

INPLASY

The Impacts of Digital Inclusion on the Development and Sustainability of Rural Women's Ventures: A Scoping Review

INPLASY202540044

doi: 10.37766/inplasy2025.4.0044

Received: 14 April 2025

Published: 14 April 2025

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ADMINISTRATIVE INFORMATION

Support - CENTRUM PUCP.

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202540044

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 April 2025 and was last updated on 14 April 2025.

INTRODUCTION

Review question / Objective This scoping research sought to answer the following research questions: • What technologies have been referenced in studies on the digital inclusion of rural women, particularly in relation to the development and sustainability of their ventures? • What are the effects of digital inclusion on the development and sustainability of women's ventures in rural areas?

Background Globally, the number of women actively involved in the development and management of entrepreneurial ventures in rural areas has increased significantly in recent years (Yadav et al., 2022; Correa & Pavez, 2016). This growth is largely attributed to initiatives aimed at closing the gender gap in access to resources, training, and technology, as well as to the strengthening of public policies that promote inclusion and female empowerment in areas where women have traditionally been marginalized (Das

et al., 2013; Marshall, 2021). In this context, women are increasingly recognized as agents of change within their communities, leading entrepreneurial projects that not only generate income but also contribute to the social, economic, and environmental development of their surroundings. These initiatives range from innovative and sustainable agricultural activities to projects related to digital transformation and the commercialization of local products, reinforcing their strategic role in the global economy (Han et al., 2022; Jamil, 2021; Ye & Yang, 2020).

In light of this role as agents of change, governments have identified the need to ensure the digital inclusion of women living in rural areas as a key strategy to enhance their participation in economic and social development (Yadav et al., 2022). Digital inclusion not only aims to provide access to information and communication technologies (ICTs), but also to equip women with the necessary skills to use these tools effectively—enhancing their capabilities, improving the

management of their ventures, and expanding their market opportunities.

As a result, understanding the effects of digital inclusion on rural women's entrepreneurial ventures has emerged as a relevant and growing area of research. This interest is reflected in recent studies that explore the multiple dimensions of this phenomenon, such as those conducted by Yadav et al. (2022), Yu et al. (2024), Rahaman et al. (2023), Yang et al. (2022), and Ye & Yang (2020), among others.

Rationale Despite the growing number of studies addressing digital inclusion, the role of women in rural areas, and business management, there is still a lack of a comprehensive literature review specifically focused on the effects of digital inclusion on the development and sustainability of their entrepreneurial ventures. While there is broad consensus on the importance of digital technologies in improving market access, operational efficiency, and the creation of collaborative networks, little systematic attention has been given to how digital inclusion impacts critical aspects of women-led rural entrepreneurship—such as strategic planning, innovation, access to finance, business scalability, and resilience in the face of economic or social challenges.

This lack of focused analysis limits a comprehensive understanding of the benefits and challenges that rural women face when adopting digital technologies in their ventures, making it difficult to generate solid and evidence-based recommendations for designing public policies, training programs, and support strategies aimed at enhancing the impact of digital inclusion in these contexts.

Therefore, a literature review centered on this thematic intersection is essential to advance knowledge on how digital technologies can become a driver of sustainable and equitable development for women entrepreneurs in rural areas. Moreover, it can complement previous studies that have explored specific areas such as financial inclusion and the use of targeted tools—including artificial intelligence, e-commerce, and mobile applications—which have shown significant potential to enhance the efficiency and competitiveness of entrepreneurial initiatives.

METHODS

Strategy of data synthesis In order to identify and select the most relevant documents for this review, the interdisciplinary databases SCOPUS and Web of Science (WOS) will be used. These platforms were chosen due to their well-

established reputation for indexing high-quality scientific literature and their broad coverage across multiple disciplines, including social sciences, economics, technology, and gender studies—fields that are essential for addressing the topic from a comprehensive perspective.

To formulate the search equation, truncation characters and Boolean operators will be employed to structure precise queries capable of identifying the most relevant and high-quality studies within the selected databases. Accordingly, the search equation will be developed using the keywords “digital inclusion”, “rural woman”, and “entrepreneurship”, along with their synonyms, plural forms, and related terms, to ensure exhaustive coverage and capture all possible variations. The search strategy will be reviewed by information specialists and librarians to ensure proper implementation across the different databases.

Eligibility criteria The eligibility criteria for this scoping review have been designed to ensure that the included studies specifically address the relationship between digital inclusion and the development and sustainability of entrepreneurial ventures led by women in rural areas.

First, only studies that focus on women residing in rural areas will be included. The second inclusion criterion requires that the studies explicitly document the effects of digital inclusion on the development and sustainability of entrepreneurship. The third criterion restricts the review to empirical studies, encompassing qualitative, quantitative, or mixed-method approaches.

The fourth criterion pertains to the type of documents. Only studies that are in their final publication stage, specifically peer-reviewed journal articles, will be considered. Appropriate filters will be applied in each database search to ensure this. Regarding language, as the fifth criterion, only articles published in English or Spanish will be included. Finally, considering technological advancements, only studies published between 2014 and 2024 will be considered.

Source of evidence screening and selection

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Data management The extraction of the effects of digital inclusion on rural women's entrepreneurial ventures will be conducted through an open coding process. This approach enables the systematic identification, categorization, and analysis of concepts and patterns found within the full texts of the selected documents. The coding results will be documented in a spreadsheet that will include the following fields: article information, research objective, methodology, identified effects, business process in which the effect is documented, results obtained, main conclusions, and limitations.

For this review, the presentation of the findings will be limited to a bibliometric analysis and the synthesis of evidence through qualitative extraction.

Language restriction English and Spanish.

Country(ies) involved Peru.

Keywords Digital inclusion; women; rurality; ventures.

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