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# How Common Service Centers (CSCs) Are Empowering Rural Communities in India

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### ABSTRACT—

Common Service Centers (CSCs) are pivotal in bridging India's rural-urban digital divide by providing access to e-governance, financial, educational, and healthcare services. This study evaluates their role in transforming rural livelihoods, fostering financial inclusion, and enhancing service access. Despite their extensive network, challenges such as inadequate infrastructure, low digital literacy, and limited community engagement hinder their potential. Employing a mixed-methods approach, this research integrates surveys, interviews, focus groups, and secondary data to assess CSC impact across diverse regions. Findings highlight CSCs' contributions to income generation, digital literacy, and reduced transaction costs, while emphasizing the need for improved infrastructure, Village Level Entrepreneur (VLE) support, and localized service design. By addressing these gaps, CSCs can evolve into sustainable, community-driven platforms that advance India's rural development and align with sustainable development goals. This study offers actionable insights for policymakers and stakeholders to enhance CSC effectiveness.

**Keywords:** Common Service Centers (CSCs), Rural Development, Digital Inclusion, E-Governance, Financial Inclusion, Socio-Economic Impact, Public Service Delivery, Community Engagement

## I. INTRODUCTION

In recent years, Common Service Centers (CSCs) have emerged as a transformative component of India's rural digital infrastructure, bridging the urban-rural divide by facilitating access to essential government, financial, and informational services. As a key initiative under the National e-Governance Plan (NeGP), CSCs aim to empower rural communities by delivering services in Multiple studies affirm that CSCs play a pivotal role in democratizing service access, especially for marginalized populations. They serve not only as access points but also as catalysts for technological awareness, digital literacy, and entrepreneurship. However, the long-term impact of CSCs on livelihoods, social inclusion, and sustainable development remains underexplored. Issues such as limited infrastructure, lack of community participation, inadequate training of Village Level Entrepreneurs (VLEs), and poor integration with local governance continue to restrict their effectiveness.

This research seeks to fill these critical gaps by investigating the long-term socio-economic impact, operational sustainability, and role of citizen participation in shaping effective CSCs. Through a mixed-methods approach, the study intends to generate actionable insights for policymakers, implementers, and rural communities alike ensuring that CSCs not only survive as infrastructure but thrive as inclusive, community-driven platforms that propel sustainable rural development, areas such as education, healthcare, agriculture, and financial inclusion through a digital platform. Despite rapid expansion now reaching over 2.5 lakh centers across India. The real potential of CSCs remains only partially realized due to persistent structural, socio-economic, and operational challenges.

Moreover, while individual case studies and region-specific evaluations exist, a broader, comparative understanding of CSC performance across geographies and especially their sustainability and community relevance is lacking. The absence of empirical data on citizen engagement, coupled with fragmented implementation strategies, further challenges their scalability.

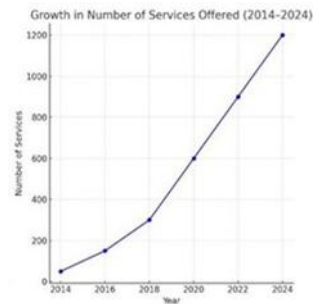


Fig.1 Growth in the number of Common Service Centers (CSCs) from 2014 to 2024.

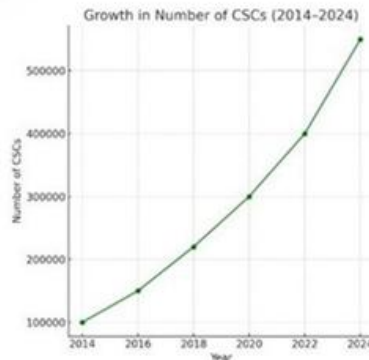


Fig. 2. Increase in the number of services offered by CSCs during 2014–2024.

## II. TYPES OF COMMON SERVICE CENTERS (CSCS) IN INDIA

CSCs in India operate under a decentralized model and are categorized based on their operational structure, services offered, and implementation approach. The major types are detailed below.



Fig. 3. Categories of CSC services: G2C, B2C, financial, education, health, and agriculture.

### A. Government-to-Citizen (G2C) CSCs

*Primary Focus:* Delivering public services directly to citizens.

*Services Include:*

- Aadhaar enrollment and updates
- PAN card applications
- Birth/death certificate issuance

- Land record access (Bhulekh)
- Ration card services
- Voter ID registration

*Goal:* Bring essential governance services closer to rural and remote communities.

*B. Business-to-Citizen (B2C) CSCs*

*Primary Focus:* Offering private/commercial services to the public.

*Services Include:*

- Mobile/DTH recharges
- Utility bill payments
- Online shopping and ticket bookings
- Insurance and banking products

*Goal:* Enhance convenience and foster digital commerce in rural regions.

*C. Financial Inclusion CSCs (Banking Correspondents)*

*Primary Focus:* Providing basic banking services to the unbanked population.

*Services Include:*

- Account opening and transactions
- Direct Benefit Transfer (DBT) disbursement
- Micro-loans and pensions
- Cash withdrawals/deposits

*D. Education and Skill Development CSCs*

*Primary Focus:* Delivering educational, vocational, and skill-based training.

*Services Include:*

- NIELIT and NDLM digital literacy programs
- English-speaking courses
- Soft skills and job-readiness training
- Competitive exam coaching

*E. Tele-health / e-Health CSCs*

*Primary Focus:* Bridging healthcare access gaps in rural areas.

*Services Include:*

- Telemedicine consultations
- Appointment bookings with doctors
- Basic diagnostic services
- Health insurance enrollment

*F. Agriculture and Rural Services CSCs*

*Primary Focus:* Supporting rural livelihoods, especially farmers.

*Services Include:*

- Soil health card issuance
- Market price updates
- Weather forecasts

- Online fertilizer/seed sales
- Farmer registration under government schemes

#### G. *Energy-Enabled (Solar) CSCs*

*Primary Focus:* Operating in off-grid areas using solar power systems.

*Purpose:* Ensure uninterrupted CSC operations where electricity is unreliable.

*Additional Services:* Energy rental (charging solar lanterns, phones, etc.).

#### H. *Customized State-Specific CSCs*

States such as Kerala (Akshaya), Jharkhand (PragyaKendra), and Andhra Pradesh (MeeSeva) run branded CSC models tailored to local needs while aligned with national objectives.

### III. Benefits

#### A. *Bridging the Digital Divide*

CSCs act as digital access points in remote villages, offering internet connectivity and enabling rural citizens to interact with digital platforms for governance, education, health, and commerce. They help reduce dependency on urban centers for digital services.

#### B. *Improved Access to Government Services*

Rural citizens can now apply for certificates, access welfare schemes, check land records, and perform Aadhaar updates without traveling long distances. This enhances transparency, efficiency, and accountability in public service delivery.

#### C. *Financial Inclusion*

CSCs help people open bank accounts, perform digital transactions, and access microloans, pensions, and insurance services. They support the government's Direct Benefit Transfer (DBT) mechanism, ensuring subsidies and welfare reach the intended beneficiaries.

#### D. *Education and Digital Literacy*

Through partnerships with skill training providers, CSCs conduct digital literacy programs, language training, and job-readiness courses. This is especially helpful for youth and women in enhancing employability and confidence.

#### E. *Access to Basic Healthcare (Telemedicine)*

In areas with limited health infrastructure, CSCs facilitate remote doctor consultations, basic diagnostics, and health scheme enrollments. They play a role in preventive health awareness and support Ayushman Bharat services.

#### F. *Agriculture Support Services*

Farmers benefit from services like soil testing, weather updates, mandi prices, and e-agriculture advice, directly from CSCs. These services improve crop planning, productivity, and income stability.

#### G. *Sustainable and Green Solutions*

Solar-powered CSCs ensure uninterrupted service delivery in power-deficient regions and promote energy awareness. This also reduces dependency on polluting fuels like kerosene.

#### H. *Rural Entrepreneurship and Employment*

CSCs are operated by Village Level Entrepreneurs (VLEs)—often local youth or women—who earn revenue from service commissions. They create local employment, encourage entrepreneurship, and boost rural economy circulation.

#### I. *Local Governance and Participation*

By serving as community hubs, CSCs promote citizen engagement, feedback mechanisms, and collaboration with gram panchayats. They increase trust in government systems and give rural people a voice in shaping services.

#### J. *Reduced Travel Time and Transaction Costs*

Rural citizens no longer need to travel to urban centers for basic services, saving both time and money. This improves convenience and service equity, especially for the elderly, women, and marginalized groups. //

## IV. METHODOLOGY

### A. Research Design

A mixed-methods approach will be used to assess the role of Common Service Centers (CSCs) in improving rural livelihoods, financial inclusion, and access to education, healthcare, and welfare. This combines quantitative data with qualitative insights for a comprehensive evaluation.

### B. Data Collection Primary Data:

- Surveys: Structured questionnaires for VLEs, CSC users, and non-users on service usage, satisfaction, benefits, and digital literacy.
- Interviews: Semi-structured interviews with CSC stakeholders (officials, VLEs, partners) on implementation and community dynamics.
- Focus Group Discussions: Group interactions with youth, women, farmers, and elderly to explore service impact and suggestions.
- Observations: On-site visits to observe CSC operations and interactions.

### Secondary Data:

- Literature Review: Academic studies and previous research on CSCs, digital inclusion, and rural development.
- Government Reports: Official publications and performance data from NeGP and CSC initiatives.
- Transaction Data: Analysis of anonymized CSC usage data.
- Socio-Economic Indicators: Data on income, literacy, health, and employment from official sources.

### C. Sampling Strategy

- 1) Geographical Scope: Multiple states/districts for regional comparison.
- 2) Participants:
  - a) VLEs: Stratified random sampling across CSC types and regions.
  - b) Users/Non-Users: Random and purposive sampling ensuring demographic diversity.
  - c) Stakeholders: Identified via snowball sampling and expert input.

### D. Data Analysis

- Quantitative: Descriptive stats (means, frequencies) and inferential tests (t-tests, ANOVA, regression) to explore CSC impact.
- Qualitative: Thematic and content analysis of interviews, FGDs, and documents.
- Integration: Mixed-methods triangulation to combine and validate insights from both data types.

## V. LITERATURE REVIEW

Common Service Centers (CSCs) have been widely recognized as vital pillars in India's e-governance strategy, especially in rural development. Several studies have explored their role in expanding access to digital services and reducing the rural-urban divide.

- Miranda [4] highlighted CSCs as important tools for democratizing service access, bridging the digital divide, and delivering essential e-governance services at the grassroots level. The paper emphasized their contribution to financial inclusion, digital education, and service delivery, though it also noted challenges like poor infrastructure and digital illiteracy.
- Rahul and Krishnan [7], in their case study on Akshaya CSCs in Kerala, found that the centers contributed positively to e-literacy and employment generation. However, the sustainability of these centers remains questionable due to inadequate institutional support and declining stakeholder involvement.
- Ummath [8] explored how CSCs have introduced ICT tools to rural populations, enhancing their technological awareness and digital participation. While elderly users benefited from basic services, younger users pointed to poor connectivity and limited worker training as major concerns.
- Malhotra and Krishnaswamy [3] examined the expectations of rural citizens in Haryana, revealing that although citizens valued services like health information and bill payments, awareness and participation remained low. The study stressed the importance of contextual factors and citizen engagement in CSC effectiveness.

- Sharma et al. [9] identified key challenges such as high travel costs, low digital literacy, and limited awareness as primary barriers to successful CSC implementation. They emphasized the need for hierarchical strategies to tackle these interconnected issues.
- Misra [5] studied the convergence of e-governance and financial inclusion, suggesting that proper alignment of service delivery models can make CSC operations more viable and sustainable. A follow-up paper [6] further linked CSCs with sustainable development goals (SDGs), showing their potential in poverty alleviation through collective community engagement.
- Loyd and Sivakumar [2] proposed a VoIP-based wireless mesh network model to power CSCs in remote areas, aiming to solve communication and infrastructure challenges. Their pilot project illustrated the feasibility of low-cost digital solutions for rural governance.
- Kumarwad et al. [1] provided a status report of CSCs in Satara district, highlighting underutilization, low awareness, and the need for government-NGO collaboration to improve service reach and digital literacy.
- Vijayalakshmi et al. [10] introduced solar-powered CSCs as a sustainable alternative for energy-scarce regions. Their model not only supported uninterrupted services but also added livelihood options and environmental awareness among villagers.

Across the literature, there is a common agreement that CSCs are transformative tools in rural India. However, sustainability, citizen participation, local customization, and infrastructure support remain under-addressed. These gaps form the basis for this study's focus on long-term impact, financial viability, and participatory service design.

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## VI. RELATED WORK

### A. Overview of Common Service Centers (CSCs) in India

CSCs are digital access points launched under the National e-Governance Plan to deliver essential government, financial, educational, and health services in rural India. Despite their wide reach, challenges like poor infrastructure, low awareness, and limited digital literacy hinder their full potential.

### B. Key Themes from Literature

- Digital Inclusion & E-Governance: CSCs help bridge the digital divide [4], but issues like poor connectivity and training persist [8].
- Financial Inclusion: VLEs as Financial Business Correspondents play a key role, with infrastructure and service quality being vital [5].
- Socio-Economic Impact: Initiatives like Akshaya CSCs improve e-literacy, jobs, and inclusion [7], contributing to SDGs [6].
- Challenges: Barriers include high costs, low awareness, and limited local engagement [3], [9].
- Sustainability & Innovation: Solutions like solar-powered CSCs [10] and VoIP networks [2] show promise, but long-term sustainability remains a concern.

### C. Research Gaps

- Limited studies on the long-term socio-economic impact of CSCs.
- Need for scalable, sustainable models and public-private financing.
- Lack of focus on community participation and feedback-driven service design.

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## VII. RESULT

### A. Socio-Economic Impact of CSCs

- Income & Employment: CSCs create jobs and boost local incomes, especially for VLEs and digital entrepreneurs.
- Education: They enhance digital literacy and provide access to skill and education programs across age and gender groups.
- Healthcare: Increased use of telemedicine and awareness of health schemes.
- Financial Inclusion: Rise in bank accounts, digital transactions, and DBT delivery.
- Reduced Costs: Citizens save time and money accessing services locally.

### B. Operational Sustainability & Scalability

- Financial Viability: Success depends on revenue, service fees, and government/private support.
- Infrastructure: Internet, power, and alternative solutions like solar affect operations.
- VLE Training: Ongoing support and training are essential for performance and retention.

### C. Citizen Participation & Engagement

- Awareness & Usage: Service adoption relies on awareness and perceived value.
- Feedback & Customization: Community feedback helps tailor services to local needs.
- Local Collaboration: Ties with Gram Panchayats improve trust, relevance, and impact.

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## VIII. FUTURE DISCUSSION

### A. Tackling Key Challenges

- Infrastructure: Improve rural internet and power with PPP models and solar solutions.
- Digital Literacy: Launch targeted programs for marginalized groups and boost awareness.
- VLE Viability: Support sustainable VLE income through diverse services, better commissions, and micro-financing.

### B. Boosting Citizen Participation

- Community Involvement: Co-design services with locals for better relevance.
- Local Governance Links: Collaborate with Gram Panchayats to align with local needs.
- Feedback Systems: Set up effective grievance redressal and feedback mechanisms.

### C. Embracing Technology

- Mobile Integration: Offer mobile-first services for better access.
- AI & Analytics: Use data to tailor services and identify gaps.
- Blockchain: Ensure transparency in records and transactions.
- Skill Upgradation: Update training to match future job demands.

### D. Policy & Stakeholder Support

- Unified Policies: Align rural development and digital goals.
- Monitoring Impact: Go beyond transactions—track empowerment and wellbeing.
- Capacity Building: Train VLEs, officials, and leaders continuously.
- Public-Private-Community Partnerships: Encourage collaborative funding and innovation.

### E. Future Research Areas

- Long-Term Impact: Study socio-economic outcomes over time.
- Comparative Models: Analyze regional best practices.
- Focus on Vulnerable Groups: Assess CSC impact on women, elderly, disabled.
- Financial Models: Evaluate sustainability of various CSC models.
- Crisis Role: Research CSC roles in emergencies and disaster response.

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## IX. CONCLUSION

Common Service Centers (CSCs) have emerged as powerful enablers of digital empowerment and service delivery in rural India. By acting as decentralized access points for a wide range of government and business services, CSCs contribute significantly to bridging the digital divide, fostering financial inclusion, promoting digital literacy, and improving access to healthcare, education, and agriculture support.

While existing literature acknowledges their potential, it also highlights persistent challenges, including poor infrastructure, low citizen awareness, lack of digital skills, and financial unsustainability that hinder their full impact. Furthermore, limited community participation and uneven implementation across states continue to affect service quality and long-term relevance.

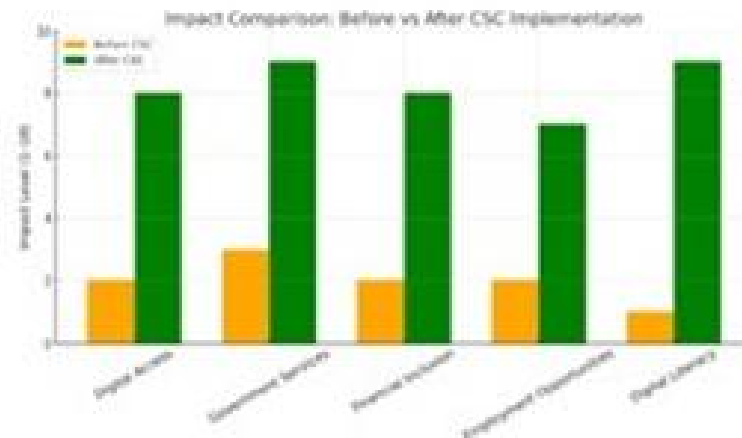


Fig. 4. Impact comparison before and after CSC implementation across five key rural development areas.

Despite these challenges, CSCs represent a critical step toward inclusive rural development. Their ability to empower local entrepreneurs, reduce transaction costs, and bring government services closer to underserved populations makes them essential to India's digital and developmental agenda. For CSCs to realize their full potential, future efforts must focus on strengthening infrastructure, supporting Village Level Entrepreneurs (VLEs), increasing local engagement, and building sustainable, scalable business models. Integrating community feedback and tailoring services to local needs will also be key to ensuring their long-term success and social impact.

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