Digital Infrastructure for Entrepreneurship Led Job Creation
Bridging the Divide: Digital Infrastructure Paving the Way for Rural Entrepreneurship-led Job Creation

India needs to generate 10 million jobs yearly, more so in rural India, where over 70% of the population resides. The editorial highlights the various pioneering work done by Development Alternatives in promoting entrepreneurship in rural India. It also discusses the transformative power of ‘Digital Infrastructure’ as a driver of entrepreneurship-led job creation.

Transition to Digital Infrastructure for Rural Enterprise Development at Scale

India’s economy is growing due to increased digital penetration but remains under-utilised in rural enterprise. Debasish Ray and Mayank Nautiyal discuss how bridging this gap can help unlock rapid economic growth. They suggest that despite challenges, digital initiatives can revolutionise rural economies and create a more inclusive society.

Digital Kaun Banega Business Leader

Work4Progress India has created the Kaun Banega Business Leader (KBBL) competition to tackle the challenges of starting a business in rural India. In this article, Shuzilini Ashuva explains KBBL’s goal to promote opportunity-based entrepreneurship, and it does so by soliciting innovative business ideas from young people and women. The first pilot has been successful, and the next phase has a special focus on women and idea generation of women-led non-traditional business ideas.

Larger Digital Landscape: UPI and E-commerce Movement Across the Country and Its Effect on Rural Entrepreneurship

India has experienced a digital revolution with the widespread adoption of UPI and e-commerce. This has created a unique opportunity for rural entrepreneurship. In this article, Neelakhi Dutta explores the impact of UPI and the e-commerce movement on rural businesses and highlights the need for policy-level changes to empower and uplift rural entrepreneurs.

Story of an Entrepreneur Using a Digital Platform

This article delves into the entrepreneurial journey of Amandeep Chaudhary. Kethosinuo Tepa and Neema Thomas discuss the Work4Progress programme that is aiding individuals like Amandeep in bridging the gap between metropolitan conveniences and rural necessities, thus promoting economic growth within the local community and contributing to India’s e-commerce landscape.
Bridging the Divide: Digital Infrastructure Paving the Way for Rural Entrepreneurship-led Job Creation

lest we forget, it is worth reminding ourselves, particularly those committed to sustainable national development that India needs to generate 10 million jobs every year. With over 70% of the population residing in villages and small towns, the ever-evolving landscape of the rural economy presents unique challenges in fostering job creation.

Development Alternatives (DA) has been a pioneer in promoting entrepreneurship in rural India. It has demonstrated entrepreneurship as a major game-changer in job creation, economic growth, and community development. In the last five years, our efforts have been spearheaded by the adoption of social innovation processes, tools and methods aimed at making entrepreneurship more accessible to people, particularly women and youth who have been otherwise excluded from opportunities for economic and social empowerment. As a result, 7000+ enterprises have been set up leading to 15,000+ jobs in 12 blocks of Uttar Pradesh.

Today, in these small pockets, over 100 enterprises are being set up every week. Moving forward, DA and our partners aim to scale these outcomes exponentially in a manner that 1 million jobs are created in Uttar Pradesh by 300,000 grassroots entrepreneurs in less than 3 years. To do so, the enabling solutions we have developed through years of engagement with communities will need to reach the hands of many more organisations and individuals.

As we stand on the precipice of a digital revolution, it’s crucial to explore how digital infrastructure will help in strengthening processes aimed at building robust entrepreneurial ecosystems. With our partner Gram Vaani, we piloted udyaME Vaani and were able to engage and influence more than 40,000 individuals for 6-months on entrepreneurship.

Digitisation of Kaun Banega Business Leader (KBBL), a prototype of DA, resulted in capturing hundreds of new creative business ideas by aspiring entrepreneurs within a short period of 1-2 months. Critical resources that were not readily accessible to entrepreneurs such as finance, information, and government schemes are now available at the doorstep, in their same village through the Kiosks network. Learning new channels for marketing and sourcing products through Buddy Box, a tool for online literacy of DA, enables entrepreneurs to connect to customers across the country. By digitising its tools and processes, DA has demonstrated pathways to strengthen its community connection, empower more entrepreneurs, facilitate timely delivery of support, and ensure that no community is left behind in the journey towards a more inclusive and prosperous future.

In this edition of the DA Newsletter, we bring forth the transformative power of ‘Digital Infrastructure’ as a driver of entrepreneurship-led job creation. We look forward to strengthening existing partnerships and working with new collaborators to design applications of digital technologies with rural communities that will break down barriers and open new avenues for grassroots entrepreneurs to become leaders in the creation of sustainable livelihoods.

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Transition to Digital Infrastructure for Rural Enterprise Development at Scale

The Indian economy is currently seeing rapid transformation and growth owing to increased digital penetration. With 715 million \(^1\) Internet users and 67% of households in the country owning a smartphone, the country’s digital penetration has been on the rise, with even rural populations benefitting from this technological advancement. Macro-level shifts such as Digital Public Infrastructure supported by the JAM trinity, low cost of data and increased social media penetration in rural areas have further accelerated this digital transformation. It is projected that the number of smartphone users will surpass 1 billion by 2026 \(^2\).

Gaps to Bridge

The digital infrastructure has brought immense benefits to multiple sectors, from government scheme delivery to financial inclusion, public health and education. But this transformation is under-utilised in the rural enterprise development sector. To accelerate holistic rural growth, it is crucial to translate digital infrastructure to economic upliftment at scale. Empirical data from Development Alternative’s multiple entrepreneurship programmes suggest that in states such as Uttar Pradesh, small rural businesses have yet to adopt smartphones or the internet at scale and are struggling with many gaps. Addressing these gaps can unlock rapid economic growth. These gaps are linked to a deeper understanding of digital technology and community adoption and include points such as:

- **Lack of access to technology:** Unequal access to reliable internet connectivity and inadequate digital connectivity in remote rural areas hinder the full realisation of the potential benefits of digital initiatives, limiting their impact on entrepreneurship.
- **Digital literacy:** The lack of digital literacy among certain segments of the rural population, especially women, poses a significant challenge. Efforts to enhance digital literacy and ensure equitable access to technology by using low-tech solutions are crucial for including a large segment of the community in the digital-led growth narrative. This also includes sensitisation of first-time internet users to predatory online scams and online crimes, which have also increased in recent times.
- **Socio-cultural barriers:** Existing socio-cultural norms, especially on young women using digital technology can impede these women’s access to and utilisation of digital resources. Addressing these societal barriers is imperative to ensuring equal participation and empowerment and requires a deeper level of capacity building of family members and awareness of community members.
- **Language barriers:** This is especially important, with 23% of Indians \(^3\) still illiterate and many more struggling to adopt English as a communication language. The diversity of languages often adds to the complexity of multiple dialects, even in Hindi. The digital solutions have to take into account this complexity and allow the scope of contextualising to local dialects and behavioural nuances of the adoption of technologies.

Opportunities for Rural People

Digital infrastructures must consider the above aspects to ensure wider adoption of digital technologies by rural entrepreneurs. The following are some opportunities that digital infrastructure can provide to rural entrepreneurs at a scale:

- **Access to support systems such as information and markets:** Digital platforms have bridged the gap between rural producers and urban markets. They have also helped label the entry-level issues usually faced by
rural entrepreneurs and provided a competitive advantage over their urban counterparts. Through e-commerce platforms and marketplaces, rural entrepreneurs can showcase their products and services to a global audience. This access has diminished geographical limitations, enabling rural businesses to thrive and expand their customer base.

- **Networking and mentorship:** Rural entrepreneurs can now communicate and share information within peer-networks through platforms such as WhatsApp and Meta. This exchange of information further helps in creating business collaborations and a local support system for rural entrepreneurs. During the COVID-19 lockdown, this networking and mentorship proved to be very helpful and ensured the sustainability of the rural enterprises.

- **Financial inclusion:** The advent of digital payment systems and banking services has empowered rural entrepreneurs who now have access to formal financial institutions. With mobile banking and digital payment solutions, these entrepreneurs can conduct transactions, receive payments, and access credit facilities, which fosters business growth and sustainability.

- **Transition from informal to semi-formalisation:** With digital payments and easier access to government mandates such as Permanent Account Numbers, udhyam Aadhar (unique ID for businesses), Goods and Service Taxes, etc., many rural businesses are opting towards semi-formalisation of their businesses to avail government subsidies.

### Social Innovation and Good Practices

In the last six years, Development Alternatives has collaborated with rural entrepreneurs in Uttar Pradesh through a new approach to social innovation methodology. This has allowed a
deeper level of understanding of the entrepreneurial ecosystem and the role of digital infrastructure. As a result of deep listening and co-creation with the community, several good practices have been developed:

- **udyaME Vaani:** To overcome the barrier of access to smartphones, the internet or literacy, Development Alternatives has partnered with Gram Vani to create an Integrated Voice Response System in which anyone can listen to courses on entrepreneurship, connect with local peers through voice clips and access support from dedicated service providers and mentors. To date, more than 5000+ women entrepreneurs have accessed this service, shared their business ideas and accessed support services.

- **udyaME and udyaME kiosks:** udyaME is a digital platform in which rural entrepreneurs can get interactive content on entrepreneurship customised to their specific needs and aspirations. To ensure that the entrepreneurs also get support, the udyaME platform is complemented through a network of physical udyaME kiosks, where experts are available within the community to support entrepreneurs and help them navigate through digital infrastructure.

- **Buddy box:** This is an interactive training session in which rural entrepreneurs, especially women entrepreneurs, can get digital literacy, such as how to open email accounts, operate a smartphone, safeguard from online crimes, etc. Post-training, they also get physical resource materials to keep referring to any basic queries that may arise in the future.

The role of digital infrastructure in rural entrepreneurship development and women’s empowerment in India cannot be overstated. While there are challenges to overcome, the opportunities presented by digital initiatives have the potential to revolutionise rural economies, enhance livelihoods and create a more inclusive and empowered society on a large scale. Policymakers, organisations and communities must work collaboratively to address these challenges and harness the full potential of digital infrastructure for sustainable rural development and women’s empowerment in India.

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Setting up a business in rural India comes with its unique set of challenges. While there are many people who aspire to become entrepreneurs, there is a lack of confidence and support available for them to channel their energies in the right direction. Inaccessibility to key resources to unlock these opportunities further constrains entrepreneurship in the hands of a few. To address these systemic challenges, Work4Progress India, through dialogues with the community, co-created the Kaun Banega Business (who will become the next business leader) Leader or KBBL competition.

KBBL is a community business competition tool that solicits innovative business ideas from youth and women and focuses on breaking myths about pursuing entrepreneurship. The tool aims to encourage shifts towards opportunity-based entrepreneurship over subsistence-based entrepreneurship. In the long run, the tool aims to address the issue of unemployment and migration in rural India. It promotes inclusive participation through user-friendly sources of communication tools such as street plays, radio shows, narrowcasting and interactive games.

The competition focuses on motivating youth and women towards livelihood creation and encourages them to think out-of-the-box for innovative business ideas with the following objectives:

- Deepen dialogue on entrepreneurship and initiate the process of co-creating an inclusive entrepreneurial ecosystem in new geographies
- Activate entrepreneurial energies to solve the issue of unemployment and migration through innovative and non-traditional business ideas
- Encourage women to take up entrepreneurship and challenge the patriarchal norms attached to women’s entrepreneurship
- Highlight the role of a support ecosystem in the life of an entrepreneur and their ability to view themselves as a leader within the system

To reach out to more communities and geography, KBBL has been digitised in collaboration with Gram Vaani. The digital structure of KBBL is adaptable according to the geographies, languages and target communities.
audience. Special attention has been paid to the digital divide among rural communities and their access to smartphones. To ensure that everyone can participate, KBBL has been designed using the interactive voice response system (IVRS), which can be accessed through both basic mobile phones and smartphones.

The first digital KBBL was piloted in Ghazipur and Varanasi. Participating in KBBL is as simple and accessible as making a toll-free call and sharing one's innovative business idea through udyaME Vaani. The campaign successfully reached over 15000 listeners over the period of three months and received 133 diverse business ideas from the community. Some of the interesting business ideas received include Khushi, a young girl, who wants to open a bicycle repair shop and Rajkumar who aspires to open a custom-made saree shop. Out of these ideas, nine business ideas were selected for the final round. The Development Alternatives Enterprise Support Services (ESS) team has been connected with all the aspiring entrepreneurs who have shared their business ideas on the platform to co-create and provide them with support in setting up their businesses through market and financial linkages now that the piloted digital KBBL has concluded.

The first pilot has illustrated the potential of the tools to reach out to diverse communities across multiple geographies at a time. It aims to provide rural communities with connections to support services who may otherwise have never considered setting up their own business due to a lack of awareness and information. The next phase of digital KBBL was launched on 14 December in the Jhansi district, with a special focus on women and idea generation of women-led non-traditional business ideas.

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In recent years, India has witnessed a remarkable transformation in its digital landscape with the widespread proliferation of the Unified Payments Interface (UPI) and the adoption of e-commerce platforms. This paradigm shift has not only reshaped the way urban consumers behave but also created a unique opportunity for fostering rural entrepreneurship. In this article, we explore the impact of UPI and the e-commerce movement on rural businesses and highlight the need for policy-level changes to empower and uplift rural entrepreneurs.

India has witnessed a remarkable surge in internet and smartphone usage, with the number of internet connections reaching 830 million [1] in 2021. This growth is attributed to the 'Digital India' programme. Concurrently, the smartphone user base has experienced substantial growth and is anticipated to hit 1 billion by 2026. This transformative shift has propelled India’s digital sector, projecting it to attain a value of US$ 1 trillion by 2030 [2].

The emergence of UPI has played a pivotal role in bridging the digital divide
between urban and rural areas. Enabled by smartphones and basic internet connectivity, UPI has empowered rural entrepreneurs to participate in the digital economy. UPI has not only simplified digital transactions but also facilitated financial inclusion for millions in rural India. To capitalise on this success, policymakers should focus on creating a robust framework to encourage financial institutions to extend their services to rural areas. This could include incentivising banks to set up branches in underserved regions and promoting the use of UPI-compatible financial products tailored to the needs of rural entrepreneurs.

Furthermore, the rise of e-commerce platforms has revolutionised how goods and services are bought and sold. With the help of online platforms, rural entrepreneurs who were once confined to local markets can now reach a national audience. However, there are still logistical challenges that need to be addressed, such as last-mile delivery and connectivity issues. Policymakers should collaborate with e-commerce companies to develop infrastructure solutions that enable seamless delivery to even the most remote areas [3].

In 2021, there has been a significant rise in online transactions in Tier-2 and Tier-3 cities in India. Rural populations have particularly been making more online purchases. According to the Indian Brand Equity Foundation, an initiative by the Ministry of Commerce and Industry, India’s e-commerce market is expected to become the world’s second-largest market by 2034 and surpass the United States [3].

To promote digital entrepreneurship in rural India, policymakers should introduce targeted incentives and subsidies such as tax breaks for businesses operating in rural areas, grants for digital skills training programmes, and financial incentives for the development of e-commerce infrastructure. While e-commerce provides a platform for rural entrepreneurs to expand their customer base, it is crucial to ensure fair market access. Policymakers must implement regulations that prevent monopolistic practices and promote a level playing field for both local and national players [4]. This includes establishing guidelines for fair pricing, preventing discrimination against smaller businesses and ensuring transparent business practices within the e-commerce ecosystem.

The digital revolution, fueled by UPI and e-commerce, holds immense promise for unlocking the entrepreneurial potential of rural India. However, to realise this potential, policymakers need to enact strategic interventions that address the unique challenges rural entrepreneurs face. This can be achieved by fostering digital literacy, promoting financial inclusion, incentivising digital entrepreneurship and ensuring fair market access. By doing so, we can build a resilient and inclusive digital economy that empowers rural entrepreneurs and contributes to the overall economic growth of the nation.

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Amandeep Chaudhary’s entrepreneurial journey is a story of resilience and entrepreneurship that unfolded in the village of Raksa, Jhansi. Originally an ITI graduate, Amandeep transitioned into a new chapter of his life when he began operating an Amazon e-store in 2022.

It was through Rajkumar Vishwakarma, the owner of Vivaan Cyber Cafe, a common service centre in Raksa, that Amandeep was introduced to this opportunity of managing an Amazon e-store and to the Work4Progress programme. Interested in the prospect, Amandeep decided to embark on this entrepreneurial venture.

To make his dream come true, Amandeep invested a substantial amount of INR 130,000. This sum included expenses for registration and security. He invested some money from his savings and also took a loan through Rang de, a peer-to-peer lending platform, to turn his aspirations into reality. This financial backing acted as the crucial foundation for setting up and launching the Amazon e-store.

Presently, the Amazon e-store stands as a thriving business in Raksa. It employs three people who play vital roles in its daily operations. Each employee gets a monthly wage of INR 8000. This not only demonstrates the owner’s business acumen but also highlights the ripple effect of entrepreneurship in promoting economic growth within the local community.

Work4Progress is a flagship programme of Development Alternatives, supported by ‘la Caixa’ Foundation, which focuses on creating dignified and meaningful livelihood opportunities for marginalised women and youth in rural India through enterprise development.

Amandeep’s Amazon e-store is a local success story that makes a substantial contribution to India’s broader e-commerce landscape. As the demand for e-commerce services continues to expand in the digital era, especially in rural communities like Raksa, Amandeep’s business plays a crucial role in bridging the gap between metropolitan conveniences and rural necessities. His e-commerce business adds to the growing need for digital transactions and access to a wide selection of products by bringing the ease of online shopping to the doorsteps of Raksa’s citizens. This not only coincides with the national trend of greater reliance on e-commerce services but also answers the special demands of rural areas, illustrating the digital marketplace’s versatility and inclusivity.

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