



IntSym

South Eastern University of Sri Lanka

CONFERENCE PROCEEDINGS

13th International Symposium 2025

**Navigating Technology Transformation for Sustainable Development:
Bridging Sciences, Technologies, and Humanities**

10TH SEPTEMBER 2025



South Eastern University of Sri Lanka



Scanned with OKEN Scanner

✓ MODA-Based Optimization of a Landsman Converter for Efficient BLDC Motor Drive in Electric Vehicles
Shanmugasundaram. N. and Rajasree. R.

✓ Reimagining Learning and Its Impact on Digital Transformation in Education by Using TPACK Framework
Ramesh. R., Bharathi Kavithai. R.A. and M.Bharani Eswari

Impact of Digital Innovations of Social Protection in India
Rajesh Kanna. R., and Wilson.S.

Performance Evaluation of Cryogenic LN₂ Coolant on Chip Morphology and Surface Finish in Machining of LM 13 Aluminium Alloy Composite
Muthuraman. V., Chandrasekaran. M., Sridhar. R. and Gurusamy. P.

✓ A Framework for Tamil Language Speech Synthesis and Automated Children's Story Narration That Uses MaryTTS
Nihla Iqbal. F. and Pulasinghe.K.

From Experimentation to Production: A Review of MLOps Implementation Strategies in Emerging Economies
Sanjeetha. F.M.B. and Nihla. F.M.I.

AI-Enhanced User Experience Design: A Systematic Review of Principles, Applications, and Ethical Challenges
Sanjeetha.F. M.B. and Nihla.F.M.I.

✓ Microstructural Evolution in the Co-Extruded Aluminium-Titanium Bi-Metal Composite
Arunkumar. S., Alphin. M.S., Edward Kennedy, Sriraman. N. Sridhar. R.

✓ IoT Enabled Smart Gardening Systems: Evaluating Efficiency and Performance Through PLS-SEM and fsQCA
Sanjeetha.F.M.B.

Evaluation of Morphological, Physiological and Yield Traits in Selected *Arachis hypogaea* L. (Groundnuts) Accessions
Kavindi. M.A.U., Mubarak. A.N.M. and Nashath. M.N.F.

DNA Profiling of Selected Inbred Maize Germplasms Using SSR Markers Related to Canopy Architecture and Photosynthetic Traits
Asmiya. A.F., Mubarak. A.N.M. and Nashath M.N.F.

IMPACT OF DIGITAL INNOVATIONS ON SOCIAL PROTECTION IN INDIA

¹Rajesh Kanna. R., and ²Wilson.S.

^{1,2}Department of Economics, School of Law, Vels Institute of Science, Technology, and Advanced Studies (VISTAS), Chennai, Tamil Nadu, India
rajeshkanna.sms@velsuniv.ac.in

ABSTRACT

Digital Innovations in Social Protection, Trends, challenges and solutions. The integration of digital technology into social protection systems represents a transformative shift with profound implications for the delivery of welfare service. This paper explores the evolving landscape of digital innovations in social protection, contextualizing these developments within the broader framework of universal social protection and a systemic approach to welfare. This article begins by outlining the historical and conceptual foundations of social protection, emphasizing the importance of achieving universal coverage to safeguard vulnerable populations against various socio-economic risks. In examining the current trends, the article highlights the emergence of DPI-enabled (Digital Public Infrastructure) systems as pivotal tools in enhancing the efficiency, accessibility, and inclusivity of social protection programmes in India. By leveraging technologies such as biometric identification, mobile platforms, and data analytics, these innovations aim to streamline service delivery and expand reach, particularly in underserved and rural areas. The discussion extends to a gendered perspective on social protection, assessing how digital innovations can address or exacerbate gender disparities in access and benefits. Additionally, the article adopts a social development approach to social protection, exploring how digital innovations intersect with broader goals of human development and social equity. The effects of digitalization on vulnerable populations, including marginalized communities and individuals with limited digital access, are examined to understand potential risks and opportunities.

Keywords: Digital Innovation, Social Protection, Digital Public Infrastructure, Sustainable Development Goal, International Labour Organization.

Introduction

Social protection is increasing on a global scale. There is ample evidence that it not only protects households from falling into poverty trap, due to ups and downs in life, but safeguards the way to prosperity by offering an alternative to negative coping strategies, such as taking children out of school or selling household assets (Radermacher, 2021). It boosts regional demand, which aids in the growth of regional economies. Households are more resilient to the financial implications of pandemics, climate shocks, and other crises. Additionally, it reduces inequalities, strengthens social cohesions and promotes stability and peace. Social protection is a key instrument for achieving the Sustainable Development Goals. In reality, providing everyone with access to social assistance when they are in need is not an easy task. Selecting the right mix of instruments, tailoring them to the desired objectives and target groups, coordinating them as effectively as possible, capitalizing on the potential of digitalization in social protection delivery, and responding to the challenges posed, for example, by new forms of work all necessitate a thorough understanding of the underlying concepts of social protection and their practical application.

*Navigating Technology Transformation for Sustainable Development:
Bridging Sciences, Technologies, and Humanities*