International Journal of Education, Modern Management, Applied Science & Social Science (IJEMMASSS)
An International Quarterly bi-lingual Multidisciplinary Double Blind Open Access Peer Reviewed Refereed Journal
ISSN:2581-9925, Impact Factor (Cosmos: 7.555 & I2OR: 5.105), Volume 08, No. 03(IV)(Special Issue), July-September, 2026, pp. 144-152

From Physical to Digital: An Empirical Analysis of Asset Tokenization Adoption among Women Entrepreneurs in the Tribal Belt of Jharkhand

Sarita Kumari*

Research Scholar, Department of Commerce and Financial Studies, Central University of Jharkhand, Ranchi.

*Corresponding Author: saritacomjsr@gmail.com

DOI Citation: Kumari, S. (2026). From Physical to Digital: An Empirical Analysis of Asset Tokenization Adoption among Women Entrepreneurs in the Tribal Belt of Jharkhand. International Journal of Education, Modern Management, Applied Science &Amp; Social Science, 08(03(IV)), 144–152. https://doi.org/10.62823/ijemmasss/8.3(iv).9600

ABSTRACT

Jharkhand is renowned for its rich natural wealth and mineral resources. The proper utilization of resources in Jharkhand could make the state economically strong. Nowadays, women are also engaging in business however, their numbers remain significantly lower compared to men, several schemes have been introduced for women entrepreneurship. In the current era, while the role of women entrepreneurs has grown significantly, but they continue to face formidable barriers these are: family responsibilities, technology complexity, gender bias and the biggest hurdle is lack of accessing credit, This paper aims to explore solution to this challenge through "Asset Tokenization and Blockchain Technology", with a specific focus on rural Jharkhand. In this study exploratory qualitative method has been used, semi structured interview has been conducted from experts and women entrepreneurs. Purposive sampling has been used. MS excel software was used for analysis the data. Hence we know blockchain technology, Decentralized financing and Asset Tokenization has immense latent potential to solve long standing collateral and credit access issues, to extend this system to rural areas, the government should conduct awareness programs and campaigns. Researcher found that women entrepreneurs have no awareness about Asset Tokenization in rural areas, According to results Asset Tokenization definitely reduces gender bias in credit approval, lack of legal framework and cyber threat will be the biggest concern for adopting this system. Experts also believe that women are taking loan but the funds are used by their husbands. The Asset tokenization system will mitigate many loan-related issues however, the benefits of this technology entirely depends upon implementation of this system.

***Keywords**: Asset Tokenization, Blockchain technology, Women Entrepreneurs, MSMEs, Tribal Belt, Collateral, Gender bias, Credit Access.*

Introduction

Jharkhand is a very prosperous state, primarily due to its resources. If we examine the proportionn of women to men entrepreneurs, it is quite low -1:4. There are 82,439 women owned enterprises registered in UDYAM portal, which is significantly a low figure. Women in Jharkhand have a strong foothold in micro level however, in the small and medium level which are considered to involve larger investment –male dominance is evident. The primary reason for this are issues related to access to credit, financial inclusion and technical literacy. In this investigation, the authors sought to suggest an alternative collateral system i.e. Asset tokenization which reduces the hinder of credit access issue of women entrepreneur.

* *Copyright © 2026 by Author's and Licensed by Inspira. This is an open access article distributed under the Creative Commons Attribution License which permits unrestricted use, distribution, and reproduction in any medium, provided the original work properly cited.*

* ***A Special Issue for the papers accepted for publication in the Two-Days Multidisciplinary National Seminar on Role of Entrepreneurship in Socio-Economic Upliftment of Women in India (22-23May 2026) Organized by Faculty of Commerce, The Graduate School College for Women, Jamshedpur, Jharkhand(A Constituent Unit of Kolhan University, Chaibasa, Jharkhand)in Collaboration with Jharkhand State Higher Education Council, Department of Higher and Technical Education, Govt. of Jharkhand & Punjab and Sind Bank, Sakchi, Jamshedpur.***

Asset Tokenization

Asset Tokenization is a system where physical assets are converted into digital tokens by using blockchain technology.

This promotes fractional ownership and facilitates easier access to loans or raising investment from the market.

Literature Review

Women entrepreneurs face numerous hurdles, such as digital divide, cyber security issues and algorithmic biases (Vasanthy & Chandramohan, 2025). Women have to face barriers such as gender bias in credit approval, digital divide and cyber security threats, the majority of women are facing financial and employment related pressure: banks hold a negative attitude towards women entrepreneurs and reluctant to grand them loan(Verma et al,2024).Most women do not wish to borrow finances due to their discomfort with the financial system, Due to “Old school” thought, women are often unable to quantify for loans(Majumdar & Mittl, 2024).80% women face financial constraints due to lack of collateral security , no credit record and not fulfilling the stringent qualifying criteria by the banks(Mouchi et al,2014).Women often lack collateral security for both short term and long term loan because generally, they do not hold property in their own names. Banks perceive that women might at any time abandon their businesses to return to being housewives: consequently, they consider them to be less creditworthy(Kishori & Sujatha,2025). The biggest obstacle of a female entrepreneurs path is availability of funding at various stages of the company"s development cycle(Singh et al, 2020). According to the study it has been observed that female entrepreneurs demonstrate strong capitalist traits, and prefer to desire the same while they can sustain occupation for life balance. Even though we have many successful Women Entrepreneurs in our country, but as we have a male dominated culture there are many challenges which women entrepreneurs face such a kind of challenges and discrimination from family and Society (Sharma, 2023).In a male dominated society, women are not treated equal to men that act as a barrier to woman„s entry into business, There are cultural and societal norms that hinder equal participation of women in ventures that men undertake(Jain, 2021).

Research Gap

In this study, researcher has tried to suggest alternative collateral for women entrepreneurs who face barriers to access credit due to lack of land/property collateral through Asset Tokenization.

Research Questions

R.Q.1. What is the current level of awareness of Asset Tokenization, Blockchain and Decentralized financing among experts and women entrepreneurs?

R.Q.2. Will the adoption of Asset Tokenization reduce gender bias in credit approval?

R.Q.3. According to experts and women entrepreneurs, what will be the biggest concern in adoption of Asset Tokenization?

R.Q.4. What is the biggest reason for credit approval rejection for women entrepreneurs?

R.Q.5. What type of Support do experts and women entrepreneurs require to adopt Asset Tokenization?

Objectives of the Study

- To assess the awareness level of Asset Tokenization, Decentralized financing and Blockchain technology among experts and women entrepreneurs.
- To determine whether Asset Tokenization system reduces gender bias or not.
- To know the biggest concern of adoption of Asset Tokenization.
- To know the reason behind credit approval rejection for women entrepreneurs by bankers.
- To understand the support that bankers and women entrepreneurs seek.

Research Methodology

- Research Design: Exploratory Qualitative Design
- Type of Data: Primary, Semi structured interview
- Sample Size: 11 bankers and 31 women entrepreneurs

- Sampling Type: Purposive sampling
- Software used: MS- Excel

Analysis and Discussion

R.Q.1. What is the current level of awareness of Asset Tokenization , Blockchain and Decentralized financing among experts and women entrepreneurs?

According to women entrepreneurs

Table 1

Awareness of Asset Tokenisation	
Yes	0
No	31

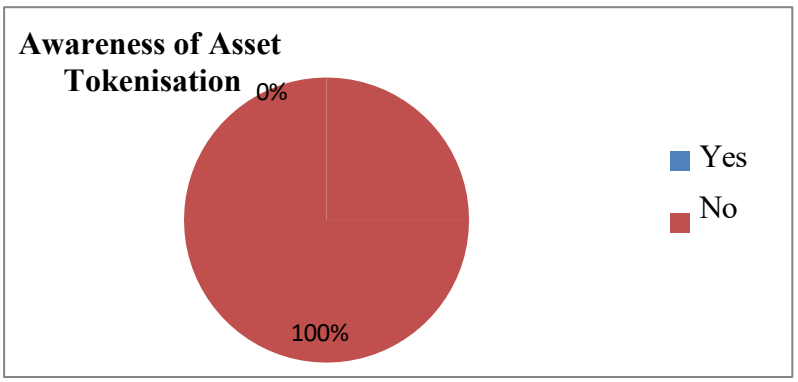


Fig. 1: Awareness of Asset Tokenisation

According to Experts

Table 2

Familiarity with Blockchain/DeFi	
Aware	5
Expert	1
Knowledgeable	3
Unfamiliar	2

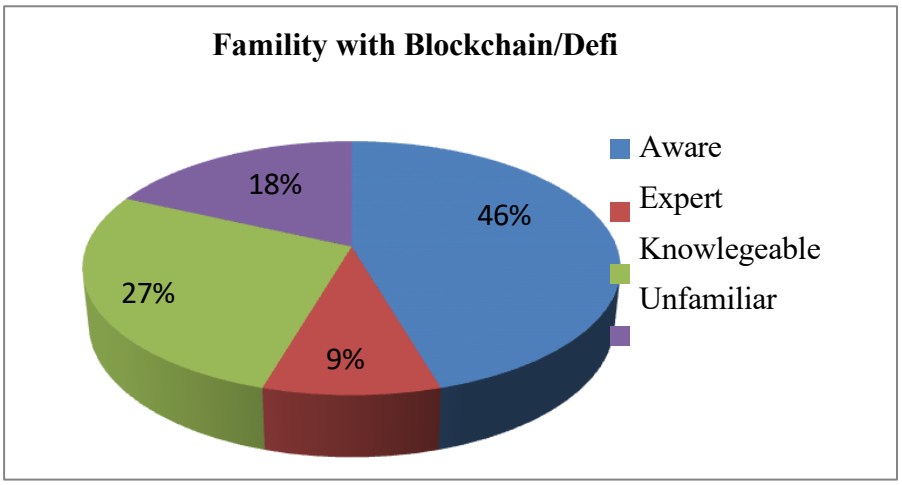


Fig.2: Familiarity with Blockchain/DeFi

Findings

46% experts are aware about Asset Tokenization and 100% women entrepreneurs unaware about Asset Tokenization.

R.Q.2. Will the adoption of Asset Tokenization reduce gender bias in credit approval?

Table 3: According to women entrepreneurs

Reduction of Gender bias due to Asset Tokenization	
Yes	24
No	4
None	2
No biasness exist	1

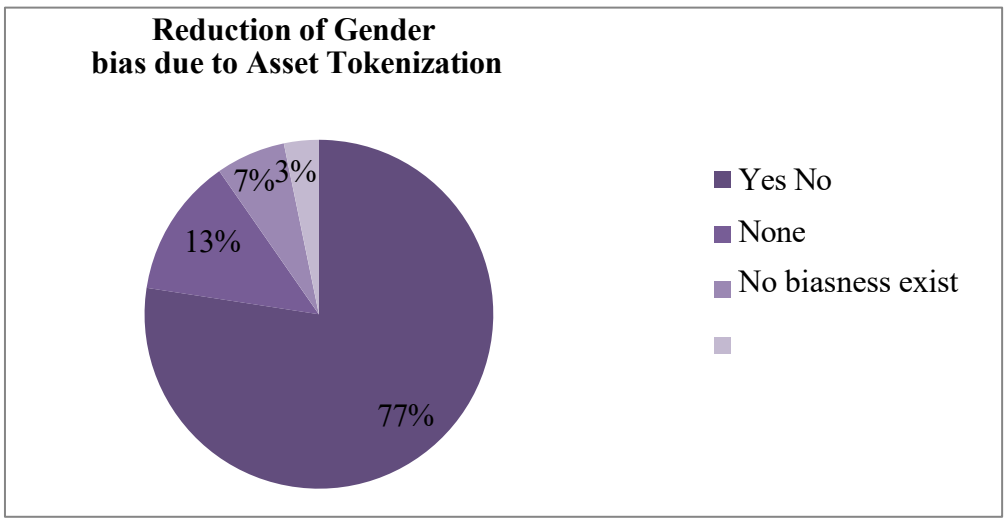


Fig. 3: Reduction of Gender bias due to Asset Tokenization

Findings

77% women entrepreneurs believe that the adoption of Asset Tokenization will reduce gender bias. Asset Tokenization system operates on digital code. As soon as loan approvals become code based, gender bias will be eliminated.

R.Q.3. According to experts and women entrepreneurs , what will be the biggest concern in adoption of Asset Tokenization?

According to Women Entrepreneurs

Table 4

Concerns of DeFi		
Cyber fraud	17	55%
Lack of Physical presence support	1	3%
Technical complexity	6	19%
High interest rates	4	13%
Cyber fraud High interest Rate	1	3%
Cyber fraud Lack of physical presence support Technical complexity	1	3%
Cyber fraud Technical complexity	1	3%

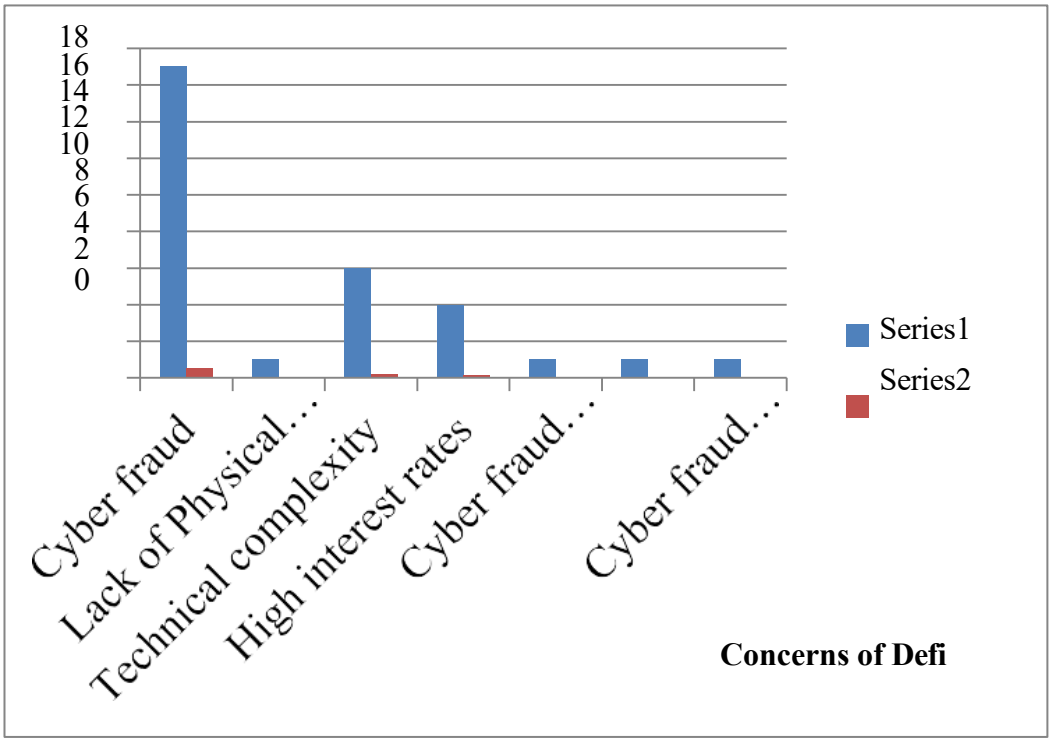


Fig. 4: Concerns of DeFi

According to experts

Table 5

Concerns of accepting Tokenized Assets		
High price volatility of digital assets	2	18%
Lack of legal framework	6	55%
Cyber security	2	18%
Lack of standardized valuation methods	0	0%
Lack of legal framework/Lack of standardized valuation methods	1	9%

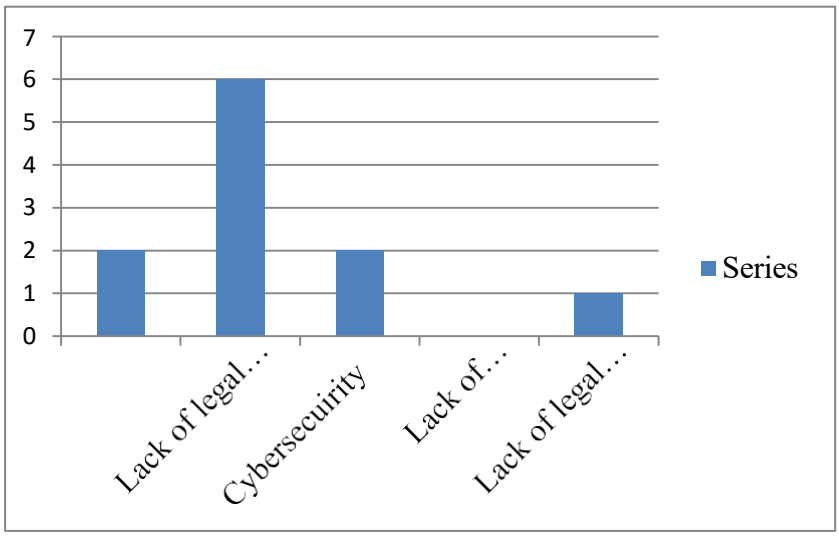


Fig. 5: Concerns of accepting Tokenized Assets

Findings

According to 55% experts thought the biggest concern of adopting Asset Tokenization is lack of legal framework whereas, 55% women entrepreneurs thought that cyber fraud is the biggest concern.

.**R.Q.4**. What is the biggest reason for credit approval rejection for women entrepreneurs?

According to experts

Table 6

Reason for higher rejection rate of women entrepreneurs		
Lack of traditional property	2	18%
Insufficient credit history	0	0%
Smaller scale of operation	6	55%
No such case	1	9%
All of the above	1	9%
Lack of traditional property/ Lack of knowledge	1	9%

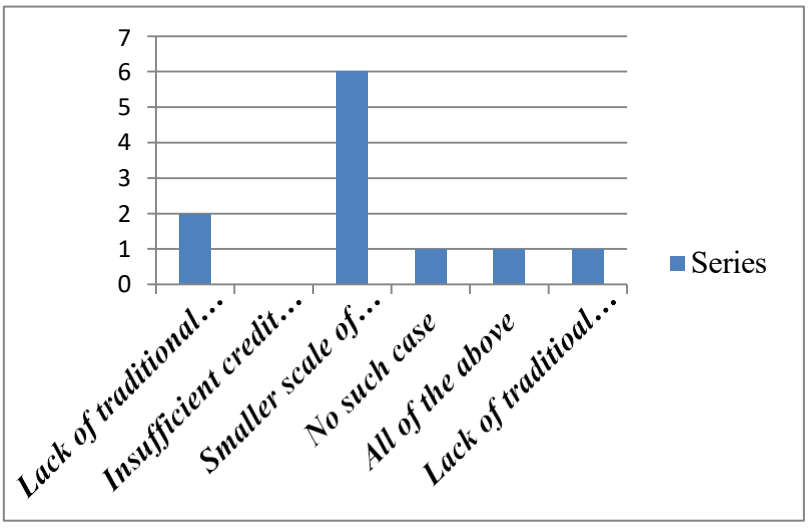


Fig. 6: Reason for higher rejection rate of women entrepreneurs according to experts

Findings

55% of experts believe that the reason for the rejection is the smaller scale of operation.

R.Q.5. What type of Support do experts and women entrepreneurs require to adopt Asset Tokenization?

According to Experts

Table 7

Suggestion for successful Asset Tokenization framework Integration with existing CBDC	
	2
Legal enforceability of digital ownership	2
Real time valuation	3
Education/ Literacy for end user 4	

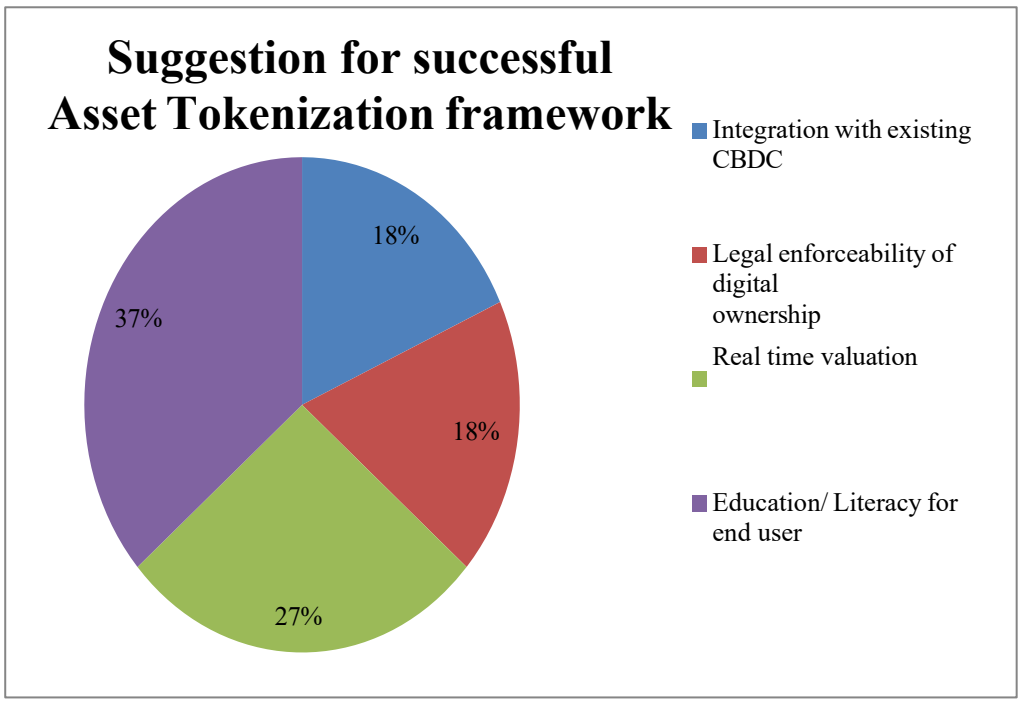


Fig. 7: Suggestion for successful Asset Tokenization framework

According to Women Entrepreneurs

Table 8

Need of Support for adopting this technology	
Training and workshops	6
Government backed guarantee	16
Easy to use mobile apps	8
Training and workshops Easy to use mobile apps	1

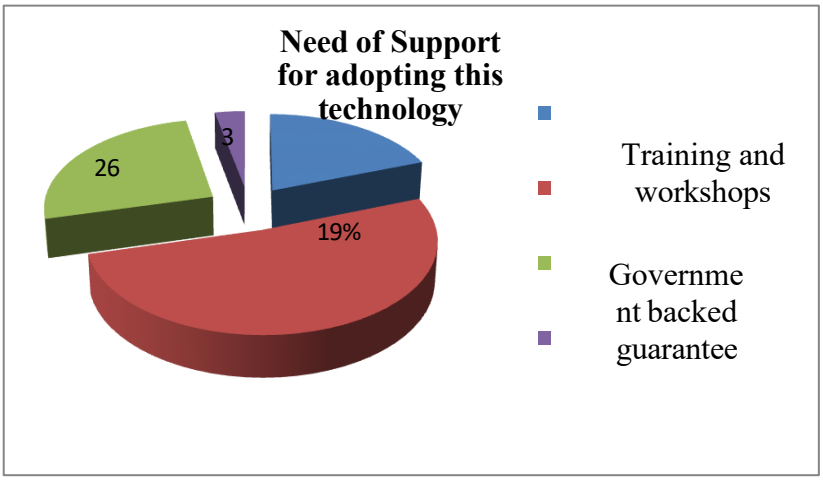


Fig. 8: Need of Support for adopting this technology

Findings

37% of experts believe that education/literacy for end users is essential; while 52% women entrepreneurs believe that government backed guarantee is needed.

Conclusion

According to the results women are less aware of Asset Tokenization and only 46% of bankers(11) are aware. 77% of women believe that the adoption of Asset Tokenization will eliminate gender bias, whereas 3% women believe that gender bias doesn"t exist. Most of (55%) of the respondents both experts and women entrepreneurs believe that the biggest concern is lack of legal framework and cyber security. 6 out of 11 bankers believe that the reason behind the rejection of credit approval for women is the smaller scale of operation. Experts believe that education literacy of Asset Tokenization is essential for end users while women want government backed guarantee. Asset Tokenization will be very invaluable system for women entrepreneurs for whom face collateral issues. According to Bankers if asset tokenization functions correctly, specifically through the smart contract the ownership of an assets will automatically transfer to the banks in the event of a borrower"s default

thereby reducing the recovery time. Some experts believe that this system won"t apply on movable goods, and price volatility of tokens will also be a hinder for this system. In nutshell success or failure of any scheme or policy depends upon awareness.

Limitation

Since the study is confined solely to the rural areas of Jharkhand, its results can"t be generalized. Internet connectivity will act as a hindrance to the practical implementation of Asset Tokenization in rural Jharkhand. Since Asset Tokenization and Blockchain technology are emerging concepts in India, there are also gaps in their legal framework.

Recommendations

The objectives will not be achieved merely by introducing digital infrastructure, the government should conduct campaigns in local languages to raise awareness regarding Asset Tokenization and Digital Credit. Since Self Help Groups(SHG) are highly prevalent in rural areas, they should be utilized to connect rural women with digital tokenization.

Future Scope of the Study

The impact of implementation of the asset Tokenization Bill, 2026 can be assessed by future researcher. In this study, the researcher focused only on rural areas, but future researcher can study the comparison of the adoption feasibility of Asset Tokenization in urban and rural areas.

References

1. Vasanthy, A., & Chandramohan,S.(2025). Empowering Women Through Digital Platforms: Strategies For Success in Business. 61-67,
2. Verma, S., Pandey, D., Kaur, H., & LV,A.(2024). Role of Digital Entrepreneurship in Social Empowerment of Women Entrepreneurs in India: A Empirical Study. Journal of Informatics Education and Research ISSN: 1526-4726 Vol 4 Issue 3.
3. Rani, V.S., & Sundaram, N.(2024). Opportunities and Challenges Faced by Women Entrepreneurs For Sustainable Development in India. DOI:10.24857/rgsa.v18n3-073
4. Majumdar, R.,&Mittal,A.(2024). Revisiting the Financial Challenges Faced by Women-Led Microenterprises: Some Evidences from the Indian Manufacturing Sector. https://doi.org/10.1108/IIMTJM-01-2024-0002
5. Isaacs, F., Oosterwyk, G., Njugana, R. (2022). Leveraging Blockchain Technology for the Empowerment of Women Micro-entrepreneurs. In: Zheng, Y., Abbott, P., Robles-Flores, J.A. (eds) Freedom and Social Inclusion in a Connected World. ICT4D 2022. IFIP Advances in Information and Communication Technology, vol 657. Springer, Cham. https://doi.org/10.1007/978-3-031-19429-0_14
6. Mauchi, F.N., Mutengezanwa, M. and Damiyano, D. (2014), “Challenges faced by women entrepreneurs: A case study of Mashonaland Central Province”, International Journal of Development and Sustainability, Vol. 3 No. 3, pp. 466 480.
7. Kishori, K.S., & Sujatha,S.(2025). Women Entrepreneurs in India- Opportunities and Challenges.
8. Sharma, R.R.(2023). A Study on Problems of Women Entrepreneurs in Urban Area with Special Reference to Ranchi, Jharkhand. MEERAYAN JOURNAL (ISSN NO:2455-6033) VOLUME 23 ISSUE 7 2023.
9. Singh, C., Ojha, D.K., Rath, R.C., & SV,S.(2020). An Analysis of Women Entrepreneurs Empowerment on SMEs and its Economic Sustainability in India: Special Reference to Ranchi City in Jharkhand. Splint International Journal of Professionals, Vol. 7, No. 4, October-December 2020 (pp. 84-93)
10. Jain,S.(2021). Status of Women Entrepreneurs in Jharkhand State. Journal of Emerging Technologies and Innovative Research, © 2021 JETIR August 2021, Volume 8, Issue 8
11. Kumar, R., & Rani, P.(2024). Exploring Financial Inclusion Among Women Entrepreneurs: A Survey in Hazaribagh District Jharkhand. International Journal for Multidisciplinary Research, Volume 6, Issue 2, March-April 2024
12. Sinha, S.K., & Rani, J.(2016). Barriers Facing Women Entrepreneurs in Rural India: A Study in Haryana. Amity Journal of Entrepreneurship, Volume 1 Issue 1 2016.

❑❑❑