but a spiritual and social journey toward moral autonomy.
5. Sustainable Development as Awareness of Meaningful Living. The SDGI variable has a high R^2 value (0.73), indicating that sustainability is the result of integrated social and technological interactions. However, interviews reveal that sustainability is not only measured by global indicators but also understood as a balance between life, values, and intergenerational responsibility. Hence, true sustainable development is the harmony between systems and the human soul.

Final Integrative Model: Humanistic Cycle of Sustainable Empowerment

Based on quantitative and qualitative results, this research produces a conceptual model called the Humanistic Cycle of Sustainable Empowerment. The model depicts a reflective spiral cycle: Smart Technology → Cross-Sectoral Collaboration → Digital Social Justice → Community Empowerment

→ Sustainable Development → (returning to reinforce technological consciousness). This cycle demonstrates that development is not a linear process but a continuous movement between innovation and reflection. When humanistic values unite with technological systems, a loop of wisdom emerges—where data and meaning enrich one another.

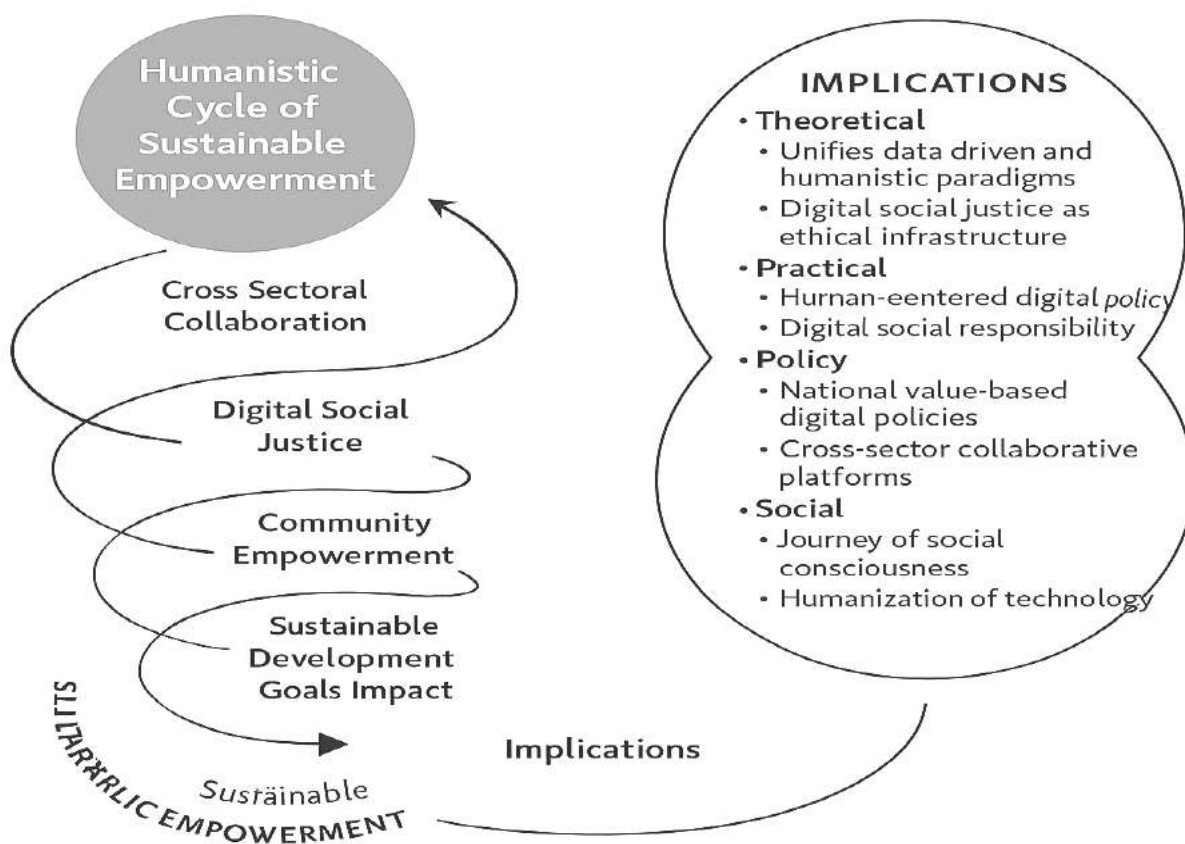


Figure 5. Final Integrative Model: Humanistic Cycle of Sustainable Empowerment.

Source : Yoesoep Edhie Rachmad, 2025.

Research Implications

1. Theoretical Implications

This study contributes to the advancement of sustainable development theory by: Integrating data-driven (empirical) and value-driven (humanistic) paradigms. Introducing a new concept: Digital Social Justice as Ethical Infrastructure, positioning digital justice as the ethical foundation of development. Presenting the Humanistic Mixed Methods model, an integrative methodology uniting rational logic and social reflection.

2. Practical Implications

1. For Government: Encourage human-centered digital policies emphasizing ethics, transparency, and public participation.
2. For Industry and CSR: Shift the paradigm of CSR toward Digital Social Responsibility (DSR)—integrating technological innovation with principles of social justice.
3. For Academia and Researchers: Adopt cross-method research approaches that seek not only empirical truth but also the accompanying social meaning.

4. For Communities: Promote digital literacy that focuses not only on technical skills but also on moral and social awareness.

3. Policy Implications

1. Formulate National Value-Based Digital Policies, embedding digital ethics and social justice as essential components of all digital transformation programs.
2. Develop Cross-Sector Collaborative Platforms that enable idea exchange between government, private sectors, academia, and communities.
3. Integrate value education and digital ethics literacy into national education curricula and public training programs.
4. Establish human-centered sustainability indicators, beyond purely economic measures.

4. Social and Humanistic Implications

This research demonstrates that sustainable development is a journey of social consciousness, not merely a formal policy. True sustainability is not about building smarter systems, but nurturing wiser humans. The combination of PLS-SEM and Thematic Analysis bridges numbers and meanings, systems and souls. Technology and innovation become meaningful only when accompanied by awareness of justice, courage to collaborate, and a commitment to honor humanity. Development thus becomes a process of humanizing technology, not merely digitizing humans.

Future Research Directions

1. Exploring the Moral Dimension of Technology: Future studies may investigate how digital moral awareness evolves within policy and education contexts.
2. International Comparative Analysis: Compare the Humanistic Cycle model across countries with different levels of technological adoption.
3. Longitudinal Method Strengthening: Observe the evolution of digital social consciousness over time to understand long-term empowerment dynamics.
4. Integration of Big Data and Narratives: Combine big data analytics with qualitative narrative exploration to create data with soul research.

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