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Digitisation as a Socio-Economic Equaliser: Self-Employment, Inclusion, and the Digital Transformation of Kerala's Economy

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ABSTRACT

The research paper discusses the role of digitisation as an enabler of self-employment and socio-economic inclusion in the state of Kerala, which is economically and socio-culturally stratified. In particular, it examines how digitisation is a structural equaliser by altering access to entrepreneurship along gender, caste, and regional lines. The research has a descriptive-analytical research design and utilizes secondary data using thematic synthesis of the data, such as the National Sample Survey Office (NSSO) employment surveys, the Telecom Regulatory Authority of India (TRAI) internet penetration reports, the National Association of Software and Service Companies (NASSCOM) gig economy data, the Ministry of Electronics and Information Technology (MeitY) policy documents, and the National Family Health Survey-5 (NFHS-5) data on gender and internet access. Theoretically, the study combines the Capability Approach as advocated by Sen with Digital Inclusion Theory to create a twofold analytical perspective in evaluating digitisation as a source of human development. The results suggest that digitisation has altered the labour market in Kerala by minimising market access barriers, decentralizing populations, and enabling platform-based entrepreneurship among demographic groups with historical disadvantages. With the help of e-commerce and Unified Payments Interface (UPI)-based payment systems, as well as gig economy platforms, a growing number of women, rural populations, and first-generation entrepreneurs have gained access to new opportunities. The research has impact at three levels: theoretically, the conceptualisation of digitisation as a socio-economic leveller that combines the perspectives of capability and digital inclusion with the synthesis of various credible sources of information to map the digital entrepreneurship ecosystem in Kerala; practically, it

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outlines policy interventions that should be undertaken to reach an equitable digital participation level, and they included the creation of inclusive digital infrastructure and the development of specific regulatory frameworks to enhance equitable digital participation.

Keywords: Digitisation; Self-Employment; Digital Inclusion; Women Entrepreneurship; Gig Economy; Kerala; Capability Approach; Socio-Economic Equality

1. Introduction

In the present research, digitisation is understood as the structural change of economic processes, the labour market, and social institutions by the introduction and incorporation of digital technologies such as internet platforms, mobile apps, electronic payment systems, and data-driven business ecosystems^[1]. It is not a simple technological upgrade but a restructuring of the basic terms of economic involvement, market accessibility, and entrepreneurial opportunity^[2].

In order to promote inclusion and self-employment prospects within Kerala's economic climate, the article investigates the transformative potential of digitisation^[1]. The traditional work market has undergone tremendous change since the development of digital technology, allowing people to explore their entrepreneurial interests and build an online presence regardless of gender differences and socio-cultural obstacles^[2].

Digitisation has made many changes to the working environment and its structure. The capital structure and extension have become stronger as organisations concentrate on digital capital formation^[3, 4]. Employees increasingly work from home, and skill-centric participation is becoming the norm. This is particularly evident in Kerala, a state with high literacy rates and strong human development indices.

The Global Digital Economy has established a new form of labour mobility where employment and company operations can be performed virtually rather than physically^[5, 6]. This reduces expenditure for employees relating to travel and accommodation while enabling broader geographic participation in labour markets.

The research questions covered in this study are as follows, with the multidimensional nature of the phenomenon taken into account:

RQ1: How does digitisation impact self-employment in the socio-culturally stratified Kerala economy?

RQ2: Which socio-cultural obstacles to economic involvement are being overcome by digitisation (e.g., caste, religion, gender differences)?

RQ3: How successfully can platform-based digital ecosystems be used as structural equalising mechanisms across geographical boundaries and gender?

RQ4: Which policy measures should be used to make digital transformation generate equitable and sustainable socio-economic consequences?

Research Gap: Even though much of the existing research in management and entrepreneurship has focused on digitization in relation to large companies and the economies of developing countries' cities, there is still a major lack of knowledge about how digitization can act as an equalizing factor within socially stratified regional economies^[7]. In most cases, the research focuses on the private sector, including industries like Information Technology (IT), insurance, and banking, ignoring the special features of developing economy nations like Kerala, which are characterized by their high levels of literacy, strong hierarchies, and powerful diaspora communities^[8-10]. Also, previous studies have lacked a systematic application of thematic synthesis using a combination of theories.

The gap has been admitted by researchers studying the issue of digital transformation of emerging economies^[11-13]. According to Plekhanov et al.^[14], digital transformation research has been largely biased towards large organisations in advanced economies, neglecting the aspects of regional and social stratification^[15, 16]. On the same note, Ghauri et al.^[17] note that research on the subject of digital entrepreneurship amongst marginalised populations is limited, especially in societies where there is a high literacy rate and yet a hierarchical orientation, like the state of Kerala. Anand et al.^[18] also emphasise that the issue of invisible inequalities in the entrepreneurial ecosystems, caste- and gender-based barriers, lacks theorisation in the literature. All these views confirm the gap in the research that has been identified in the current

work.

This study adds to the body of literature in three ways: by viewing digitisation as a socio-economic equaliser rather than just a technology; by measuring entrepreneurial inclusion using both Sen's Capability Approach and Digital Inclusion Theory; and by producing evidence-based, management-related policy implications^[1, 2].

2. Theoretical Framework

The Capability Approach and Digital Inclusion Theory are two complementary theoretical frameworks that serve as the conceptual foundation for this study. These frameworks have been carefully chosen because, as this article explores, digitisation is not just about technological access but also about human development—namely, whether or not people can use digital tools to engage in meaningful economic activity. Digital Inclusion Theory provides the operational mechanism, elucidating the circumstances under which digital access translates into significant socio-economic outcomes, while Amartya Sen's Capability Approach offers the normative basis for assessing whether digitisation actually increases individual freedoms and opportunities. When combined, these frameworks enable this study to go beyond descriptive descriptions of digitisation and provide an analytical lens for determining whether and how digital transformation functions as a structural equaliser.

2.1. The Capability Approach

The Capability Approach, developed by Amartya Sen, explains development in terms of expanding individual freedoms and capabilities rather than merely increasing income^[19]. Digitalisation helps expand functional capabilities by providing access to information-intensive markets, skills, and networks^[20, 21].

Even though the Capability Approach was created in the 1980s and 1990s, it is still highly applicable and is being utilized by more current authors to evaluate business inclusion, technology access, and digital transition. For instance, MacKenzie et al.^[22] take into account the development of human capital in low-socioeconomic-status areas, while Murray employs the method to analyze students' liberties in the context of their digital education in the contemporary world.

Furthermore, while discussing their research on digital inclusion, MacKenzie et al., Murray, and Fisk et al. actually make reference to the Capability Approach^[22–24]. It demonstrates that Sen's method is still highly applicable and useful for determining whether digitization entails freedom or merely access.

The Capability Approach states that development must be evaluated on the basis of what individuals are able to do and be—their functionings. Capabilities are the real opportunities available to individuals to generate valuable outcomes. Development occurs when individuals have the freedom to make meaningful choices and convert available resources into desired outcomes^[23, 25]. The approach distinguishes between 'resources', 'conversion factors', 'capabilities', and 'functionings'.

Digitalisation is an enabling resource that can greatly enhance functional capabilities by: (i) providing access to information-intensive markets; (ii) facilitating skill development through online learning platforms; (iii) enabling engagement with digital networks and entrepreneurship ecosystems; and (iv) improving financial inclusion through digital payment systems^[22].

This framework allows the paper to analyse digitisation not just as a technological process but as a human development mechanism.

2.2. Digital Inclusion Theory

Digital Inclusion Theory fills the gaps in the Capability Approach by emphasising the need for fair inclusion and effective use of digital technology^[26]. It goes beyond the simplistic concept of the 'digital divide' (access vs. no access) and adopts a multi-layered approach encompassing: Access Equity—provision of affordable access to devices, the internet, and infrastructure; Skills and Literacy—digital literacy, critical use skills, and adaptive learning; Meaningful Use—effective use of digital technology to produce something of value rather than simply consuming it; and Outcome Equity—ensuring that digital engagement translates into real socio-economic outcomes^[27].

By combining the Capability Approach with Digital Inclusion Theory, this research has constructed an overarching analytical framework: the Capability Approach explains the normative basis of digital inclusion (enhancing human capabilities and freedoms), while Digital Inclusion Theory

explains the mechanisms through which digital access translates into productive socio-economic outcomes^[24, 28]. The combination implies that digital transformation should be assessed not only in terms of technology adoption but also in terms of its capacity to improve human capabilities and achieve outcome equity^[29].

3. Methodology

3.1. Research Design

This study employs a descriptive-analytical research design. The ‘descriptive’ component involves the systematic documentation of digital transformation trends, institutional developments, and socioeconomic shifts in Kerala’s economy. The ‘analytical’ component involves the evaluation and interpretation of these trends against the theoretical framework to generate explanatory insights beyond surface-level description. Because of its exploratory nature and macro-structural focus, this design is appropriate for a study that places itself at the intersection of digital transformation and inclusive entrepreneurship. It enables multilayered interpretation of how institutional structures, socioeconomic processes, and opportunity distributions have been reconfigured by the expansion of the digital sphere^[30].

Since this study only uses secondary data, it is crucial to differentiate the current research strategy from a systematic literature review (SLR). Database searches, specified inclusion criteria, and quality evaluation are all part of the methodical and thorough procedure that an SLR adheres to. The descriptive-analytical design employed here, on the other hand, is explanatory in character and does not attempt to synthesize all of the body of current research. Rather, it develops a theoretical explanation of the phenomenon by carefully selecting reliable secondary sources, such as government reports and institutional data. Thematic synthesis is used in the analysis, allowing for interpretation that goes beyond simple description.

The significance of elucidating the connection between the descriptive-analytical approach and the thematic synthesis approach needs to be established. Whereas the research design outlines the broad epistemological approach (explanatory and non-experimental in nature), thematic synthesis represents the actual analytical tool utilized for examining the secondary data collected.

3.2. Data Selection Criteria

The criteria for choosing secondary data sources included: (i) authority—reliable data sources such as an organization or a journal article published by a government, peer-reviewed journals, or well-known databases were considered; (ii) recency—the more recent the data, the better, while old data was essential only if it was basic to the method used; (iii) thematic relevance—data that focused on digitalization, entrepreneurship, empowerment of women, and digital infrastructure in India and Kerala was favoured; and (iv) quantitative data. The criteria (iv) for “quantitative data” in this research article are defined as numerical data produced by reputable government agencies and academic organizations, rather than primary quantitative data produced by the authors themselves. NSSO (employment and self-employment), TRAI (internet and broadband subscription), NASSCOM (gig economy employment data and digital economy gross domestic product (GDP) figures), MeitY (scheme coverage and scheme beneficiaries), and NFHS-5 (gender-wise data on internet usage and mobile phones) are some examples of quantitative datasets based on statistical data and reports.

Specifically, the study draws upon: NSSO employment and self-employment trend data; TRAI internet penetration and broadband access reports; NASSCOM gig economy and digital economy reports; MeitY policy and scheme effectiveness documents; NFHS-5 gender and internet access data; and scholarly articles retrieved from Scopus, Google Scholar, and JSTOR using keyword combinations such as ‘digitisation and self-employment’, ‘digital inclusion Kerala’, ‘gig economy India’, and ‘women digital entrepreneurship emerging markets’^[31].

3.3. Analytical Procedure: Thematic Synthesis

To provide analytical insights that go beyond the descriptive level, the research adopts a thematic synthesis methodology. Thematic synthesis, as established by Thomas and Harden^[32], involves three stages: (i) free line-by-line coding of documentary evidence; (ii) organisation of codes into descriptive themes; and (iii) generation of analytical themes that go beyond descriptive reporting to provide interpretive insights grounded in the theoretical framework^[32, 33].

In this case, all secondary data sources have been coded

based on the four-theme analytical framework that includes Digital Access, Skill Development, Entrepreneurial Participation, and Inclusivity Effects, as outlined in the next section. Synthesis of codes helps identify commonalities, divergences, and implications for policymaking. This is how the researcher is able to go from data analysis to theory development^[32, 33].

3.4. Analytical Framework

The research analysis framework is organised around four core interconnected themes: (i) Digital Access—evaluating the extent and accessibility of digital technology expansion; (ii) Skill Development—analysing digital literacy, capacity building, and institutional skill development programmes^[34]; (iii) Entrepreneurial Participation—evaluating the expansion of self-employment and digital economic participation; and (iv) Inclusivity Outcomes—analysing the impact of digitisation on equal income opportunities, gender empowerment, and socio-economic mobility.

The thematic analysis is built around four themes that capture the dimensions of the digitisation–inclusion relationship as follows: Digital Access (conditions for participation), Skill Development (capacity development), Entrepreneurial Participation (economic impact), and Inclusivity Outcomes (impact on equity). Based on the Capability Approach by Amartya Sen and Digital Inclusion Theory, the four themes provide the basis for transitioning from descriptive to interpretive work. Together, they help assess whether the process of digital change in Kerala works to equalise structurally or maintains existing differences. These four themes provide a framework for evaluating the extent to which digital access expands toward meaningful inclusion in the business environment^[35, 36].

4. Digitisation and Self-Employment in Kerala

Self-employment in Kerala has undergone a paradigm shift as a result of the digitalisation process, which has made it easier for conventional entrepreneurial ecosystems to give way to data-driven ones^[37]. The digital infrastructure has been a driving force in reshaping opportunity structures for self-employed individuals and micro-entrepreneurs in a state renowned for its high literacy rates, positive social develop-

ment indices, and globally connected diaspora.

The increasing trend of data-informed business decision-making is central to this paradigm shift. Analytics, customer interaction measures, and digital feedback methods are being used by an increasing number of entrepreneurs to stay abreast of shifting consumer preferences^[37]. Small firms can now employ digital technology to track demand trends, customise offerings, adjust pricing tactics, and build enduring customer relationships without relying entirely on intuition^[38]. Digital payment ecosystems, including UPI and mobile banking, have simplified transactions and increased trust in online commerce.

Digital payment systems—especially UPI-enabled and mobile banking platforms—have made financial transactions easier, reduced reliance on cash-based transactions, and improved transparency, thus increasing consumer confidence in online commerce. For solo entrepreneurs, the integration of payments improves liquidity management^[39].

4.1. E-Commerce Platforms and Online Businesses

The proliferation of e-commerce platforms has fundamentally altered the business landscape for small and micro-entrepreneurs. These platforms reduce supply chain difficulties and provide logistics support, customer service infrastructure, and market access^[39]. Digital marketing through social media constitutes a low-cost strategy for market development. Particularly in developing regions, e-commerce has created inclusive opportunities for micro-entrepreneurs, self-employed individuals, and small enterprises to integrate into formal value chains^[40].

One of the most significant contributions of e-commerce platforms lies in their ability to reduce supply chain complexities. These platforms provide integrated logistics networks, warehousing facilities, inventory management systems, and last-mile delivery support^[41, 42]. By leveraging centralised distribution systems and third-party logistics partnerships, entrepreneurs can focus on product development and customer engagement rather than operational bottlenecks. Digital platforms streamline procurement and order processing through automated systems, reducing transaction costs and enhancing operational efficiency^[43].

Customer service infrastructure is another critical advantage. E-commerce platforms provide built-in mecha-

nisms for customer interaction, grievance redressal, ratings, reviews, and return management^[44, 45]. Such features not only improve consumer trust but also enhance transparency and accountability. Real-time feedback enables businesses to refine their offerings based on customer preferences^[46, 47].

Furthermore, digital marketing plays a pivotal role in the growth of online businesses. Social media marketing has emerged as a cost-effective strategy for market expansion and brand positioning^[48, 49]. Platforms such as Instagram, Facebook, and WhatsApp enable entrepreneurs to directly engage with target audiences and promote products without high advertising expenditures^[50, 51]. Data-driven marketing tools allow businesses to analyse customer demographics and purchasing patterns, facilitating targeted promotional strategies and improving conversion rates^[52].

In essence, e-commerce platforms function not merely as sales channels but as comprehensive business ecosystems integrating logistics, marketing, analytics, and customer management. This digital transformation enhances scalability, fosters innovation, and strengthens market competitiveness, especially for small and emerging enterprises^[53].

4.2. Digital Skill Development and the Gig Economy

Digitisation has played a major role in the development of the gig economy. The growth of digital platforms and applications has made it possible for people to provide services on demand^[54, 55]. The gig economy—involving platforms such as ride-sharing, food delivery, and content creation—has opened up opportunities for young people, women, and professionals to earn money through flexible working arrangements^[56, 57].

The gig economy is characterised by flexible work arrangements, short-term or project-based contracts, and digital client interactions. Unlike traditional employment models based on long-term employer-employee relationships, gig economy jobs are facilitated by platform intermediation, algorithmic management, and performance ratings^[58, 59]. Workers have the autonomy to choose assignments based on availability, skills, and preferences, allowing them to exercise control over their work schedules and intensity^[60]. This flexibility enables workers to participate in the labour market, balance work and life, and work with multiple clients simultaneously, including global clients on freelance platforms^[61].

5. Inclusivity through Digitisation

By removing structural obstacles that constrain full participation in economic activity, digitisation has become a crucial instrument in the effort to promote inclusive growth. In emerging economies—particularly in socioculturally stratified contexts—access to markets has historically been mediated by hierarchies of caste, religion, gender, geography, and social capital. Digital technologies alter these access structures by decentralising opportunity and establishing merit-based visibility systems^[37]. The widespread use of mobile phones, digital payment systems, e-commerce platforms, and social media marketplaces signals a socioeconomic trend toward increased inclusivity through digitalised participation frameworks^[62, 63].

5.1. Addressing Socio-Cultural Barriers

Digitisation weakens traditional gatekeeping mechanisms that restrict economic entry. The pre-digital business environment was characterised by network-based access and community endorsement, which frequently reinforced social exclusion^[64]. Access to capital, customers, and supply chains was often impeded by invisible barriers for marginalised communities, especially those affected by caste-based stratification or religious prejudice^[18]. Digital platforms, however, rely on algorithmic visibility and transaction-based reputation rather than identifying social markers.

By shifting focus to product quality, service efficiency, ratings, and digital reputation systems, online entrepreneurship enables caste-neutral and religion-neutral market interactions^[65]. By relying on digital portfolios and analytics for performance-based legitimacy, digitisation democratises access to opportunities by enabling businesses to build reputations based on quantified results rather than social capital^[17]. Additionally, face-to-face biases that influence purchasing decisions in physical settings are lessened by digital payment platforms and online marketplaces. By standardising transactional procedures, digital wallets, digital identities, and e-commerce platforms reduce discriminatory discretion—particularly for first-generation entrepreneurs^[66].

Digitisation also helps individuals access information about government schemes, credit facilities, skill development, and market trends through digital portals and applications. Accessing such information enables individuals to

overcome informational asymmetry, which has historically acted as a barrier for socio-economically marginalised sections of society^[65]. Hence, digitisation acts as a structural equaliser that helps individuals transcend socio-cultural barriers and access the broader economy.

5.2. Empowering Women Entrepreneurs

Digital platforms enable women to participate in economic activities without requiring geographical mobility. Domestic duties, safety concerns, and normative expectations limit women's movement in many sociocultural contexts^[67]. Digital platforms lessen these restrictions by enabling economic activity without requiring physical mobility^[68].

Home-based digital enterprises—such as online tutoring, handicraft sales, digital content creation, virtual assistance, social media marketing, and beauty consulting—have gained significant traction^[69]. These businesses enable women to use local expertise and existing skills within flexible schedules that accommodate caring obligations. The incorporation of digital payment systems further improves financial autonomy by ensuring direct income control and reducing dependence on intermediaries^[70].

Digital entrepreneurship contributes to social empowerment in addition to generating revenue. Online communities and networking sites enable mentoring, information exchange, and peer support, boosting self-esteem and entrepreneurial capabilities. Female entrepreneurs can further benefit from training modules, webinars, and digital marketing tools to develop their professional skills and competitive advantages^[71].

Therefore, inclusion through digitisation can be seen as a multifaceted empowering tool that goes beyond technology access. The removal of sociocultural gatekeeping obstacles and the flexibility of home-based entrepreneurship provide the groundwork for social and economic transformation, making digitisation a key facilitator of inclusive and gender-responsive development pathways.

6. Challenges and Structural Constraints

Despite the promise of digitisation for inclusive development, its spread has not been uniform or without limitations. Structural inequities, infrastructural deficiencies,

and technological risks continue to influence the rate and extent to which digital ecosystems can generate equitable outcomes^[72]. If these issues are not addressed, digital inclusion risks unintentionally sustaining inequality in new digitally mediated forms.

6.1. The Digital Divide

The digital divide operates on two levels. The first-level digital divide refers to disparities in physical access to devices and internet connectivity between urban and rural regions. The second-level digital divide refers to differences in the quality of digital skill utilisation—distinguishing between basic and advanced skill application. Even in a high-literacy state like Kerala, advanced digital skills such as coding, data analytics, and digital marketing are not uniformly distributed, creating new forms of inequality where access exists but high-value participation remains limited to a skilled minority.

6.2. Cybersecurity and Platform Risks

Cyber fraud, phishing attacks, and data privacy breaches can discourage digital adoption and undermine the trust that is essential to digital economic participation. Trust-building mechanisms, digital awareness campaigns, and regulatory frameworks for platform accountability are necessary to mitigate these risks.

6.3. Infrastructure Instability

Digital ecosystems require high-speed internet connectivity, a steady supply of electricity, and functioning digital technology. In many semi-urban and rural areas, weak internet infrastructure and sporadic power outages disrupt digital continuity, impacting the reliability and productivity of digital enterprises.

6.4. Access to Capital and Financial Constraints

Despite the removal of some entry barriers, the initial expenditures associated with devices, software, digital marketing, and cybersecurity may be prohibitive for low-income entrepreneurs. Without access to formal financing institutions, small business owners may find it difficult to scale their digital ventures.

6.5. Platform Inequality and Algorithmic Bias

Algorithmic systems used by digital platforms determine vendor visibility. Algorithms may unintentionally favour established merchants, urban companies, or those with higher advertising expenditures, thereby excluding new entrants. Information asymmetry caused by opaque algorithmic decision-making can limit the strategic flexibility of new entrepreneurs.

6.6. Gaps in Digital Literacy

Various demographic groups—particularly the elderly and first-generation technology users—struggle with basic digital literacy beyond infrastructure availability. Lack of knowledge about digital compliance procedures, documentation requirements, or platform functionality can cause operational inefficiencies. Systematic instruction in the use of digital technologies is required to enable effective involvement^[71].

6.7. Regulatory Uncertainty

In many cases, technological advancement has outpaced legislative development, creating regulatory uncertainty in areas such as platform accountability, taxation, data protection, and cross-border transactions^[73]. Small digital entrepreneurs frequently cannot comprehend regulatory standards, leading to legal concerns or financial repercussions, and regulatory uncertainty can impair business planning.

7. Policy Implications

To fully harness the transformative power of digitisation for inclusive and sustainable development, policy interventions must transcend infrastructure expansion and embrace ecosystem governance. Digitisation is not merely a technological phenomenon; it is a socio-economic transformation process that requires coordinated support from governments, regulatory bodies, educational institutions, and business enterprises.

Managerial Implications:

The study suggests that any plan incorporating digital platforms must be developed with inclusion as a clear organizational goal in terms of management and organizational

leadership. Businesses must implement supplier diversification programs that include gig economy workers and digital micro-entrepreneurs from underrepresented groups. For employees from backgrounds with little to no expertise with digital technologies, human resource managers in digital organizations are required to offer onboarding programs and capacity-building initiatives.

Societal Implications:

Through the creation of equal market participation regardless of caste and religious affiliation, digitalization presents the possibility of changing Kerala's long-standing social inequity systems. The democratization of market participation provided by digital technology is contingent upon the implementation of intentional policy measures. If not, those who already enjoy social advantages will benefit the most from digitalization.

Policy Recommendations:

- Establish digital entrepreneurship incubation centres at the district and regional levels, with targeted support for first-generation entrepreneurs and rural innovators.
- Provide women-specific digital credit lines with low interest rates, minimal collateral requirements, and simple digital registration procedures.
- Integrate digital entrepreneurship, cybersecurity, data analytics, and e-commerce management into higher education curricula with experiential learning components.
- Develop platform regulatory frameworks establishing clear standards for commission rates, algorithmic fairness, data protection, and dispute resolution.
- Extend social security provisions to gig workers, including pension plans, health insurance, and grievance mechanisms, and formally recognise gig work under labour laws.
- Accelerate digital infrastructure development through public-private partnerships, ensuring equitable geographic distribution and bridging the urban-rural digital divide.

8. Discussion

Digitisation in Kerala represents both technological advancement and profound social transformation. Its impact is multi-dimensional, influencing economic structures, gender

dynamics, and socio-cultural norms. The findings of this study affirm that digital technology has shifted economic power from capital-intensive enterprises toward knowledge-driven and platform-based participation—enabling small-scale entrepreneurs, home-based workers, and freelancers to engage with national and global markets without commensurate infrastructural investment.

The results of this research affirm that digitisation in Kerala functions as a complex socio-economic influence, concurrently transforming labour market frameworks, redefining access to opportunities, and changing gender relations in entrepreneurship. These results correspond with and broaden multiple recognised areas of management and entrepreneurship research. From a platform economics viewpoint, the rise of digital platforms in Kerala illustrates two-sided market dynamics, where intermediary platforms generate value by linking buyers and sellers who would otherwise encounter significant search and transaction costs. For micro-entrepreneurs and home-based workers in Kerala, digital platforms have effectively substituted traditional institutional gatekeepers—such as caste-based trade networks and location-specific market hierarchies—with algorithmically driven reputation systems that prioritise performance rather than social capital. This constitutes a significant structural change aligned with institutional theory's claim that both formal and informal institutions shape entrepreneurial behaviour and access to opportunities.

Linking these findings to the theoretical framework: As per Sen's Capability Approach, digitization must enhance individuals' "capabilities," or their true probabilities to carry out valuable tasks. This hypothesis is corroborated by information obtained from the gig economy, digital payments, and e-commerce sectors of Kerala, particularly concerning females and startups led by first-generation entrepreneurs. Nonetheless, the prevalence of second-order digital divides or disparities in advanced skill utilization demonstrates the necessity of "conversion factors" such as reliable infrastructure, digital competence, and regulation in the enlargement of capabilities. The concept of "meaningful usage" and "outcome parity" advocated under Digital Inclusion Theory aligns with the assertion that merely accessing digital platforms does not necessarily lead to empowerment among entrepreneurs, especially those encountering structural obstacles.

Moreover, the growth of the gig economy provides further support for the resource-based view of entrepreneurship, as access to resources such as market reach, consumer information, payment systems, and professional recognition has been democratised through digital platforms—creating entrepreneurial opportunities that were structurally unavailable to low-capital entrepreneurs in traditional markets. This finding resonates with the inclusive entrepreneurship literature, which posits that addressing resource barriers is a key pathway to promoting entrepreneurial inclusivity across social groups.

On gender relationships, the research results are in line with the 5M framework of women's entrepreneurship, which positions markets, money, management, motherhood, and the macro-environment as central dimensions through which women entrepreneurs navigate their contexts. Digital platforms alleviate constraints on all five dimensions: markets (without requiring physical mobility), money (via digital payment systems), management (through flexible work arrangements), motherhood (by accommodating domestic responsibilities), and macro-environment (through performance-based algorithmic visibility). However, it is critical to note that digital engagement does not automatically guarantee greater empowerment for women; the second-level digital divide—manifesting as device ownership disparities, time poverty caused by unpaid care work, and limited access to advanced digital skills—remains a key mediating factor.

The expansion of digital payments and gig platforms also contributes to the formalisation of the informal sector. Small entrepreneurs who previously operated in cash-based local markets are increasingly participating in digital transaction systems, enhancing their credit access, improving financial record-keeping, and increasing market visibility.

From a developmental perspective, this study supports the view that digitisation must be perceived as a complementary process rather than a structural alternative to formal employment creation, industrial policy, and social security regimes. In the absence of strategic institutional interventions—including platform regulation, social protection for gig labour, and affordable digital finance—digitisation is prone to generating economic precarity in a digitally mediated form. This nuanced perspective advances the conversation in the management literature beyond techno-optimistic descriptions toward a contextually informed inter-

pretation of digital transformation in developing economies.

Limitations and Directions for Future Research

This study suffers from various limitations, which can be seen as areas for fruitful research in the future. Firstly, being a conceptual paper, it does not gather any primary demographic data; therefore, future research should focus on a mixed-methods approach to verify the conclusions of the current study by surveying and interviewing digital entrepreneurs, especially women and disadvantaged community members. Secondly, the current research examines only one region, i.e., Kerala; thus, comparative studies should consider other Indian regions with varying literacy rates, infrastructural development, and social hierarchies to see whether the conclusions drawn here would apply universally. Thirdly, since the research draws conclusions based on the present situation of digitization, future researchers should look into the longitudinal effects of digitization to understand its benefits and disadvantages more comprehensively. Lastly, the role played by the algorithmic mechanisms in creating inequality in platform-based entrepreneurship, found to be a structural problem in this study, should be investigated empirically.

9. Conclusions

Digitisation has emerged as a powerful catalyst for self-employment and inclusivity in Kerala's economic landscape. By providing a level playing field for entrepreneurs, addressing socio-cultural barriers, and empowering women, digitisation has the potential to create a more equitable and prosperous economic environment in the state. To fully realise these benefits, policymakers and stakeholders must collaboratively work to bridge the digital divide and ensure that all individuals have the necessary resources to thrive in the digital age.

However, digitisation is not a panacea. Without strategic policy support, digital transformation may reproduce existing inequalities through new technological forms. Access to devices, high-speed connectivity, advanced skills, and digital finance must be equitably distributed to enable broad-based participation. Particular attention must be paid to women and marginalised communities to ensure that digital participation translates into long-term economic empow-

erment rather than temporary or precarious engagement. Social security frameworks for gig workers, regulatory protections against platform exploitation, and targeted digital entrepreneurship support programmes are essential to sustaining the gains of digital transformation.

Digital entrepreneurship should be integrated into broader development strategies that encompass industrial policy and skills development missions. This approach combines technological advancement with social protection and contributes to long-term developmental gains—transforming digitisation from a technology trend into a sustainable development model that embeds gender equality, social justice, and economic resilience into Kerala's growth trajectory.

Author Contributions

Conceptualization, S.A.S. and L.K.; methodology, writing—original draft, S.A.S.; Literature Review, L.K.; Writing—Review & Editing, S.A.S. and L.K. Both authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

This study did not require ethical approval as it relies exclusively on publicly available secondary data sources. No human participants were directly involved in data collection.

Informed Consent Statement

Not applicable. This study does not involve primary data collection from human participants.

Data Availability Statement

All data sources used in this study are publicly available through the institutions cited in the Methodology section, including NSSO, TRAI, NASSCOM, MeitY, and NFHS-5 reports.

Conflicts of Interest

The authors declare no conflicts of interest.

AI Use Statement

Artificial intelligence (AI) tools were used during the preparation of this manuscript to improve the language, readability, and overall grammatical coherence of the text. The authors reviewed and approved the final version of the manuscript and take full responsibility for its content.

References

- [1] Thomas, T., Suresh, T.S., 2020. Digital financial inclusion: A catalyst for socio-economic transformation of scheduled castes and scheduled tribes in Kerala. *IOSR Journal of Business and Management*. 22(5), 18–26.
- [2] Ahmad, R., Sharif, F., Ahmad, S., et al., 2024. Does the digital economy improve female employment? A cross-country panel data analysis. *Heliyon*. 10(13), e33535. DOI: <https://doi.org/10.1016/j.heliyon.2024.e33535>
- [3] Chen, Y., Shen, L., Bian, Y., et al., 2023. Effects of digital transformation on dynamic capital structure adjustment: Evidence from China. *Systems*. 11(7), 330. DOI: <https://doi.org/10.3390/systems11070330>
- [4] Zhang, K., 2025. Does the capital structure affect the digital transformation of enterprises? Mediating role based on financing costs. *ETI Transactions on Data Analysis and Forecasting*. 3(1), 4–17.
- [5] Javaid, M., Haleem, A., Singh, R.P., et al., 2024. Digital economy to improve the culture of industry 4.0: A study on features, implementation and challenges. *Green Technologies and Sustainability*. 2(2), 100083. DOI: <https://doi.org/10.1016/j.grets.2024.100083>
- [6] Li, Y., Xie, Z., Tui, Z., et al., 2025. The impact of digital economy on flexible employment: The mediating role of laborer perceptions. *SAGE Open*. 15(1), 1–19. DOI: <https://doi.org/10.1177/21582440251327017>
- [7] Pual, A., Pillai, R., 2017. IIMK Case Study: On the Road to Digitization: The Case of Kerala. India Institute of Management Kozhikode: Kerala, India.
- [8] Pareek, S., Maidullah, S., Soni, V., 2025. Challenges and opportunities in the adoption of fintech in emerging markets. *Academy of Marketing Studies Journal*. 29(S5), 1–16.
- [9] Yadav, U.S., Tripathi, R., Tripathi, M.A., et al., 2023. Digital and innovative entrepreneurship in the Indian handicraft sector after the COVID-19 pandemic: Challenges and opportunities. *Journal of Innovation and Entrepreneurship*. 12, 69. DOI: <https://doi.org/10.1186/s13731-023-00337-5>
- [10] Sivaraman, M., Neriampampil, C., 2024. Women entrepreneurship and digitalization. In *The Palgrave Handbook of Global Social Problems*. Springer International Publishing: Cham, Switzerland. pp. 1–23. DOI: https://doi.org/10.1007/978-3-030-68127-2_455-1
- [11] Hinson, R.E., Adeola, O., 2022. Marketing Communications and Brand Development in Emerging Economies, Vol. 1. Springer: Cham, Switzerland. DOI: <https://doi.org/10.1007/978-3-030-88678-3>
- [12] Spottswood, E.L., Wohn, D.Y., 2020. Online social capital: Recent trends in research. *Current Opinion in Psychology*. 36, 147–152.
- [13] Nirmani, I.A.P., 2025. Barriers to digital participation in developing countries: Identifying technological, social, and cultural obstacles to community involvement. *GSC Advanced Research and Reviews*. 23(2), 61–71. DOI: <https://doi.org/10.30574/gscarr.2025.23.2.0130>
- [14] Plekhanov, D., Franke, H., Netland, T.H., 2023. Digital transformation: A review and research agenda. *European Management Journal*. 41(6), 821–844. DOI: <https://doi.org/10.1016/j.emj.2022.09.007>
- [15] Rashmi, M., 2017. Social Construction of Empowerment: A Study on the Impact of Government ICT Programmes amongst Women in Kerala [PhD Thesis]. Indian Institute of Space Science And Technology: Thiruvananthapuram, India.
- [16] Ozturk, I., Alqassimi, O., Ullah, S., 2024. Digitalization and SMEs development in the context of sustainable development: A China perspective. *Heliyon*. 10(6), e27936. DOI: <https://doi.org/10.1016/j.heliyon.2024.e27936>
- [17] Ghauri, P., Fu, X., Minayora, A., 2022. Digital technology-based entrepreneurial pursuit of the marginalised communities. *Journal of International Management*. 28(2), 100948. DOI: <https://doi.org/10.1016/j.intman.2022.100948>
- [18] Anand, P., Attri, P.S., Sahasranamam, S., 2025. Invisible inequality in entrepreneurial ecosystems: The micro-foundations of navigating marginalization. *Business and Society*. DOI: <https://doi.org/10.1177/00076503251407016>
- [19] Dubois, J.-L., Trani, J.-F., 2009. Extending the capability paradigm to address the complexity of disability. *Alter*. 3(3), 192–218. DOI: <https://doi.org/10.1016/j.alter.2009.04.003>
- [20] Van Hoang, D., Thi Hien, N., Van Thang, H., et al., 2025. Digital capabilities and sustainable competitive advantages: The case of emerging market manufacturing SMEs. *SAGE Open*. 15(2), 1–25. DOI: <https://doi.org/10.1177/21582440251329967>
- [21] Wang, Z., Lin, S., Chen, Y., et al., 2023. Digitalization effect on business performance: Role of business model innovation. *Sustainability*. 15(11), 9020. DOI: <https://doi.org/10.3390/su15119020>
- [22] MacKenzie, A., Chiang, T.-H., 2023. The human de-

- velopment and capability approach: A counter theory to human capital discourse in promoting low SES students' agency in education. *International Journal of Educational Research*. 117, 102121. DOI: <https://doi.org/10.1016/j.ijer.2022.102121>
- [23] Murray, R., 2024. The capability approach, pedagogic rights and course design: Developing autonomy and reflection through student-led courses. *Journal of Human Development and Capabilities*. 25(1), 131–150. DOI: <https://doi.org/10.1080/19452829.2023.2261856>
- [24] Fisk, R., Gallan, A., Joubert, A., et al., 2022. Healing the digital divide with digital inclusion: Enabling human capabilities. *Journal of Service Research*. 26(4), 542–559. DOI: <https://doi.org/10.1177/10946705221140148>
- [25] Robeyns, I., 2003. The capability approach: An interdisciplinary introduction. Available from: https://www.academia.edu/621260/The_capability_approach_an_interdisciplinary_introduction (cited 9 February 2026).
- [26] Fernandes, C., Ferreira, J.J., Veiga, P.M., et al., 2022. Digital entrepreneurship platforms: Mapping the field and looking towards a holistic approach. *Technology in Society*. 70, 101979. DOI: <https://doi.org/10.1016/j.techsoc.2022.101979>
- [27] Haleem, A., Javaid, M., Qadri, M.A., et al., 2022. Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*. 3, 275–285. DOI: <https://doi.org/10.1016/j.susoc.2022.05.004>
- [28] Slavković, M., Pavlović, K., Nikolić, T.M., et al., 2023. Impact of digital capabilities on digital transformation: The Mediating Role of Digital Citizenship. *Systems*, 11(4), 172.
- [29] Cavalcanti, D.R., Oliveira, T., de Oliveira Santini, F., 2022. Drivers of digital transformation adoption: A weight and meta-analysis. *Heliyon*. 8(2), e08911. DOI: <https://doi.org/10.1016/j.heliyon.2022.e08911>
- [30] Kraus, S., Durst, S., Ferreira, J.J., et al., 2022. Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*. 63, 102466. DOI: <https://doi.org/10.1016/j.ijinfomgt.2021.102466>
- [31] Sindakis, S., Showkat, G., 2024. The digital revolution in India: Bridging the gap in rural technology adoption. *Journal of Innovation and Entrepreneurship*. 13(1), 29. DOI: <https://doi.org/10.1186/s13731-024-00380-w>
- [32] Thomas, J., Harden, A., 2008. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*. 8, 45. DOI: <https://doi.org/10.1186/1471-2288-8-45>
- [33] Yip, S.Y., Zeng, S.A., 2025. Developing an analytical framework for multi-level data analysis in qualitative inductive studies. *International Journal of Qualitative Methods*. 24. DOI: <https://doi.org/10.1177/16094069251401328>
- [34] Habib, M., 2023. Digital transformation strategy for developing higher education in conflict-affected societies. *Social Sciences and Humanities Open*. 8(1), 100627. DOI: <https://doi.org/10.1016/j.ssaho.2023.100627>
- [35] Camps, C., Kraus, S., Thomas, A., et al., 2026. Digital entrepreneurship: A review, research synthesis, and development of a framework. *Technology in Society*. 84, 103124. DOI: <https://doi.org/10.1016/j.techsoc.2025.103124>
- [36] Bravo, M.C.M., Chalezquer, C.S., Serrano-Puche, J., 2021. Meta-framework of digital literacy: A comparative analysis of 21st-century skills frameworks. *Revista Latina de Comunicación Social*. 79, 76–110.
- [37] Puthukkeril, K.R.A., Ajeesh, S., Akshay, A. L., 2025. Impact of e-commerce: Evidence from Kerala state—The emerging knowledge economy in South India. *SEEJPH*. 25(S2), 3829–3845.
- [38] Kamyabi, M., Özgüt, H., Ahmed, J.N., 2025. Sustaining digital marketing strategies to enhance customer engagement and brand promotion: Position as a moderator. *Sustainability*. 17(7), 3270. DOI: <https://doi.org/10.3390/su17073270>
- [39] Khando, K., Islam, M.S., Gao, S., 2023. The emerging technologies of digital payments and associated challenges: A systematic literature review. *Future Internet*. 15(1), 21. DOI: <https://doi.org/10.3390/fi15010021>
- [40] Rizkita, M.A., Winarno, A., Suwono, H., et al., 2025. Integrating cultural adaptation in digital marketing strategies: Enhancing competitiveness and sustainability in MSMEs of Java, Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*. 11(3), 100609. DOI: <https://doi.org/10.1016/j.joitmc.2025.100609>
- [41] Brown, W., Johnson, O., Wilson, G., 2024. Influence of e-commerce technologies on supply chain management in retail. Preprints. DOI: <https://doi.org/10.20944/preprints202407.1140.v1>
- [42] Viu-Roig, M., Alvarez-Palau, E.J., 2020. The impact of e-commerce-related last-mile logistics on cities: A systematic literature review. *Sustainability*. 12(16), 6492. DOI: <https://doi.org/10.3390/su12166492>
- [43] Darko, E.O., Vlachos, I., 2022. Creating valuable relationships with third-party logistics (3PL) providers: A multiple-case study. *Logistics*. 6(2), 38. DOI: <https://doi.org/10.3390/logistics6020038>
- [44] Fatorachian, H., Ramesh, S., 2025. Leveraging digital transformation platforms to strengthen market position in India's textile industry. *Cogent Business and Management*. 12(1), 2527220. DOI: <https://doi.org/10.1080/23311975.2025.2527220>
- [45] Vatavwala, S., Kumar, B., Sharma, A., 2024. Enhancing upselling and cross-selling in business-to-business markets. In: Sheth, J.N., Jain, V., Mogaji, E., et al. (Eds.). *Customer Centric Support Services in the Digi-*

- tal Age. Palgrave Macmillan: Cham, Switzerland.
- [46] Vashishth, T.K., Vikas, Sharma, K.K., et al., 2024. Enhancing customer experience through AI-enabled content personalization in e-commerce marketing. In: Ltifi, M. (Ed.). *Advances in Digital Marketing in the Era of Artificial Intelligence: Case Studies and Data Analysis for Business Problem Solving*. CRC Press: Boca Raton, FL, USA. pp. 7–32. DOI: <https://doi.org/10.1201/9781003450443-2>
- [47] Wunderlich, N.V., Blut, M., Brock, C., et al., 2025. How to use emerging service technologies to enhance customer centricity in business-to-business contexts. *Journal of Business Research*. 192, 115284. DOI: <https://doi.org/10.1016/j.jbusres.2025.115284>
- [48] Sharabati, A.A.A., Ali, A.A.A., Allahham, M.I., et al., 2024. The impact of digital marketing on the performance of SMEs. *Sustainability*. 16(19), 8667. DOI: <https://doi.org/10.3390/su16198667>
- [49] Babatunde, S.O., Okeleke, P.A., Ijomah, T.I., 2022. The role of digital marketing in shaping modern economies: An analysis of e-commerce growth and consumer behavior. *International Journal of Management & Entrepreneurship Research*. 4(12), 675–691. DOI: <https://doi.org/10.51594/ijmer.v4i12.1417>
- [50] Rangaswamy, A., Moch, N., Felten, C., et al., 2020. The role of marketing in digital business platforms. *Journal of Interactive Marketing*. 51(1), 72–90. DOI: <https://doi.org/10.1016/j.intmar.2020.04.006>
- [51] Şahin, E., 2023. Social media marketing. In: Sumer, S.I., Parilti, N. (Eds.). *Social Media Analytics in Predicting Consumer Behavior*. CRC Press: Boca Raton, FL, USA. pp. 15–45. DOI: <https://doi.org/10.1201/9781003200154-2>
- [52] Theodorakopoulos, L., Theodoropoulou, A., 2024. Leveraging big data analytics for understanding consumer behavior in digital marketing: A systematic review. *Human Behavior and Emerging Technologies*. 2024(1), 3641502. DOI: <https://doi.org/10.1155/2024/3641502>
- [53] Kumar, V., Ashraf, A.R., Nadeem, W., 2024. AI-powered marketing: What, where, and how? *International Journal of Information Management*. 77, 102783. DOI: <https://doi.org/10.1016/j.ijinfomgt.2024.102783>
- [54] Alauddin, F.D.A., Aman, A., Ghazali, M.F., et al., 2025. The influence of digital platforms on gig workers: A systematic literature review. *Heliyon*. 11(1), e41491. DOI: <https://doi.org/10.1016/j.heliyon.2024.e41491>
- [55] Mundhe, E., 2025. *The Infinite Path: Research across Disciplines*. S. M. Joshi College: Pune, India. DOI: <https://doi.org/10.5281/zenodo.14583763>
- [56] Green, D.D., Walker, C., Alabulthim, A., et al., 2018. Fueling the gig economy: A case study evaluation of Upwork.com. *Management and Economics Research Journal*. 4, 104.
- [57] Sharma, A.K., Sharma, R., 2025. The gig economy and the evolving nature of work in India: Employment, policy, and platform realities in the age of convenience. *Journal of Digital Economy*. 4, 156–167. DOI: <https://doi.org/10.1016/j.jdec.2025.07.005>
- [58] Himani Srihita, R., Goli, G., Rajyalaxmi, M., et al., 2025. Transformative dynamics of the gig economy: Technological impacts, worker well-being and global research trends. *International Journal of Engineering Business Management*. 17. DOI: <https://doi.org/10.1177/18479790241310362>
- [59] Yu, J., Abdul Hamid, R., 2024. Gig workers' psychological contracts and turnover intention: A mediated path analysis of organizational identification and job satisfaction. *Acta Psychologica*. 251, 104587. DOI: <https://doi.org/10.1016/j.actpsy.2024.104587>
- [60] Weideman, M., Hofmeyr, K.B., 2020. The influence of flexible work arrangements on employee engagement: An exploratory study. *SA Journal of Human Resource Management*. 18, a1209. DOI: <https://doi.org/10.4102/sajhrm.v18i0.1209>
- [61] Esakkiammal, Sangeetha, S., Amirthavarshini, E., 2024. A study on opportunities and challenges faced by freelancers. *IPE Journal of Management*. 14(23), 134–140.
- [62] Kaushiki Singh, D.K.S., Shaiphali Jain, D.S.J., 2025. The Role of Digital Payment Systems in Economic Growth in Developing Economy. *International Journal of Business and Management Invention*. 14(5), 144–148. DOI: <https://doi.org/10.35629/8028-1405144148>
- [63] Putrevu, J., Mertzanis, C., 2023. The adoption of digital payments in emerging economies: Challenges and policy responses. *Digital Policy, Regulation and Governance*. 26(5), 476–500. DOI: <https://doi.org/10.1108/DPRG-06-2023-0077>
- [64] van Dalen, A., 2023. *Algorithmic Gatekeeping for Professional Communicators: Power, Trust, and Legitimacy*. Routledge: London, UK. DOI: <https://doi.org/10.4324/9781003375258>
- [65] Hochstein, R.E., Harmeling, C.M., Perko, T., 2023. Toward a theory of consumer digital trust: Meta-analytic evidence of its role in the effectiveness of user-generated content. *Journal of the Academy of Marketing Science*. 53, 1034–1054.
- [66] Harichandana, A.D., 2025. Digital payment adoption in emerging markets. *International Journal on Science and Technology*. 16(3), 1–77. DOI: <https://doi.org/10.71097/ijts.v16.i3.7770>
- [67] James, I., Ibukun, T., Ng, P.Y., 2026. Opportunities or threats: Impact of digital engagement on marginalized women entrepreneurs. *Gender, Work and Organization*. 33(1), 164–180. DOI: <https://doi.org/10.1111/gwao.70029>
- [68] Mäntymäki, M., Baiyere, A., Islam, A.K.M.N., 2019. Digital platforms and the changing nature of physical

- work: Insights from ride-hailing. *International Journal of Information Management*. 49, 452–460. DOI: <https://doi.org/10.1016/j.ijinfomgt.2019.08.007>
- [69] Finkle, T.A., 2018. Technology entrepreneurship: Creating your own online business. *Journal of Technology Research*. 8, 1–13.
- [70] Andriamahery, A., Qamruzzaman, M., 2022. Do access to finance, technical know-how, and financial literacy offer women empowerment through women's entrepreneurial development? *Frontiers in Psychology*. 12, 776844. DOI: <https://doi.org/10.3389/fpsyg.2021.776844>
- [71] Hossain, M.A., Sur, S., 2025. Digital platform adoption by homepreneurs: A detailed study of economic growth prospects amidst the COVID-19 pandemic. *ACCLAIMS*. 42, 1–8.
- [72] Agustian, K., Mubarok, E.S., Zen, A., et al., 2023. The impact of digital transformation on business models and competitive advantage. *Technology and Society Perspectives*. 1(2), 79–93. DOI: <https://doi.org/10.61100/tacit.v1i2.55>
- [73] Greenstein, S., Zamboni, M., 2025. Navigating the legislative dilemma: Evaluating the EU AI Act's approach to regulating emerging technologies. *Theory and Practice of Legislation*. 13(3), 312–352. DOI: <https://doi.org/10.1080/20508840.2025.2513177>