

Chief Minister's Rajasthan Economic Transformation Advisory Council (CMRETAC) DEPARTMENT OF PLANNING, RAJASTHAN

POLICY STUDY ON REDESIGNING TRADE IN THE ERA OF E-COMMERCE





Chief Minister, Rajasthan & Chairman, Economic Transformation Advisory Council

CHAIRMAN'S MESSAGE

Every state is important in the scheme of national development. We cannot assure the progress of India without the progress of the states. The Constitution binds us in a federal polity where every order of the government (Union, State and Local) has an important role to play. State governments are certainly closer to the people and hence bear an enormous responsibility towards ensuring effective delivery of goods and services.

In this endeavor, they have a direct, indirect, and enabling role to play. Rajasthan is committed towards that goal and has been at the forefront of many reforms since long. Our sincere and unceasing efforts, during the pandemic and otherwise, have been recognized widely.

The Bhilwara COVID-19 containment model has been recognized as a replicable model globally. Ours was also one of the first states in India which came up with a comprehensive strategy for economic revival in the wake of the pandemic. Besides taking a plethora of immediate steps to extend social and economic relief to the people during COVID-19, Rajasthan has also introduced several transformative measures in the recent past to boost the economy of the state. MSME Facilitation Act, 2019; Food Processing Policy, 2019; Tourism Policy, 2020; Mukyamantri Chiranjeevi Swasthya Bima Yojana, 2021; Handicraft Policy, 2022; Rajasthan Investment Promotion Scheme, 2022; Rajasthan Right to Health Care Act, 2022; Indira Gandhi Urban Employment Guarantee Scheme, 2022 and Vision 2030 are some of the path breaking initiatives undertaken by the government.

We also started a practice of 'thematic' annual budgets for converging our efforts and energy on most pressing issues and have ensured that governance is truly decentralized. Our campaigns on 'Prashasan Shehron Ke Sang Abhiyan' and 'Prashasan Gaon Ke Sang Abhiyan' are examples of that spirit. While our efforts are incessant, structural slowdown and unexpected shocks like the pandemic can derail the economy. This calls for continuous preparedness on our part.

Creation of Chief Minister's Rajasthan Economic Transformation Advisory Council (CMRETAC) was a significant step to ensure our preparedness for short-term and long-term development objectives. In the year 2021-22, the Council prepared nine (09) policy studies on areas as diverse as Fiscal Management; Managing Urban Informal Sector; Integrated Agro-Business Infrastructure; Sustainable Agriculture; Doing Business; Quantifying Intangible Cultural Assets; Education and the New Paradigm (bridging digital divide); Medical Services; and Public Private Partnership in Infrastructure.

In the year 2022-23, the Council undertook six (06) new policy studies. These pertain to Building Energy Transition Roadmap; Financing Green Infrastructure; Urbanization of Rural Areas; Recalibrating Institutions to meet Climate Challenges; Using Data for Better Policy Formulation and Evidence-based Decision Making; and Redesigning Trade in the Era of E-commerce.

These policy areas may appear to be separate and discreet but one commonality that binds them all is that they are truly geared towards a bottom-up approach to the development of the state while embracing and addressing new challenges. I urge my colleagues in the state government to also focus on inter-linkages in these policy areas for the best possible outcomes.

I am confident that these fifteen (15) path breaking studies would be a valuable input for the state and I am happy to state that the present policy study is very much part of this endeavour.

I am grateful to the Members of the Council, my Ministerial colleagues, officers of the Government, all collaborators and organizations who have worked tirelessly to make this possible. My special acknowledgement of Dr. Arvind Mayaram, Vice Chairman, CMRETAC, whose leadership and contribution towards this endeavor have been extremely valuable. My appreciation is also to the entire team at CMRETAC which has diligently worked to put these reform-oriented studies together.

(Ashok Gehlot)



सत्यमव जयत Economic Advisor to CM & Vice Chairman CM's Rajasthan Economic Transformation Advisory Council



VICE CHAIRMAN'S MESSAGE

India's e-commerce sector is booming, thanks to widespread internet access, smartphone use, deeper integration of digital payment systems and greater affordability. Several businesses are shifting towards direct consumer interface via e-commerce platforms which have created new opportunities for MSMEs in diverse markets.

Rajasthan has over 26 lakh MSMEs, numerous artisan clusters and is a known hub of Gems and Jewelry, handloom, textiles, carpets and readymade garments. This stems from state initiatives aimed at promoting entrepreneurship, business growth, and job creation. Rajasthan MSME (Facilitation of Establishment and Operation) Act of 2019, Rajasthan Investment Promotion Scheme (RIPS) 2022, Rajasthan Handicrafts Policy, and Rajasthan Start-up Policy, amongst others have significantly enhanced the state's investment landscape and business competitiveness.

However, in order to maximise opportunities through e-commerce there is a need to better understand the landscape of MSMEs, e-commerce models, their specific requirements, bottlenecks that prevent them for deeper penetration, tech readiness, legal and regulatory framework, and other support systems.

In the light of above, the Chief Minister's Rajasthan Economic Transformation Advisory Council (CMRETAC) in collaboration with Koan Advisory prepared this study on 'Redesigning Trade in the Era of E-Commerce'.

I express my gratitude to Hon'ble Chief Minister for providing continuous support and encouragement. I also express my gratitude to Hon'ble concerned Ministers, esteemed members of CMRETAC for their valuable guidance, concerned secretaries, other officers in the government, Technical Support Organization to CMRETAC and all other collaborators.

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(Dr. Arvind Mayaram)

ACKNOWLEDGEMENT

At the outset, we would like to express our deepest gratitude to the Chairman of Chief Minister Rajasthan Economic Transformation Advisory Council (CMRETAC), Hon'ble Chief Minister, Shri Ashok Gehlot and Hon'ble concerned Ministers.

We are indebted to Dr. Arvind Mayaram, Vice-Chairman for his valuable guidance and generosity with timely feedback on our work. We are grateful to the members of CMRETAC who have guided this study from time to time.

We are immensely grateful to Smt Veenu Gupta, Additional Chief Secretary, Department of Industries & Commerce; Smt. Namrata Vrishni, Joint Secretary (Tax), Department of Finance; Smt. Sonia Chaturvedi; Additional Director, DOIT&C; Shri Tapan Kumar, Joint Director, DOIT&C; Shri Yogendra Gurnani, Additional Director, Department of Industries; Shri P.N. Sharma, General Manager, Department of Industries Jaipur (Rural); Smt. Shilpi R. Purohit, District Director Dausa, Department of Industries; Shri Natwar Singh, Analyst-cum-Programmer, DOIT&C; Shri Amit, iStart, DOIT&C; and Shri Subhash Bhandari, Consultant, RUDA.

This study would not have been possible without the proactive support of Shri Bhawani Singh Detha, Principal Secretary, Plan; Shri Bhanwar Lal Bairwa, Joint Secretary, CMRETAC & Director, Directorate of Economics & Statistics; Shri Munshi Singh Rajput, OSD to Economic Advisor to the Chief Minister; Shri Vijay Kumar Sharma, Assistant Director, CMRETAC; Shri Ashutosh Sharma, Assistant Director, CMRETAC; Shri Ashutosh Sharma, Assistant Director, CMRETAC; Shri Yograj Pacherwal, Assistant Programmer, CMRETAC and Smt. Saroj Saini, Informatics Assistant, CMRETAC.

Our gratitude is also to Shri Mohit Kalawatia, ONDC; Shri Chirag Galundia, Wavemaker (GroupM/WPP Company) and Ms. Ajaita Shah, Frontier Markets, for their valuable insights into the e-commerce sector.

We are immensely thankful to the team at Koan Advisory and take this opportunity to thank Shri Achyutam Bhatnagar, Associate, Koan Advisory; Ms. Tamanna Sharma, Associate, Koan Advisory; Shri Vikash Gautam, Lead Economist, Koan Advisory; and Shri Vivan Sharan, Partner, Koan Advisory, for their thorough and timely guidance, inputs, and encouragement throughout this study. Indicc Associates provided technical support throughout the study period. We thank Shri Akshat Mishra, Shri Kartikeya Gupta, Shri Dhwaj Khattar, Ms Sowmya Kolla and Shri Krishn Mathur at Indicc Associates who constantly worked hard, sometimes on short deadlines, to ensure timely delivery of all policy studies.

Finally, any error or omission that may have remained is solely ours and should not be ascribed to any of the above acknowledged person or institution.

Ateesh Nandi Senior Associate Koan Advisory Group, New Delhi Abhishek Kumar Technical Advisor, CMRETAC & Partner, Indicc Associates

LIST OF ABBREVIATIONS

Abbreviation	Full Form
B2C	Business to Consumer
B2G	Business to Government
CFC	Common Facilitation Centre
СТЕ	Consent to Establish
СТО	Consent to Operate
DIC	District Industries Centre
DoIT	Department of Information Technology and Communication
EDB	Ease of Doing Business
ICD	Integrated Cluster Development
GDP	Gross Domestic Product
GI	Geographical Indicators
GVA	Gross Value Added
MSME	Micro, small, and medium enterprises
MIFC	MSME Investment and Facilitation Centres
ONDC	Open Network for Digital Commerce
RUDA	Rural Non- Farm Development Agency
RSLDC	Rajasthan Skill and Livelihoods Development Corporation
RSRTC	Rajasthan State Road Transport Corporation
RSPCB	Rajasthan State Pollution Control Board
SHG	Self-help Groups
SLA	Service level agreements
UDH	Urban Development and Housing Department

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EXECUTIVE SUMMARY

In the past two decades, India's digital revolution has radically transformed business operations, transitioning them from physical to digital realms through electronic commerce or e-commerce. E-commerce has created new business models, employment opportunities and has allowed manufacturers and traders access to untapped markets. The sector witnessed widespread adoption across Indian states over the last decade, particularly in Tier-Y and Tier-Z cities.

E-commerce serves as a crucial avenue for Micro, Small, and Medium Enterprises (MSMEs) to broaden their market presence through increased efficiency and richer customer engagement. However, MSME participation in the sector hinges on their access to digital services and their capacity to harness digital tools.

Integration of MSMEs into e-commerce value chains requires sustained policy and institutional support. Micro enterprises constitute a staggering 99 percent of Rajasthan's 26.87 lakh MSMEs. These enterprises in particular require assistance from the Government in terms of market linkages, skilling and capacity building initiatives, and simplification of legal compliance frameworks.

While the Government of Rajasthan has implemented various institutional, legal and policy initiatives to boost investments and MSME competitiveness, several efficiencies can still be unlocked.

This study titled 'Redesigning Trade in the Era of e-Commerce' thus commences with an evaluation of the landscape of MSMEs in Rajasthan and their potential for growth and value generation through e-commerce. It assesses the e-commerce opportunity for MSMEs under various models of e-commerce i.e. Private Marketplace Platforms; Open Network for Digital Commerce (ONDC); State-Owned Marketplace Platforms: Rajasthan's 'e-Bazaar' Platform; and Assisted e-Commerce.

To assess the status of the e-commerce ecosystem across states in India, researchers have developed a 'tech readiness index' which compares the performance of 28 Indian states on four composite parameters i.e. tech access; tech infrastructure; tech business orientation; and tech institutions and laws. These parameters examine factors such as the extent of technology accessibility, alignment of local institutions and infrastructure with technology, and the overall business inclination towards technology value chains.

The tech readiness index serves as a proxy for understanding the level of e-commerce penetration within each state, and aids in the identification of crucial factors related to

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e-commerce penetration. Amongst the 28 states analysed, Karnataka, Maharashtra and Tamil Nadu emerge as leading states in terms of 'Tech Readiness' and Rajasthan ranks at the 11th position. Results from the index highlight the need for the State Government to focus on the parameters of 'Tech Access' and 'Tech Business Orientation' to strengthen its e-commerce sector, and compete with these frontier states.

The study uses these insights, along with observations from a comprehensive review of legal and policy frameworks in Rajasthan to identify key gaps and action points for the consideration of the State Government.

The recommendations build on existing efforts by the State Government to improve MSME competitiveness and ease of doing business in Rajasthan. The study recommends mechanisms to orient existing institutional structures and policies towards the e-commerce sector. It recommends mechanisms to ease the legal compliance burden on MSMEs, optimise skilling and training programmes, and augment e-commerce market access for artisans, weavers and crafts persons in Rajasthan - both on the demand as well as the supply side. The study also provides a step-wise mechanism to strengthen the state-operated e-Bazaar platform through linkages with ONDC.

Key highlights of the recommendations are provided below:

- Set up an institutional superstructure headed by the Chief Secretary, Government of Rajasthan, for monitoring and facilitation of e-commerce value generation.
- Revitalise Rural Non- Farm Development Agency (RUDA) in order to focus on e-commerce value chains by facilitating market linkages; and aligning skilling programmes with cluster-specific requirements at a district level.
- Target skilling programmes and curriculum imparted by the Rajasthan Skill and Livelihoods Development Corporation (RSLDC) towards sector-specific skill gaps; and e-commerce allied skills.
- Harness existing Common Facility Centres (CFCs) for skill training workshops and programmes.
- Streamline existing legal compliance structures through a self-certification framework governed by self-regulatory body.
- Repurpose marketing centres set up under the Rajasthan Handicrafts Policy, 2022, to serve as e-commerce aggregation channels.
- Leverage the network of vehicles operated by the Rajasthan State Road Transport Corporation (RSRTC) to bolster local logistics chains for mid-mile delivery, on a pilot basis.

- Authorise private entities to perform last-mile pickup and delivery services under a tendering process.
- Issue a representation to the Government of India highlighting the need for accountability, trust and transparency as fundamental principles under the national e-commerce policy.
- Expand e-Bazaar's B2C segment by onboarding of local producers onto e-Bazaar and integrating with ONDC.

1. INTRODUCTION

The digital and information revolution in India in the last two decades has brought a sea change in business activity, shifting it from physical to digital spaces through electronic or e-commerce. With the advantage of fast communication and information sharing, e-commerce has led to new ways of doing business and creating jobs. It has helped many retailers, traders and manufacturers connect with diverse markets locally and worldwide, and by matching consumers with suppliers better it has increased value creation.

It provides a significant opportunity for Micro, Small and Medium Enterprises (MSMEs) to strengthen and deepen their markets. At present they confront several bottlenecks in consumer servicing and difficulty in expanding their consumer base. A pre-requisite to leveraging gains from e-commerce is access to digital services and adoption of technology. Digital transformation can help businesses reach optimal productivity, efficiency and improve customer satisfaction.

Interestingly, according to a 2021 survey conducted by Indian Council for Research on International Economic Relations (ICRIER),ⁱ e-commerce marketplaces in the country registered an 80-90 percent increase in seller registrations, majority of which were MSMEs belonging to smaller cities and remote areas. A more recent ICRIER study in 2023ⁱⁱ highlights that access to e-commerce markets, access to skilling and access to credit are some of the key gaps that remain unaddressed from an MSME competitiveness standpoint.

Long-term adoption of e-commerce is contingent upon addressing institutional and infrastructural challenges to bridge these gaps. This study aims to identify some of these roadblocks, and recommend strategies to overcome that.

This study situates the e-commerce landscape in the State as a digital storefront serving businesses and customers. To begin with, it assesses the MSME landscape in India and Rajasthan, followed by an evaluation of the e-commerce business model to identify potential opportunities. Subsequently, it analyses gaps in existing policies and institutions and provide recommendations to overcome the same.

Notably, the study develops an index of 30 parameters to evaluate and compare Rajasthan's 'tech readiness' with that of other states in India. It also discusses legal compliance issues and relevant policy initiatives by the State to identify areas of improvement. This study concludes by outlining strategies to unlock the e-commerce potential of Rajasthan, with a focus on restructuring and re-orienting exiting institutional frameworks and targeted delivery of policy devices.

2. LANDSCAPE OF MSMEs IN RAJASTHAN

The MSMEs play a key role in the development of the Indian economy. They are classified as per the composite criteria issued by the Union Ministry of MSMEs.ⁱⁱⁱ This composite standard examines plant and machinery investment as well as turnover to classify enterprises as MSMEs.

Micro	Small	Medium		
Investment in plant and machinery or equipment: Not more than	Investment in plant and machinery or equipment: Not more than	Investment in plant and machinery or equipment: Not more than		
Rs 1 crore, and	Rs 10 crore, and	Rs 50 crore, and		
Annual turnover: Not more than Rs 5 crore	Annual turnover: Not more than Rs 50 crore	Annual turnover: Not more than Rs 250 crore		

Table 1: Composite Criteria for Classifying MSMEs

Source: Ministry of MSMEs, Government of India

In 2020-21, MSMEs accounted for 30.27 percent of the country's gross domestic product (GDP) and nearly 50 percent of the total exports, contributing 33 percent to the manufacturing output. Further, the MSME sector has generated employment for nearly 110 million people and is the second largest source of employment in the country, after agriculture. There are more than 6.3 crore MSMEs in the country and a majority of these are in the micro enterprise category.^{iv}

The MSME sector in Rajasthan is a vital contributor to the state's economy. As per Rajasthan's MSME policy, 2022, 98 percent of the existing enterprises in the state fall under the MSME category. There is an estimated 26.87 lakh MSMEs in the state, out of which 99.2 percent (26.66 lakh) are micro enterprises, while small and medium enterprises are only 20,000 and 1,000 in number respectively.^v The state employs 46.33 lakh people in the MSME sector, majority of whom are men with a strong base in production of Gems and Jewellery, Handicrafts, Food Processing, Auto Components, Textiles, and Leather products.^{vi} The state also houses a growing number of service-based MSMEs, which includes businesses focussing on analytics, marketing, design, tourism, healthcare service providers, Agri-tech, and Fintech.

An overwhelming majority of MSMEs in Rajasthan are micro enterprises

Most manufacturing and services enterprises in Rajasthan have annual turnover of less than 5 crore. There is a huge potential for theses micro enterprises to scale up. Given the growing e-commerce landscape in the State, there is a need for concerted action in terms of:

- (a) Developing linkages of MSMEs to e-commerce value chains,
- (b) Enabling infrastructure for skilling, capacity building and value generation
- (c) Structure frameworks to ease the legal compliance burden in Rajasthan.

Given that most enterprises are micro and small, four institutional arrangements at the State-level can be considered most relevant. These are:

- Rural Non-Farm Development Agency (RUDA),
- District Industries Centres (DICs) under the Department of Industries, Government of Rajasthan
- Rajasthan Skill and Livelihoods Development Corporation (RSLDC).
- Rural Self Employment Training Institutes (RESTIs) set up by Ministry of Rural Development (MoRD), Government of India play a role at the district level in terms of financing and access to credit.

While RUDA can be repurposed as a State-level institution to enable micro and small industries to take advantage of the e-commerce landscape, DICs and RSETIs play a significant role at a decentralised level (in each district).

Since e-commerce is likely to entail a significant capacity and skill development, another institution at the State level i.e. RSLDC holds immense importance. A brief description of these institutional arrangements is as follows:

RUDA

RUDA is an independent agency for promotion of rural non-farm sector in the state of Rajasthan. It follows a sub- sectoral, integrated and cluster-based approach for promoting rural micro enterprises as viable avenues of sustainable employment. RUDA aims at bridging the gaps in the value chain by organizing artisans, skill augmentation, technological development & dissemination, design and product development and credit and market facilitation.

DICs

DICs play an important role in developing and promoting micro and small industries at the district level. Since a majority of industries in Rajasthan are micro sized, relevance of DICs in the State is significant. As the touchpoint for the Department of Industries, they can play a key role in reducing the gap between MSMEs and the market through decentralised assistance, including access to credit and distributing incentives under various policies of the State Government. This is typically done through facilitation of interaction between industry associations and relevant departments of the State Government.

With appropriate repurposing, DICs can contribute significantly towards creating opportunities in the e-commerce space for MSMEs.

RSLDC

Rajasthan Skill and Livelihood Development Corporation (RSLDC) is the nodal agency for running skilling programmes in the state. RSLDC stemmed from the Rajasthan Mission on Skill and Livelihood. Its primary objectives are provision of technical and entrepreneurial skills, vocational training, and post-training placement. The training programmes run by the agency are mainly part a of central or State schemes. Since its inception RSLDC has trained over five lakh individuals and placed over two lakhs into jobs.

RSETIs

RSETIs are set up by the Ministry of Rural Development (MoRD) and have dedicated infrastructure in each district of India to impart training and skill upgradation to candidates residing in rural areas. RSETI skilling programmes are typically geared towards entrepreneurship development. RSETIs are managed by banks, and can play a key role in bridging credit gaps.

2.1. Udhyam registered MSMEs in Rajasthan

The Udhyam registration is a voluntary online registration mechanism for MSMEs, launched in 2020 by the Ministry of MSMEs. The registration process works on a self-declaration basis and does not require any physical documentation.

Rajasthan has the 5th highest Udhyam registrations in the country, with nearly 14 lakh Udhyam registered MSMEs. The data indicates that a significant proportion of micro and small enterprises find value in obtaining Udhyam registration. In other words, it suggests a high demand of benefits linked to Udhyam registration.

Micro	13,65,320
Small	33,543
Medium	2,548
Total	14,01,411

Table 2: Udhyam Registrations in Rajasthan (2022)

Source: msme.gov.in

2.2. Rajasthan's startup ecosystem

The State's startup ecosystem is beginning to mature and requires a sustained policy fillip. Around 8,100 startups based in Rajasthan were registered on the Startup India portal as of November 2022, and 1,910 approved startups are registered on Rajasthan's iStart portal.

Data on Startup India show that most Rajasthan startups are engaged in emerging sectors such as business support services, food processing and education technology. Some 15 percent of startups are in e-commerce or allied sectors, including app development, customer support, data science, digital marketing, freight and logistics, digital payments and others. 50 percent of startups in Rajasthan are at the ideation or validation stage, while only 10 percent are scaling their business (Figure 1). The iStart portal shows the ratio of approved to funded startups is currently low. Only six industries of a total of 33 saw more than 25 percent of their startups receiving funding through iStart.

Be that as it may, a quick glance at the registered enterprises, and the services that they offer, suggests that many startups in Rajasthan can potentially offer services that can propel Rajasthan's e-commerce market. Their sustained growth can engender a symbiotic ecosystem for MSMEs in e-commerce.



Figure 1: Rajasthan-based Startups, Stages of Growth Source: Startup India Portal

2.3. Micro and Small Enterprises (MSEs) of artisans, weavers and craft persons

Rajasthan is home to over six lakh craft persons and artisans whose work is world renowned. In 2020-21 alone the state exported handicrafts worth Rs. 6,205.32 crore and handloom products worth Rs 5,729.29 crore, as well as over Rs. 6,300 crores worth of exports in other categories such as gems and jewellery, carpets, and readymade garments.^{vii}

Further, there are over 43 sanctioned artisan clusters in the state^{viii}. MSEs of artisans, weavers and crafts-persons are heterogeneous in terms of size, sectoral focus and geographic spread.

Several organisations including non-government organisations (NGOs), agencies of the State Government, Self-Help Groups (SHGs), associations or societies of producers, have local presence and physical networks which can be leveraged in ecommerce supply chains. These collectives can play the role of local market facilitation agencies in enabling local producers access credit and connect with market in addition to facilitating exchange information about demand, prices, skills, and grievance redressal.

The Government of Rajasthan has taken several noteworthy steps to develop clusters of artisans, weavers and craft persons. For example, allocating Rs. 318.21 lakh for development of the Kota Doria cluster located in Kaithun, Roteda and Mangrol, and Rs. 185.19 lakh towards the Murtikala cluster in Alwar. Yet there remains a significant room for scaling up.

Looking ahead, a granular approach is needed to support the heterogeneous needs of different clusters. This is the reason why decentralised market facilitation will be crucial.

Resource investment of the State Government has typically been in the following areas:

- Building infrastructure such as common facility centres for skill development and training;
- Sponsoring artisans to participate in nationwide fairs and festivals;
- Facilitating collaborations with global brands and designers;
- Compiling a database of artisans with the issuance of official identity cards; and,
- Marketing and advertising clusters through documentary films and product catalogues. For other artisan clusters, especially some newly sanctioned ones including Phad Painting in Bhilwara and Pak Visthapit in Jodhpur, the above initiatives are a ready template to emulate.

3. RAJASTHAN'S E-COMMERCE OPPORTUNITY

The E-commerce sector is one of the most heavily invested sectors in India as it received a total funding of USD 33 billion between 2014 and 2023.^{ix} The growth of this sector is underpinned by an estimated 180 million online shoppers, and further fuelled by rapid urbanization and deepening of digital payments. These trends are accompanied by a notable decline in average household size and a concurrent increase in disposable incomes.^x

In terms of geographical reach, e-commerce has witnessed widespread adoption across India. E-commerce penetration is particularly robust in western and southern states, namely Gujarat, Maharashtra, Karnataka, Telangana, and Tamil Nadu.^{xi} Notably, over 60 percent of e-commerce transactions originate from Tier-Y and Tier-Z cities, constituting nearly half of India's online shopper base. Delhi NCR, Bengaluru, Mumbai, Pune, and Jaipur are the prominent startup hubs for e-commerce in terms of funding^{xii}.

Selling products via e-commerce is one of the most accessible avenues for businesses to set-up operations, primarily because of the minimal capital requirements and expansive customer reach. This has ignited a surge in entrepreneurial ventures, creating large-scale employment opportunities in the country. Current estimates suggest that e-commerce has generated employment for approximately one million individuals as of 2023^{xiii}. Additionally, the sector has fostered employment growth in the gig economy, which is projected to reach seven lakh by December 2023^{xiv}.

With Rajasthan becoming the first state in India to have come up with a social security legislation for gig workers,^{xv} it is likely that outward migration of gig workers could potentially be arrested. This can engender two related outcomes. First, ease of locating manpower for e-commerce activities, and second, creation of 'good & better jobs' for gig workers. For e-commerce platforms, this can constitute as a part of overall value that they generate. In other words, it can reflect on social value creation in addition to economic value addition. Both these elements will be contingent on the presence of other ecosystem services necessary for e-commerce activities.

Some key e-commerce opportunities for Rajasthan

- Retail of organic farm products- The Chief Minister of Rajasthan, in budget 2021-22, announced a natural farming plan for around four lakh farmers. This project is under implementation. In addition, another four lakh farmers are already pursuing natural farming in the State. While the production system has received the attention, market and retail segments also need support
- Creation of Crop Cluster Business Units (CCBUs), as recommended under CMRETAC Study on Agri-Business Infrastructure in 2021-22, can facilitate marketing channel on organic produce
- Products from clusters which have Geographical Indicator (GI) Tags
- Products from clusters identified by Department of industries under different State and National schemes, such as the National Handloom Development Programme
- Artisanal gems and jewellery made in Rajasthan
- Bandhej textiles from the Shekhawati region in Rajasthan
- Artisanal *puppertry* products

3.1. Landscape of e-commerce value chains

The value chain of a typical e-commerce business comprises five broad stages, starting with production which encompasses raw material procurement, processing, and assembly. Inbound operations entail order management, inventory control, and warehousing, while outbound operations involve packaging, shipping, and logistics.

In the area of services, a pivotal activity for any e-commerce enterprise is marketing and sales, which entails content dissemination through advertising, promotions, and related strategies. Finally, post-sales services, essential for customer retention and repeat business, involve efficient customer support and quality assurance mechanisms.^{xvi}





From an MSME perspective, there are a number of costs and compliances involved in being an e-commerce seller. Product listings must ensure transparent disclosure of all product information to avoid seller liability for misselling under the Consumer Protection (E-Commerce) Rules, 2020. In terms of operations, sellers need to run targeted ad campaigns, track inventory levels, and further analyse demand metrics for dynamic pricing.

Service level agreements (SLAs) between stakeholders in e-commerce value chains (including the e-commerce platform, sellers and logistics service providers) stipulate deal commercials as well as legal representations, warranties and indemnities. Large private e-commerce marketplaces tend to issue standard form contracts to sellers and logistics service providers. MSEs have limited bargaining power in negotiating SLAs in such cases.

E-commerce model can broadly be categorized into four types, namely: Private marketplace platforms; Open Network for Digital Commerce (ONDC); State-run e-commerce platform such as Rajasthan's e-bazaar; and, Assisted e-commerce. These models have been detailed below.



Figure 3: Types of E-commerce Business Models

3.1.1. Private marketplace platforms

Under the Foreign Direct Investment Policy, 2020, 'marketplace model of e-commerce' is defined as provision of an information technology platform by an e-commerce entity on a digital and electronic network to act as a facilitator between a buyer and seller. In simpler terms, these platforms function as two-sided intermediaries, enabling sellers to list their products while offering buyers access to an extensive catalogue of products.

In the Indian context, Amazon and Flipkart represent two of the most prominent marketplace e-commerce platforms. As of 2022, Amazon has over one million sellers and 100 million registered users in India^{xvii}, while Flipkart has 200 million monthly active users^{xviii} These statistics highlight the network effects that underpin these platforms, as they bring together a substantial number of buyers and sellers onto a single place. They have invested heavily in innovation, human capital, and cutting-edge technologies, allowing them to raise entry barriers for competition. On the other hand, attributes of their efficiency can be regarded as good practices which can be emulated by smaller players. This is however contingent upon the availability of technological and financial resources with smaller players.

Additionally, almost all large marketplace platforms offer benefits such as access to a vast customer base, streamlined onboarding and delivery processes, marketing and after-sales services such as advertisements, customer support, easy returns and refunds.

Key aspect of large e-commerce platform

• High Commission Charges

Large private marketplace platforms are entrenched in India's e-commerce market. They exercise end-to-end control over e-commerce supply chains, and reportedly charge 18-25 % of the sale price in the form of commissions from sellers.^{xix}

The commission charges depend on the product category, the sale price of the product and market conditions. In addition, sellers pay fees for additional services such as inventory management, storage, shipping, and return facilitation on a product basis to the marketplace.^{xx}

• High competition among sellers

Presence of many sellers on the platform necessitates businesses to promote their offerings through paid advertising. This is analogous to the concept of 'Search Engine Optimization' (SEO) wherein a website pays a certain amount to achieve higher rankings on specific search engines

From an MSME seller's perspective, high competition necessitates greater advertising spend to improve the ranking and visibility of a particular product listing

• Wide network effects

The success of any marketplace platform hinges on the creation of network effects through sustained participation by both sellers and buyers. Large players such as Flipkart and Amazon are able to exert control over ecommerce supply chains owing to the vast network effects they have built over the years. More sellers on an e-commerce platform leads to more consumer choice and more buyers increases the total addressable market for sellers. Until both the demand and supply sides scale up considerably, the value addition of a marketplace platform remains to be unlocked



Figure 4: Network Effects on a marketplace platform

3.1.2. ONDC

A crucial item of digital infrastructure that may have a seminal effect on e-commerce is the ONDC.

ONDC is a technology infrastructure that seeks to shift e-commerce away from walled or closed- platforms by splitting the e-commerce supply chain into distinct yet interconnected blocks.

The network has two sides, one for buyers and one for sellers. Businesses that join the ONDC can do so either as buyer-side applications, responsible for providing the user experience, or as seller-side applications, responsible for seller onboarding, logistics, and other business-to-business services.

The transformational appeal of the ONDC lies in the fact that it lets buyers and sellers transact with one another regardless of the e-commerce platform. By making product discovery platform-agnostic, the ONDC offers opportunity in particular to micro enterprises in Rajasthan.



Source: Internet Freedom Foundation^{xxi}

Interactions within the ONDC are yet to be tested in the market. State governments have a key role to play in sensitising businesses about the ONDC, and in laying the groundwork for buyers and sellers to leverage the network.

Key takeaways

• ONDC unbundles e-commerce supply chains

ONDC allows customers to shop from a single-buyer application to access product listings across different seller apps. As a result, it breaks platformcentric silos in e-commerce. To illustrate, today, a seller onboarded on Amazon cannot reach a buyer on Flipkart, and vice versa. However, ONDC's open protocols allow buyers and sellers to interact regardless of the seller-app / buyer-app they use. This allows for improved product discovery for buyers, as well as greater reach for sellers.^{xxii}

• **ONDC's transformative potential is untapped**

ONDC ecosystem not only allows sellers to reach a wide audience with low commission charges, but also creates avenues for fleet operators providing delivery services or agencies providing e-cataloguing services. To leverage the potential of ONDC, MSMEs in Rajasthan require targeted awareness about its benefits and limitations. Notably, the Government of Madhya Pradesh executed a Memorandum of Understanding (MoU) with ONDC to conduct workshops to educate, mentor, and support MSMEs, startups, and market participants while facilitating their onboarding onto ONDC.

3.1.3. State operated e-commerce marketplace – Rajasthan's e-Bazaar

E-Bazaar is an e-commerce platform owned and operated by the Government of Rajasthan, and it has over 300 registered sellers operating under a business to consumer (B2C) or business to government (B2G) model. Other states such as Maharashtra, Karnataka and Andhra Pradesh also have similar government-operated platforms.

Several products available on e-Bazaar are handmade pieces created by or sourced from local artisans and small businesses. These are unique products that can attract high-paying audience which is not yet tapped. Most importantly, one is unlikely to find the same item anywhere else, thereby making the artisanal piece unique and exclusive. E-Bazaar offers a range of products that are eco-friendly, making them environmentally sustainable.

However, an urgent challenge for e-Bazaar is that it must compete with private ecommerce platforms for consumer attention. As per data from DoIT as on January 2023, the B2C segment of Rajasthan's e-Bazaar only had 35 onboarded sellers and ~ 775 product listings. B2C sellers had only sold ~ 70,000 products worth Rs ~22 lakh cumulatively. This is only a small fraction of the number and value of goods sold by private marketplace platforms.

Nevertheless, the B2G segment of e-Bazaar is a convenient avenue for procurement by various State Government departments. E-Bazaar had 295 registered B2G sellers providing goods such as furniture & electronics and services such as digital marking, social media management etc. A total of 1210 products and 189 services were listed in the B2G segment of e-Bazaar as of January 2023.

Key aspects of e-Bazaar

• E-bazaar has limited reach in the B2C segment

Although e-Bazaar is a valuable initiative for B2G orders and procurement, in the B2C segment, it suffers from low reach due to limited Stock Keeping Units (SKUs) on the platform. This gives consumers lesser variety of goods to choose and purchase from.

• Limited user trust

E-Bazaar engenders low trust due to limited user reviews. Lack of user reviews has an adverse effect on consumer confidence and leaves the impression that the product listing may be counterfeit or misleading.

3.1.4. Assisted E-commerce

Assisted e-commerce platforms employ sales personnel to help walk consumers through the order placement process, thereby increasing competition and making commerce more convenient for the consumer and the seller. This model has shown success in Rajasthan where SHGs are key catalysts in rural economies to match hyper-local demand and supply. A key limitation of such a model is that it thrives on familiarity and personal networks within closed communities. (Ex: Frontier Markets)

Key aspects of assisted e-commerce

• Assisted e-commerce models offset lack of digital literacy among consumers Since consumers receive assistance from the platform in placing and managing their orders, this model can cater to consumers in areas with lower levels of digital literacy and tech adoption.

• High Trust within user groups

Assisted e-commerce models deploy physical sales personnel who are closely connected to the consumers and communities they serve. The sales personnel provide guidance to consumers and local producers to help bridge hyperlocalised demand, supply and skill gaps at the village, cluster or district level. Their involvement throughout the e-commerce life cycle, engenders high levels of user trust.

4. TECH-READINESS AS A PROXY FOR MAPPING THE E-COMMERCE ECOSYSTEM

Research has shown a correlation between tech readiness and readiness for ecommerce. Studies by the World Trade Organization^{xxiii}, the Asia Development Bank^{xxiv} and the United Nations Conference on Trade and Development^{xxv} provide some recent examples. The reason for this is twofold. An improved tech landscape improves customer/audience engagement, and also improves operational productivity and efficiency. These factors are also important in the end-to-end experience as the ecommerce footprint grows, from managerial decision making to gains in competitive advantage^{xxvi}.

With this in mind, we construct a Tech Readiness Index for India's states, to situate Rajasthan's e-commerce preparedness in relation to others, and evaluate the best practices in leading states which Rajasthan can adopt.

4.1. Rajasthan's growing digital footprint

The number of people with an internet connection in the State has increased fourfold over the last eight years, from 12.5 million internet subscribers in 2014 to 45.4 million in 2021.^{xxvii} Every second person in the State now has internet access, yet internet penetration in Rajasthan remained marginally below the national average through the same period (as shown in Figure 6).



Figure 6: Internet Subscription, Rajasthan and India

Source: Telecom Statistics India (2021), Union Ministry of Health and Family Welfare (2021)

Rajasthan has made efforts in recent years to improve internet penetration through several policy initiatives. For instance, the Bhamashah Digital Parivaar Yojana, 2019, and the Mukhya Mantri Digital Sewa Yojna, 2022 are aimed at catalysing public access to smartphones with internet connections, while eMitra networks for e-governance, the Raj Megh cloud services program, and the Raj NET multi-modal connectivity network are aimed at improving the state's digital capacities.

From the standpoint of MSME participation into e-commerce, it is important to focus on tech readiness of Rajasthan's MSMEs as many of these enterprises are in their infancy in terms of harnessing digital technologies and consider online transactions a prospect for the future.

Rajasthan is in the process of establishing itself as a technological and business hub. One of the leading states in terms of labour law reforms, it has ensured a single window clearance system, loan schemes for exporters, interstate logistical ease, power availability, and laws on information technology and intellectual property (IT/IP). It will need to make a sustained push on certain other parameters (Figure 7). These include research and development (R&D), knowledge intensity, cluster strength, financial inflows, power costs, the investor interface and more.



Figure 7: Business and Investment Landscape in Rajasthan

Source: Trade Readiness Index, NITI Aayog (2020)

To improve the e-commerce landscape in Rajasthan (see Figure 2) five operational priorities emerge: cluster development, industrial cargo, corridor capacity, internet penetration, and developing a startup ecosystem. The government can also make use of the large footprint in IT/IP-related activities, the prevalence of GIs, and the single-window clearance system established for investors to further develop e-commerce in the state.

As the states develop, some of them employ a 'distributed strategy' wherein all local geographies receive more or less equal policy focus, and the differences in an outcome across geographies are due mainly to internal economic forces or local historical evolutions. Other states by contrast adopt a 'polarised strategy', in which a few local geographies are given higher policy focus than others.

The index takes due cognisance of both these strategies, that is, we score states first on the basis of select parameters, and subsequently develop index scores adjusted for inequality, by weighting the original scores according to the extent of tech-access inequality in each of the states.

4.1.1. Index design

The Tech Readiness Index is built on four key pillars: tech access, tech infrastructure, tech business orientation, and tech institutions and laws. We assess state performance on 30 parameters across these pillars to develop the index. Table 3 lists the parameters in each of these pillars. Annexure 1 details these variables and the respective sources for each, and the algorithm used to construct the index.

Pillar 1: Tech Access	Pillar 2: Tech Infrastructure			
Internet penetration	Gram Panchayats with optic fibre			
Common service centres	networks			
Number of ATMs	Smart cities			
Digital payment transactions	Electric vehicles			
Internet shutdowns				
Speed of 4G network				
Speed of 3G network				
Service availability of network				
Pillar 3: Tech Business Orientation	Pillar 4: Tech Institutions and Laws			
Knowledge output	IT policy			
Business orientation	Cyber security			
Startup ecosystem	IP enforcement			
Knowledge workers	Data centre policy			
Wholesale markets with e-NAM	N-LRSI score			
Knowledge diffusion	IT SEZs			
NIC standard	Online gaming			
Enrolment in PhD per lakh population	Animation and VFX			
Enrolment in engineering or tech	Taxi aggregators			
programs	Digital skills policy			

Table 3: Design of the Tech Readiness Index

4.1.2. Tech readiness scores

Table 3 presents the ranking of states on the Tech Readiness index and its four subindices. Karnataka, Tamil Nadu and Maharashtra rank highest, performing well in almost all the sub-indices. Notably, this result is consistent with industry estimates on e-commerce penetration within the country, reinforcing the validity of our hypothesis of evaluating e-commerce preparedness through tech readiness.^{xxviii} Mizoram, Nagaland and Arunachal Pradesh occupy the bottom positions on the index.

The inequality adjustment, penalising regions with high levels of disparity in tech access, changed the position of over half the states compared to their original, unweighted scores. Maharashtra, Haryana, Telangana, Gujarat, Andhra Pradesh, West Bengal, Chhattisgarh and Manipur moved lower in the rankings, indicating these states have relatively unequal patterns of tech access, while Kerala, Goa, Uttar Pradesh, Odisha, Punjab, Uttarakhand, Tripura, Sikkim, Himachal Pradesh, Meghalaya and Mizoram moved higher up the rankings. The other states, and Rajasthan among them, retained their positions, which indicates that tech access inequality here is on a par with the national average

		Sub-Indices, Unadjusted				Tech	Change in	
States	Tech Readiness Rank, Unadjusted	Tech Access	Tech Infrastructure	Tech Business orientation	Tech Institution and Laws	Readiness Rank, Inequality -adjusted	Rank, Inequality -adjusted - Adjusted	
Karnataka	1	3	6	2	1	1	_	
Tamil Nadu	2	9	15	4	4	2	—	
Maharashtra	3	2	17	3	11	4	\downarrow	
Kerala	4	7	13	7	5	3	Ť	
Telangana	5	10	9	1	13	6	\downarrow	
Haryana	6	16	7	9	2	7	\downarrow	
Goa	7	1	3	8	15	5	↑	
Gujarat	8	8	14	6	8	9	\downarrow	
Uttar Pradesh	9	6	5	5	14	8	1	
West Bengal	10	21 18 16 3		13	\downarrow			
Rajasthan	11	18 8 12		6	11	_		

Table 4: Ranking of States

Andhra Pradesh	12	11	23	13	9	15	\downarrow
Punjab	13	13	19	11	12	12	Ť
Odisha	14	14	12	18	7	10	↑
Uttarakhand	15	12	10	10	20	14	↑
Assam	16	23	2	23	10	16	_
Madhya Pradesh	17	4	20	15	24	17	_
Jharkhand	18	17	11	21	17	18	_
Bihar	19	15	4	22	23	19	_
Chhattisgarh	20	5	16	24	27	24	\downarrow
Tripura	21	27	1	27	22	20	↑
Sikkim	22	20	27	25	16	21	↑
Himachal Pradesh	23	19	26	14	26	22	Ť
Meghalaya	24	28	28	19	18	23	↑
Manipur	25	26	21	17	25	26	\downarrow
Mizoram	26	22	22	26	21	25	↑
Nagaland	27	24	25	28	19	27	_
Arunachal Pradesh	28	25	24	20	28	-	_

Note: The indices are developed using principal component analysis. Annexure 1 discusses variable definitions, data sources and methodology. The inequality adjustment could not be made for Arunachal Pradesh for lack of sufficient data.

Rajasthan ranks 11 on the index overall. Its rank in the four pillars shows that there is significant scope for improvement in Tech Access and Tech Business Orientation. In the Tech Access pillar, Rajasthan performs well in terms of network speed and service availability. It needs to improve internet penetration and the use of digital payments. It needs also to invest in increasing the number of Common Service Centres, and ATMs (Figure 8). These factors can act as first points of contact for adoption of e-commerce by increasing digital literacy and awareness about carrying secure financial transactions.



Figure 8: Tech Access and Tech Business Orientation in Rajasthan Source: Trade Readiness Index

In the Tech Business Orientation pillar, Rajasthan scores highest in terms of wholesale markets with the e-NAM facility. It also scores well on the NITI Aayog's innovation index parameter, namely Business Environment – covering aspects such as the ease of doing business and credit/banking facilities – particularly in microfinance institutions (MUDRA), subsidies and benefits through direct transfer, and the share of manufacturing and services to GSDP.

The state scores low on parameters of Knowledge Output, Knowledge Diffusion, and Knowledge Workers.^{xxix} These are the areas where the state must continue its efforts through investments and policy reform. In particular these include R&D and skill development: such as grassroots level innovation, number of research publications, trademarks registered, and number of private R&D units in the state. Related to this is Rajasthan's low score on persons working in the ICT industry, or enrolled in PhDs or engineering and technological degrees.

The reform areas noted above are in line with the analysis of Rajasthan's business and startup landscape, which is in a nascent stage, and needs continuous push from the State Government to become competitive with leading states.

Rankings assess states' relative position, and below we also show how far a state is from the top performers, or frontier states, indicating how much effort is needed to

reach the frontier. Table 5 presents the state scores on the above parameters along with a heat map indicating their distance from the best performing state in each. Rajasthan is well situated in this regard in terms of Tech Institutions and Laws. It will need a lot more effort and investment however to approach the frontier position in Tech Access, Tech Infrastructure, and Tech Business Orientation. By improving its internet infrastructure and digital penetration, and aspects of skill development particularly for e-commerce relevant jobs, Rajasthan can move closer to the leading states and improve its e-commerce competitiveness.

			Sub-Indices				
State	Tech Readiness Score	Inequality Adjusted Score	Tech Access Score	Tech Infrastructure Score	Tech Business Orientation	Tech Institutions and Laws	
Karnataka	100	100	78.53	56.66	91.83	100	
Tamil Nadu	88.98	92.82	65.4	43.68	85.9	94.16	
Maharashtra	85.84	87.2	88.41	46.87	86.61	73.08	
Kerala	82.81	87.88	69.77	47.83	66.93	92.11	
Telangana	81.45	83.64	63.23	49.61	100	67.1	
Haryana	79.09	80.31	45.64	52.06	64.13	98.72	
Goa	76.93	84.58	100	77.33	65.17	53.74	
Gujarat	76.92	68.21	67.43	47.76	74.28	75.83	
Uttar Pradesh	70.37	69.03	71.22	59.79	74.56	55.75	
West Bengal	66.07	59.14	26.51	43.05	48.98	97.78	
Rajasthan	65.12	62.8	43.83	49.81	53.81	79.93	
Andhra Pradesh	63.29	50.14	63	27.2	53.65	73.71	
Punjab	63.21	61.16	55.7	42.63	54.86	71.14	
Odisha	60.39	65.15	51.2	48.37	37.46	79.14	
Uttarakhand	52.63	55.51	56.07	48.93	60.74	42.59	
Assam	48.59	44.16	19.16	81.36	21.63	73.29	
Madhya Pradesh	44.88	43.83	76.94	36.85	50.39	27.3	
Jharkhand	42.11	39.91	44.92	48.86	30.44	50.58	
Bihar	37.87	36.99	47.76	69.7	24.66	37.2	
Chhattisgarh	30.02	26.25	71.97	43.85	21.62	19.24	
Tripura	29.44	31.99	11.82	100	14.31	37.21	
Sikkim	29.1	29.48	34.58	11.04	20.89	50.87	
Himachal Pradesh	27.94	28.37	41.49	12.63	50.88	21.11	
Meghalaya	25.97	27.4	10	10	34.74	48.12	
Manipur	22.89	21.67	13.54	29.83	45.89	24.16	
Mizoram	21.29	22.24	25.88	27.64	15.85	37.67	
Nagaland	17.83	18.1	16.78	13.21	10	45.45	
Arunachal Pradesh	10	10	15.57	19.55	33.38	10	

Table 5: Statewise Tech Readiness Scores

Note: Scores are scaled from 10 to 100 and obtained using principal component analysis. Dark red indicates that the highest level of effort is needed to reach the frontier, while dark green is the frontier mark. Variable definitions, data sources and methodology are explained in the annexure.

100

50

10
4.1.3. Correlation with gross value added by industry and services

As e-commerce operates at the intersection of tech and economic activity, we examine the correlation between each state's tech-readiness and the gross value added by its industry and service sectors.

Tech-readiness shares a strong relationship with industry and services GVA. A state ranked one position higher than another will on average have a 0.16 percent higher services GVA and a 0.18 percent higher industrial GVA than the lower-ranked state. Figures 9 and 10 show states such as Karnataka, Tamil Nadu, Maharashtra and Gujarat are significantly ahead of the others, scoring high on both the Tech Readiness Index and industry and services GVA.

Although Rajasthan is ahead of most states, a significant gap remains in its position compared to the frontier states. There is scope for improvement as it navigates towards the frontier (Figure 8 showed the specific parameters the states need to focus on).



Figure 9: Tech Readiness and Gross Value Added by Industry (2021-22) Source: Reserve Bank of India



Figure 10: Tech Readiness and Gross Value Added by Services (2021-22) Source: Reserve Bank of India

Concluding the section we observe that Rajasthan fares well on the parameters of Tech Infrastructure and Tech Institutions and Laws. These include smart cities, electric vehicles, gram panchayats connected with optic fibre networks, and policies on IT, intellectual property, data centres and digital skills. The state shows a growing trend in internet subscriptions and many aspects of business operations: including a single window clearance system, loan schemes for exporters, strengthening wholesale markets, and intrastate logistic ease.

Rajasthan is above the national average on these parameters, but needs an additional push to compete with leading states. To better identify the specific interventions that may be undertaken by the state government, in the next section we analyse the policy landscape for e-commerce in Rajasthan in comparison with frontier states.

4.1.4. Key takeaways

• A state's 'tech readiness' is a direct reflection of its e-commerce ecosystem.

Access to tech services and innovations can help businesses improve e-commerce readiness through better audience engagement, and increased productivity and

efficiency. Hence, states with better technological footprint have a one-to-one correspondence with e-commerce readiness.

• Rajasthan fares well among low-income states, and 11th in the overall index

Out of the 28 states analysed. Karnataka, Maharashtra and Tamil Nadu are the leading states in terms of Tech Readiness. See Annexure 2 for detailed breakdown Tech Readiness Ranks and Per Capita NSDP of States.

The State Government needs to focus on the parameters of 'Tech Access' and 'Tech Business Orientation' to compete with frontier states. These parameters cover aspects such as internet penetration, digital payment transactions, innovation, and skill development, and startups.

High Income States	Per Capita NSDP (INR lakh)	Overall score	Overall rank	Middle Income States	Per Capita NSDP (INR lakh)	Overall score	Overall rank	Low Income States	Per Capita NSDP (INR lakh)	Overall score	Overall rank
Karnatak a	2.27	100.00	1	Maharasht ra	2.02	90.20	3	Uttar Pradesh	0.66	77.41	8
Tamil Nadu	2.25	90.43	2	Andhra Pradesh	1.70	70.13	10	Rajasthan	1.09	66.78	11
Haryana	2.40	82.80	4	West Bengal	1.22	65.61	12	Madhya Pradesh	0.98	47.62	16

Table 6 Top performing states based on per-capita income

5. DOING BUSINESS IN RAJASTHAN

The digital revolution in India has touched all corners of the state, owing to many future-oriented initiatives taken by the government. At this juncture it is important to ensure that the enabling conditions for businesses to leverage technological developments are put in place.

In this section we discuss the law and policy landscape in Rajasthan from an Ease of Doing Business (EDB) perspective. Enabling ease of doing business is crucial for developing e-commerce as it catalyses business competitiveness, improves supply chain links, and nurtures community-level entrepreneurs. The discussion centres on the value chains in e-commerce: broadly speaking, the businesses and service providers engaged in manufacturing, logistics and digital onboarding.

EDB is essentially a policy stance that aims to remove unnecessary complexities and barriers in the business compliance and regulatory landscape. A more streamlined compliance process can help businesses rationalise the resources invested in product development and scaling. Similarly for investors, EDB clarifies the compliance risks, which has a favourable impact on their investment decisions. Initiatives promoting EDB create stronger tailwinds for startups and MSMEs, owing to their capacity limitations relative to big business and industrial houses.

5.1. Review of legal compliance frameworks in Rajasthan

Buinsses in Rajasthan require several approvals and clearances to do business in the State. These include approvals from various departments of the State Government, including the Local Self Government Department, the Department of Energy, the State Pollution Control Board, the Department of Labour, etc. We divide these into three levels: Level 0 (land and building clearances), Level 1 (operational clearances), and Level 2 (sectoral clearances), as shown in Figure 11. A department-wise list of permissions and clearances in Rajasthan is provided in Annexure 3.

Level 1 - Basic operational clearances Concerned departments: LSG, PWC, PHED Approvals / compliances: Power supply connection. Water supply connection, Sewer connection Road Trade access. License, Shops Registration, etc.

Level 2 – Sectoral clearances Concerned departments: LSG, Labour, RSPCB, RajFAB Inspection Department

Approvals / compliances:

Environmental clearances, Factories & Boilers licenses, compliances for engaging contract labor, etc.

Level 0 – Land & Building clearances Concerned departments: RIICO, LSG, UDH

Approvals / compliances:

Procurement / allotment of land & RERA Registration, Building plan approvals, Building completion certificate, Fire NoC, etc.

Figure 11: Compliance schematic for Rajasthan^{xxx}

Source: Rajasthan SWCS Portal

To obtain each of these approvals, a physical or electronic form must be filed with attachments and processing fees. Clearances take approximately 7–15 days to process unless there are objections, and approvals including for factory licences and environmental clearances can take as many as 60–120 days.^{xxxi}

The Level 0, 1 and 2 compliances discussed above are required by all states in India. The frontier e-commerce states have however taken steps to ease the burden, including simplification of filing requirements, processing timelines or reducing the renewal costs or processing time taken. Andhra Pradesh^{xxxii} for instance now has a process for deemed approval of applications once the designated processing period has elapsed. Such initiatives make the legal compliance landscape more certain and predictable for businesses, and boost investor confidence in the state. Provisions for deemed approval have not been implemented in Rajasthan so far.^{xxxiii}

5.1.1. Cost of compliance in Rajasthan

A 2023 ICRIER study highlights that compliance requirements for sellers under the Consumer Protection (E-commerce) Rules, apply regardless of their size.^{xxxiv} Coupled with a complicated Goods and Services Tax (GST) regime, seller liability provisions disproportionately impact MSMEs and businesses with lower digital literacy and tech access.

A 2022 study undertaken by CUTS Centre for Competition, Investment & Economic Regulation (CUTS C-CIER) on ease of doing business in Rajasthan highlighted the need for reduction in compliance burden on businesses in the State.^{xxxv} The CUTS

Study provided a three-step mechanism to assess the legality, necessity and proportionality of compliances in the State.

The study weighed various legal compliances in Rajasthan against the above parameters, including registrations under Rajasthan Shops and Commercial Establishments Act, 1958, approvals for Building Plans by the Urban Development and Housing Department (UDH), Government of Rajasthan, Consent to Establish (CTE) and Consent to Operate (CTO) issued by the Rajasthan State Pollution Control Board (RSPCB), among others. The CUTS study carried out a comparative study of the costs, procedures and timelines involved in obtaining clearances from governments across states.

It recommended the need for rationalising the validity and fees for obtaining various clearances. Notably, the study recommended the need for co-regulatory or self-regulatory models of governance where the State Government accepts self – certifications or third-party verification certificates to fulfil the requirement of compliances. At the same time, it highlighted the potential efficiency gains from auto-renewal systems and deemed-approval frameworks form an ease of doing business perspective.

High compliance costs in terms of fees, time taken for approvals and need for periodic approvals create frictions in the development of local e-commerce value chains, making them less competitive in the borderless world of e-commerce markets. Indeed, digitisation of application processing under the State Government's Single Window Clearance System through Rajasthan Single Sign on (SSO-ID) has been a key improvement. However, as echoed the study, structural changes in the compliance landscape are warranted to leapfrog Rajasthan's doing business outlook, particularly from an e-commerce perspective. In this context, we assess the impact of the deemed approval regime under the Rajasthan MSME (Facilitation of Establishment and Operation) Act of 2019 (Rajasthan MSME Act).

5.1.2. Exemption framework for MSMEs under Rajasthan MSME Act

A key initiative to ease the compliance burden on MSMEs has been the introduction of a self-declaration framework under the Rajasthan MSME Act.

Rajasthan MSME Act provides time bound exemptions to establishments set up after 2019 from obtaining various authorisations, permissions and clearances from the State Government for a period of five years.

Manufacturing or services enterprises set up after 2019 as well as new manufacturing or service ventures launched by existing enterprises at different and separately identifiable locations are eligible to avail the relaxations under the Rajasthan MSME Act.

To avail of the exemptions, only a single form needs to be filed before the State Government (either physically or electronically) which includes basic details about the applicant, enterprise, and location. The form includes broad self-declarations on maintaining safety standards in business operations and not engaging in prohibited activities or activities that can pose a serious threat to public health or to law and order. With this self-declaration, an acknowledgement certificate is obtained that can be presented in lieu of any approval, or clearance required by the State Government. In effect the approved enterprises are wholly exempt from any clearances, approvals or even inspections by the State Government.

Any compliance obligation, whether a trade licence from the Local Self Government Department, or registration of shops or establishments by the Labour Department, or permissions for generators or transformers from the Energy Department, and others, is deemed fulfilled for the exemption period.

However, once the five-year exemption period has elapsed, beneficiary-enterprises under the Rajasthan MSME Act must obtain all clearances and approvals in a period of six months from the respective departments of the state government.

Thus, the Rajasthan MSME Act provides a much needed but a time bound relief. However, given that Rajasthan's MSME landscape predominantly consists of micro enterprises who may not be able to grow beyond a particulat threshold within the five-year period, there is a need for structural support to ease the legal compliances in Rajasthan. We discuss a model of extending the deemed approval framework under the Rajasthan MSME Act in Section 6 (*Recommendations*).

As laws do not exist in vacuum, policy environments enabling businesses to unlock competitive advantage may also focus development toward priority sectors. In the following section, we examine the various policy interventions made by Rajasthan from an ease of doing business perspective in e-commerce. We look to assess the extent to which the high cost of compliance for businesses is offset by policy interventions of the State Government.



5.2. Thematic review of the policy landscape in Rajasthan

Figure 12: EDB centric policy initiatives from an e-commerce perspective

5.2.1. Financial assistance

The Rajasthan MSME Policy 2022, Rajasthan Startup Policy, 2022, and Rajasthan Investment Promotion Scheme 2022 (RIPS 2022) are a bouquet of subsidies, waivers, funding and other benefits for businesses in Rajasthan: in the form of interest subsidies for loans obtained by MSMEs, subsidies linked to capital investments, turnover or additional employment generation by businesses, and reimbursing the mandatory social security contributions by employers (such as the EPF and ESI employer contributions). Notably, RIPS 2022 offers capital and interest subsidies to businesses investing in the distribution support system (including logistic parks, warehouses, and cold chain facilities).^{xxxvi} These businesses are also allowed exemption from paying certain levies and duties such as electricity duty, mandi fee, stamp duty, land taxes and more.

To support startups and MSMEs, the Rajasthan Startup Policy, 2022, offers funding incentives according to a startup's potential and stage of development.^{xxxvii} One-time financial assistance of 10 percent of the external capital raised can be accessed by startups in sunrise sectors (including Industry 4.0, green energy, and data centres amongst others) under RIPS 2022.^{xxxviii} Startups can also claim certain expenses incurred for training workers in management, entrepreneurship or soft skills from a recognised institute. In regard to public procurement, the Rajasthan Handicrafts Policy provides for the purchase of quality products from registered artisans though the e-Bazaar portal without the need for a tender.^{xxxix}

To further encourage businesses to incur capital expenditure, RIPS 2022 specifies several add-on investments for businesses creating assets either in thrust sectors (such as IT, fintech or cold chain facilities) or new locations in the state.^{x1} For MSMEs, the government offers financial assistance for creating R&D centres and test laboratories, conducting training programs for employees working in core R&D, and for contracting research projects to recognised R&D institutions and technical colleges.^{x1i}

In terms of risk coverage and access to credit facilities, the Raj MSME Policy aims to encourage banks and financial institutions to set up specialised MSME branches across the state. It also aims to provide insurance offerings at competitive premium rates to MSMEs.^{xlii}

5.2.2. Infrastructure support

The Raj MSME Policy is focused on building industrial parks for micro enterprises in sectors such as handicrafts, handloom weaving, and food processing. It also prioritises logistical support and connectivity for MSME parks and clusters. It discusses in particular the developing of smart industrial areas with access to modern facilities, and an Integrated Cluster Development (ICD) program. In the ICD program, potential clusters of businesses engaged in business of a similar nature are identified and their relevant upstream and downstream linkages are strengthened.^{xliii} The program is aimed at building sector-focused testing laboratories, R&D centres, and skilling centres to promote industry automation.

RIPS also offers support to educational institutes creating business incubation centres to foster startup development.^{xliv} The Rajasthan Handicrafts Policy offers incentives for setting up permanent marketing centres for handicraft or handloom products by handloom weavers' cooperative societies, artisan societies, or other collectives in urban areas.^{xlv}

Along with infrastructural links in the form of *eMitra* touchpoints, the State Government, under the Rajasthan MSME Policy 2022 and the Rajasthan Handicraft Policy 2022 provides for the creation of Common Facility Centres (CFCs). Under the eMitra initiative, the State Government authorises private firms to operate physical e-Mitra kiosks and serve as a last mile connect between the State and its people. Over 80,000 e-Mitra kiosks are currently operational at the gram panchayat level in all districts of Rajasthan. Together with the wide network of kiosks, e-Mitra apps enable delivery of several citizen centric schemes, effective governance services and outreach / awareness programmes. On the other hand, CFCs are high-end and capital-intensive infrastructure projects supported by the State. CFCs house state-of-

the-art machinery/equipment and are critical for bridging infrastructure gaps in the State.

In terms of digital infrastructure, Rajasthan has created various web portals such as SWCS, iStart, Raj Udyog Mitra and Raj Nivesh, which share updated information with businesses and potential investors. Department specific notices, reports, statutes, rules and other information are available on the web portals of each department, including the RajFAB and LocalSelfGovernment portals, among others. The Raj MSME Policy also includes e-marketing support as a priority area. It discusses building linkages between specific sectors such as khadi and handloom weaving and e-commerce portals, and offering market-oriented design interventions, as well as helping build brand awareness.

A key component of digital infrastructure from an e-commerce standpoint is the e-Bazaar portal. e-Bazaar is an e-commerce portal owned and operated by the Government of Rajasthan, and it has over 300 registered sellers operating in a B2C or B2G model. Challenge for e-Bazaar is that it competes with large e-commerce companies for consumer attention. Since its inception, the B2C segment has sold 70,000 products worth Rs ~22 lakh. This is only a small fraction of the number and value of goods sold by competitors such as Flipkart and Amazon. Even the niche ecommerce operators such as Meesho report larger GMV figures on a daily basis. Nevertheless, the B2G segment of e-Bazaar is a convenient avenue for procurement by various State Government departments. By using the portal, startups registered on the iStart portal can fulfil B2G orders without a tender. At present the State Government is sreamlining e-Bazaar 2.0 with a focus on MSME onboarding and consumer focused services.

5.2.3. Institutional levers

Institutional levers have an important role to play in information gathering and policy formulation, and in the actual delivery of policy initiatives. From an e-commerce standpoint, the MSME Investment and Facilitation Centres (MIFCs) and the State Level Sanctioning Committee (SLSC) are the institutional backbone of government–business relations in Rajasthan.

MIFCs were set up under the Raj MSME Policy, and are responsible for supporting MSMEs from their inception. They help investors make international collaborations, collate the documents needed for bank loans, perform district-level sector analyses and more. At the state level, the SLSC is the sanctioning authority for investments made under RIPS 2022. It is empowered to review cases that merit its scrutiny and in these its decision is final. Its membership comprises government officials including the ACS or Principal Secretary, the Industries Chairman, the Commissioner of

Investment & NRIs (BIP), the MD of RIICO, the Commissioner of the Industries Department, and others. It also monitors implementation of the Raj MSME Policy.

With regard to institutional support for capacity development, the Rajasthan government has set up product-specific Centres of Excellence (CoEs) in collaboration with universities and research centres in the state. These CoEs work with MSME clusters to promote skill upgrades and the adoption of technology. For this purpose, the MIFC is responsible for creating a trainers' pool to conduct advanced training programs at the district level in aspects such as e-marketing, the use of digital services, and registering intellectual property.

We note that recent policy initiatives by the State of Rajasthan stipulate incentives targeted toward startups and MSMEs. The emphasis is on upskilling and developing capacity in the state, which may yield dividends in the medium to long term.

There is scope to increase competitiveness to e-commerce businesses in the state, whether by allowing access to non-personal data, developing innovative sharing models for facilities, or creating avenues for deeper knowledge sharing between businesses and education institutions. Employment of professional organisations for data analytics support and strategy consulting that could help startups and MSMEs understand e-commerce markets better and to launch competitive products. Additional push factors may be cultivated by strengthening fast and reliable network services.

We discuss key gaps in the policy climate of Rajasthan.

5.3. Key gaps

The analysis of the institutional, legal and policy structures in Rajasthan, in conjunction with the broader analysis of Rajasthan's tech-readiness to harness e-commerce value chains reveals the following key gaps. We provide recommendations for the State Government to mitigate these gaps in Section 6 (*Recommendations*).

5.3.1. Need to revitalise institutional structures

A 2023 ICRIER study on e-commerce value generation notes that MSMEs face significant bottlenecks in accessing credit, raw materials, and skilled labour.^{xlvi}

DICs have wide institutional networks and can streamline supply-chain linkages but lack capacity and a focus on e-commerce value chains. Although they are instrumental in bridging the gap between MSMEs and the market, DICs do not carry out any activities that are specific to unlocking value from e-commerce. There is a need for DICs to collaborate more closely with RSETIs to address demand and credit gaps at a district level.

For this purpose, the mandate of RSETIs could be expanded to include e-commerce credit services and financial literacy regarding the same.

Similarly, in its current *avatar*, RUDA is underutilized in terms of addressing the challenges faced by MSMEs. RUDA primarily acts as the touchpoint for NGOs and other producer collectives. It is imperative that the State Government reforms, reorganises and revitalises RUDA, given the potential for MSEs outside of Tier X and Y cities in Rajasthan to leverage e-commerce supply chains.

5.3.2. Need to focus RSLDC skilling programmes on a sectoral basis

Clusters across districts and sectors have varying needs in terms of skilling and training programmes, which require continued assessment. However, the RSLDC primarily relies on demand assessment by Training Partners (TPs). The TPs mostly organize training programmers in locations where suitable infrastructure is available, and not necessarily on the basis of demand for skilling exists. This has an implication on the choice of training location, batch size and total strength of classes. Together these factors impact skill-based employment opportunities. Further a sector skill council for e-commerce also does not exist in Rajasthan. As a result, RSLDC's programmes lack focus onto e-commerce allied skills, i.e. entrepreneurial and technical skills relevant to e-commerce such as inventory management, online marketing, order fulfilment and lifecycle management, SEO, etc.

Typically, Sectoral Skill Councils (SSC) such as those under the National Skill Development Council (NSDC) are specially tasked with the responsibility of demand assessment, identification of skill-basis demand trends and development of standards for skill training, accreditation and assessment.

Unless these gaps are addressed, RSLDC and vitality skilling and training programmes on e-commerce will lack requisite granularity to address district and sector specific skill gaps. It is imperative that RSLDC has a comprehensive skill strategy which is aligned with evolving market trends and is able to empower enterprises to compete within e-commerce value chains.

5.3.3. Need to augment CFCs to address sectoral skilling gaps

While the Rajasthan Handicrafts Policy 2022 and the Rajasthan MSME Policy 2022 have enabling provisions for setting up of CFCs, they fall short of integrating skilling initiatives with such CFCs. The existing provisions in the Policy do not consider that

producers for whom CFCs are set up, require tailored product specific skills and ecommerce allied skills.

CFCs can be tailored to prevailing market conditions. Producers of handicrafts and handloom products require continued skill augmentation to meet changing demand patterns and serve export markets more effectively. To this end, CFCs can provide sector-relevant design support, CAD interventions, market assistance, brand promotions, project management support.

5.3.4. Need to institute structural changes to ease legal compliance frameworks

While the Rajasthan MSME Act exempts new enterprises from having to obtain multiple permissions, clearances etc., under a self-declaration framework, the fiveyear period may not be sufficient to support businesses, especially micro and small businesses in Rajasthan. Additionally, Rajasthan MSME Act does not apply to establishments set up before it came into force.

However, given the way Rajasthan's MSME landscape is oriented, there is a need for structural changes and institutional levers that take the private sector into confidence to build responsible legal compliance practices.

In tech driven sunrise sectors there is an emerging trend of self-regulatory organisations (SROs). SROs help foster greater trust between the State and market. This could potentially reduce State intervention which is not only onerous for businesses but also administratively taxing due to limited State capacity.

5.3.5. Need to augment e-commerce market access

A 2023 ICRIER study on leveraging MSME potential in e-commerce highlights market access as one of the most critical challenges that must be solved for to allow MSMEs to leverage gains from e-commerce.^{xlvii}

It is important to view this challenge from both the demand as well as the supply side. From the demand side, the State Government must explore ways of incentivising large marketplace platforms to onboard MSME sellers in Rajasthan. On the supply side, it must create the conditions that allow MSMEs to onboard onto ONDC or any marketplace platform(s) of their choice.

Local market facilitation agencies such as NGOs, societies, agencies like Rajeevika etc., have physical networks, trust and connect with local producers. They empower communities of artisans, weavers, and crafts persons with access to clients, credit, information, and legal support, among other things. However, the potential for leveraging local market facilitation agencies in e-commerce remains untapped. They can be integrated on the supply and demand side of the e-commerce value chain. On the supply-side, leveraging local market facilitation can help in aggregation of products for e-listing. On the demand side, they can serve as pivots for marketplace platforms to access Rajasthan's vibrant communities of artisans, weavers and craft persons.

5.3.6. Need for policy focus on ONDC to strengthen local value chains as well as e-Bazaar

The Rajasthan MSME Policy 2022 does not account for importance of ONDC to lend network effects to onboarded MSME sellers. ONDC can yield network effects once buyer and seller activity on the platform attain critical mass. Linkage of e-Bazaar to this network is an important first-step in this regard. Thereafter, it is imperative that local value chains comprising of tech service providers, sellers, app developers, logistics operators etc. are aware of the transformational potential of ONDC.

6. RECOMMENDATIONS

In this section we distil the preceding discussion of tech readiness, policy and the policy and compliance landscape in Rajasthan in the form of actionable recommendations.

The state government should take a four-pronged approach may building growth and resilience in e-commerce. Under this approach, the state should focus on enabling access to e-commerce markets. To this end, MSEs and clusters of producers and artisans may be encouraged to collectivise their resources for e-commerce. This would increase their capacity to spend on e-cataloguing and digital marketing, as well as bearing commissions charged by large e-commerce marketplaces. Further, by onboarding as a collective, local artisans can better protect themselves from seller liability.

At the same time, the state may develop its own e-commerce marketplace i.e. the e-Bazaar, to match the consumer experience offered by large marketplaces. This entails focusing on the B2C segment and building linkages with ONDC.

In addition, the State Government should strengthen its machinery, particular its vast network of DICs towards e-commerce facilitation in collaboration with RSETIs. Further, it may use data to understand local skills and productive capacities in order to focus on capacity building measures that bridge demand-supply gaps in e-commerce. Lastly, it may deepen e-commerce enabling infrastructure by encouraging private sector participation for last-mile delivery and transient storage of packaged goods.



Figure 13: Thematic Division of Recommendations

Theme	Recommendations
Optimising institutional structures	• Revitalising government touchpoints such as the RSLDC, DICs, RSETIs and RUDA towards e-commerce value addition.
Streamlining legal compliance mechanisms	• Furthering the objectives of the Rajasthan MSME Act under a structured self-certification and self-regulation framework.
	• Championing accountability and transparency in the national e-commerce policy.
Improving market access	• Enabling entrepreneurs and artisans to earn revenue from e-commerce channels.
	• Deepening logistics networks for mid-mile and last mile delivery.
	• Strengthening e-Bazaar.
Building Capacity	• Targeting skilling and training programmes and harnessing CFCs to unlock additional revenue from e-commerce channels.

Table 7: Thematic Overview of Recommendations

6.1. Institutional superstructure for monitoring and facilitation of e-commerce

At the state level there are five relevant departments that play a significant role in bolstering e-commerce ecosystem. These include Department of Industries, DoIT, Department of Rural Development, Department of Labour and Department of Skill, Employment and Entrepreneurship.

A joint monitoring and facilitation body for e-commerce can be created which will be comprised of secretaries heading the abovementioned departments. This empowered body can set actionable targets for all relevant departments in terms of e-commerce facilitation, and would periodically report to the Chief Secretary, Government of Rajasthan. It shall monitor progress by conducting periodic stock taking exercises, and call for quarterly progress reports from relevant departments in respect of implementation of existing policy mandates towards e-commerce enablement.



Figure 14: Institutional superstructure for monitoring and facilitation of e-commerce

Within this framework, each department will discharge a specific role which focuses its existing mandate towards e-commerce value generation. The roles discharged by each department can be as follows.

DoIT can facilitate expansion of IT infrastructure, and create special programmes for micro and small enterprises. This entails providing access to mentorship, and facilitating connections with investors.

Department of Industries can coordinate with DICs via RUDA in the manner detailed in Recommendation 7.2 (*Institutional restructuring to revitalise RUDA*).

Department of Rural Development can supervise assisted ecommerce models in Rajasthan, as well as onboarding of SHG-driven enterprises on the e-Bazaar platform.

Department of Labour can maintain and update data on gig workers engaged in Rajasthan.

Department of Skill, Employment and Entrepreneurship can coordinate and supervise sectoral training and skilling programmes developed and imparted by RSLDC, as detailed in Recommendation 6.3 (*Focusing RSLDC programmes and harnessing CFCs to be e-commerce ready*).

6.2. Institutional restructuring to revitalise RUDA

The following decentralised institutional framework can help the State Government revitalise RUDA to: (a) facilitate market linkages; and, (b) align existing skilling programmes of the State Government with cluster-specific requirements on a district level.



Figure 15: Institutional restructuring to revitalise RUDA

RUDA can have an increased mandate to coordinate directly with DICs within this hub-and-spoke framework. It can leverage the networks of local NGOs, SHGs, associations, agencies, and other collectives having local presence, to identify, map and address the myriad concerns of Rajasthan's diverse MSME landscape. At the same time, RUDA can adopt a structured coordination framework with the RSLDC to tailor its skilling and training programmes according to district-wise industry needs.

This framework can be overseen by Additional Chief Secretary, Department of Industries and Commerce, Government of Rajasthan.

With this expanded mandate, RUDA+ will be able to steer a multi-level coordination framework between communities of artisans, weavers, craft persons, SHGs, and micro enterprises at the lowest level and the Department of Industries and Commerce, Government of Rajasthan, at the highest level for targeted implementation of policy devices.

DICs play a critical role providing an access-point to the State Government at the district level. As the lowest tier in the decentralised coordination framework, DICs

can serve as the entites responsible for engaging constructively with RSETIs for collating data from local networks of SHGs, NGOs, and other collectives of producers. Structured engagement with RSETIs can help DICs meet credit access gaps, particularly for micro enterprises in the State.

DICs shall provide quarterly reports on sector-specific challenges and concerns faced by local producers, and identify areas for targeted intervention by the Department of Industries, and the empowered e-commerce coordination body, as detailed in Recommendation 1. Areas for targeted intervention may vary from credit assistance, grievance redressal, or market facilitation.

At the next tier, coordination between RUDA+ and RSLDC will provide granular insights in terms of district-level needs for skilling programmes, training courses and capacity development. This will allow for improved focus of RSLDC's efforts towards continued skill augmentation of producer communities as well as e-commerce allied skills.

In sum, this multi-level structure designed around RUDA+ can channel Rajasthan's underutilized institutional mechanisms towards targeting policy action for e-commerce enablement.

6.3. Focusing on RSLDC programmes and harnessing CFCs to be e-commerce ready

CFCs can be leveraged to augment the needs of local industries within a cluster. For instance, CFCs near Kota Doria clusters can cater to specific weaving and dyeing techniques used in the handloom sector. On the other hand, CFC near marble artisan clusters in Alwar can cater to specific sculpting and carving techniques required for marble products. This will ensure maximum utilisation of existing resources and physical infrastructure within the State.

RSLDC shall tailor its programmes to suit the sector-specific needs of various clusters in Rajasthan. In other words, it shall impart skilling and training programmes which are tailored to address sector wise and district wise talent gaps. In parallel, the RSLDC shall leverage CFCs as training centres for imparting e-commerce allied skills such as inventory management, online marketing, order fulfilment and lifecycle management and SEO to interested MSMEs.

Further, the RSLDC may invite e-commerce marketplaces to form a body akin to Sectoral Skill Councils (SSCs) at the State level for e-commerce. This will create a mechanism for periodic skill gap assessments in e-commerce. Private entities would be incentivised to be a part of the skill assessment body given the untapped potential of e-commerce in Rajasthan. Since they would be able to hire from a pool of trained workers who have gained industry-relevant skills under programmes designed by them, private entities would be able to reduce personnel costs in the long term.



Figure 14: Harnessing sector-specific RSLDC curricula and CFC infrastructure for skill augmentation for local producers

Separately, a connect with the market and industry is necessary for the identification of demand-supply mismatches in skills and capabilities. RSLDC's lacks the necessary industry outlook since its board-level decision making lacks due industry representation.

In this regard, the State Government can authorise structural changes to RSLDC. Currently, there are nine members in the RSLDC's board of directors, all of whom are high-level officers in the state government. In contrast, the board of directors of the National Skill Development Council (NSDC) has representatives from bodies such as National Association of Software and Services Companies (NASSCOM), Confederation of Indian Industry (CII), Federation of Indian Chambers of Commerce & Industry (FICCI) and The Gems and Jewellery Export Promotion Council (GJEPC), Council for Leather Exports (CLE) among others.

The RSLDC can reconstitute its board of directors or organisational structure to incorporate the perspectives of industry bodies such as NASSCOM and Confederation of Indian Textile Industry (CITI), as well as those of local associations, such as the Rajasthan Organic Farmers Association (ROFA).

6.4. Streamlining legal compliance mechanisms through self-certification frameworks

An efficient legal compliance framework must foster responsible business practices while providing adequate headroom for MSMEs to align with applicable legal standards and requirements.

The Rajasthan MSME Act exempts MSMEs from having to obtain permissions, approvals and clearances from various departments of the State Government to commence and conduct business operations. However, once the five-year exemption period elapses, businesses must obtain these permissions anew and thereafter incur compliance costs on a periodic basis.

The State Government can further the intention behind the Rajasthan MSME Act by leveraging self-regulatory models of governance. This can achieve the twin objectives of fostering regulatory agility and reducing the compliance burden on MSMEs.

The State Government can recognise SROs to serve as 'Industry Compliance Offices', (ICOs) which shall certify MSMEs as legally complaint on an annual basis. Compliance certificates issued by ICOs shall have the same effect as an acknowledgement certificate issued under the Rajasthan MSME Act, save that ICO-issued compliance certificates must be renewed on an annual basis for a fee.

ICOs shall comprise of former officials of the State Government, a retired district judge and industry representatives from various sectors in Rajasthan. Local market facilitation agencies and legal experts, technology and merchandise experts and consumer rights activists, may be inducted to ICOs in an advisory capacity.

ICOs shall discharge the following duties (indicative list of responsibilities).

- Co-draft guidelines along with the Department of Industries on the manner and nature of furnishing self-declarations by MSMEs.
- Record compliance-related grievances voiced by MSMEs and highlight the same to the relevant departments of the State for systemic resolution.
- Empanel registered chartered accountants for conducting annual audits and inspections.
- Provide support in meeting compliance standards, for instance in terms of maintenance of statutory registers, and provide assistance in rectifying minor non-compliances.
- Promote the use of technology such as compliance management software tools by MSMEs.

6.5. Augmenting e-commerce market access for artisans, weavers and craft persons

6.5.1. Supply side augmentation

The State Government can create the enabling infrastructure that allows local producers such as artisans and weavers to onboard onto e-commerce platforms through policy optimisation.

The role of permanent marketing centres set up under the Rajasthan Handicrafts Policy, 2022, can be expanded to serve as e-commerce aggregation channels. Currently, permanent marketing centres serve as nodes for promotion and physical commerce of Rajasthani handicraft and handloom products. Their expertise, networks and resources can be harnessed for e-commerce aggregation on the supply side.

As e-commerce aggregation points, marketing centres shall be responsible for ecataloguing of products sourced from local producers via local market facilitation agencies. Marketing centres would manage e-listings, fulfil order lifecycles, redress of customer grievances and discharge the duties and liabilities of sellers under the Consumer Protection (E-Commerce) Rules, 2020^{xlviii} on behalf of local producers.



repurposed marketing centres

To this end, Paragraph 16 of the Rajasthan Handicrafts Policy, 2022 can be amended to include the following additional paragraph.

"Marketing Centres shall enter into arrangements with registered Artisan Societies / Handloom Weavers Cooperative Societies /organisations of artisans and weavers for providing e-commerce aggregation services which includes e-cataloguing, delivery assistance and seller liability protection." SLAs between marketing centres as e-commerce aggregation points and local market facilitation agencies shall ensure that proceeds of sale are distributed back to the relevant local producer(s) periodically in a transparent manner. Marketing centres and local market facilitation agencies may deduct facilitation fees as a percentage of the sale price so as to create sustainable incentive structures along the value chain.

Value addition

Marketing centres as e-commerce aggregation channels shall add value in the following manner:

- Allowing local producers to earn from e-commerce supply chains without having to undertake the costs and legal risks of being sellers on e-commerce marketplaces.
- Reducing the dependency on public procurement for handicrafts products.
- Investing in premium grade branding and packaging to cater to high-income and luxury markets.
- Share insights on demand trends, performance metrics of specific SKUs and consumer reviews with local market facilitation agencies, who in turn pass such insights onto local producers.

Further, the proivison for financial assistance for marketing of hanidcrafts products under the Rajasthan Handicrafts Policy, 2022, can be optimised for greater impact. Paragraph 17.IV of the Rajasthan Handicarfts Policy, 2022 provides financial assistance of up to Rs 25,000 upon the creation of any "websites / facebook page for publicity & promotion and e-Marketing of the handicraft and handloom products by handloom weavers." However, Marketing assistance for publicity & promotion of a dispersed set of Facebook pages and websites may not garner adequate consumer attention or drive traffic towards sales.

Funds earmarked for financial assistance should be used solely for online promotion campaigns for the goods listed by marketing centres / e-commerce aggreagtion channels on e-commerce marketplaces. These campaigns must be targeted to specific buyers based on data analytics tools.

6.5.2. Demand side augmentation

The State Government can leverage the networks of local market facilitation agencies to incentivise large e-commerce marketplaces to onboard local producers such as artisans and weavers. Local market facilitation agencies can serve as pivots for private e-commerce marketplaces to access producers, provide intelligence and handholding support in respect of local production and demand cycles as well as productive capacities.



Figure 16: Illustration of demand side connect with artisans, weavers and crafts persons via local market facilitation agencies

Structured access to local touchpoints will incentivise private e-commerce marketplaces to explore markets beyond tier X and Y cities in the State.

In terms of institutional coordination, RUDA+ (see Recommendation 6.2) can be tasked with the mandate of harnessing the wide network of DICs to coordinate linkages between large marketplace platforms and local market facilitation agencies.

6.6. Leveraging RSRTC and private partners on pilot basis to improve logistics connectivity

The State Government can, on a pilot basis:

- (a) leverage the network of buses operated by the Rajasthan State Road Transport Corporation (RSRTC) for mid-mile delivery of e-commerce goods; and,
- (b) authorise private entities to perform last-mile pickup and delivery services under a tendering process.

Mid-mile delivery

Timely deliveries are critical to build consumer trust on e-commerce. Opening up RSRTC for cargo and freight services will create reliable and low-cost logistics solutions which can benefit micro-enterprises outside Tier X cities.

The RSRTC can levy delivery charges and generate additional revenue for providing logistics services to / on behalf of e-commerce platforms. RSTRC can even operate as a logistics service provider on ONDC to help the network gain traction in Rajasthan. Lastly, it can improve delivery timelines for B2C orders placed on e-Bazaar. These charges can be realised through SLAs with e-commerce platforms.

Notably, Maharashtra has unlocked efficiencies in local logistics chains by leveraging the delivery service arm of Maharashtra State Road Transport Corporation (MSRTC) – 'MahaCargo' – for e-commerce. MSRTC modified its old buses by removal of passenger seats and converted them into tucks for the delivery purposes. MSRTC MahaCargo earned a revenue of Rs100 crore between 2020 and 2022 through e-commerce deliveries.^{xlix}

Opening up RSRTC for cargo and freight services will create reliable mid-mile logistics solutions for businesses, especially micro enterprises located in rural areas / Tier Z cities, to fulfil orders in timely fashion. More importantly it will improve consumers' trust and experience of e-commerce across districts in Rajasthan.

Last-mile delivery

Logistics chains for last-mile or doorstep delivery can be streamlined through private participation. Networks of delivery executives managed by authorised contractors. The Department of Transport may invite bids against a lump-sum payment as per the Rajasthan Transparency in Public Procurement Act, 2012, to private entities willing to take responsibility for the delivery and pickup of e-commerce goods.

The pilot projects can be conducted in districts such as Jaisalmer & Bikaner (low connectivity and population density) and Kota (high e-commerce demand) to explore the viability and efficacy of these delivery models. The pilot exercises for mid-mile and last-mile delivery may be undertaken for a 6-month period from July to December to enable the state to assess performance during peak seasons (Diwali/ Dhanteras and New Year sales).Periodic review from customers through telephone calls and information sharing from e-commerce platforms may inform evaluations of the efficacy of such logistics arrangements. The authorisation for delivery contractors may be extended or renewed basis the review process, along with determinations such as the nature of districts served, minimum price, and the commission structures for RSTRC.

6.7. Championing accountability, trust and transparency in the national e-commerce policy.

The State Government can issue a representation to the Government of India on the need for accountability, trust and transparency as fundamental principles under the national e-commerce policy. The representation should highlight:

Impact of fallback liability on MSE sellers.

The draft e-commerce amendment rules released by the Ministry of Consumer Affairs, Government of India¹ introduced the concept of fallback liability for e-commerce marketplaces. As a result, e-commerce marketplaces, regardless of their involvement in product discovery, packaging, delivery etc., would be responsible for faulty products etc.

Fallback liability creates operational risks for marketplace platforms and disincentivises them from onboarding producers of artisanal products which have irregular inventory and quality levels. Making platforms liable for third-party sellers' inability to deliver products fundamentally shifts incentive structures on e-commerce. To mitigate fallback liability, marketplace platforms may reduce listings of micro enterprises of local producers, and instead focus on onboarding big businesses who produce standardized goods through mechanised processes and are less likely to default on delivery commitments.

The State Government must highlight the potential impact on producers of artisanal products due to the concept of fallback liability.

Need for graded accountability frameworks

Accountability in e-commerce should be a function of the roles and responsibilities discharged by both sellers and marketplaces. For instance, passive e-commerce marketplaces should institute escrow structures for payments and transparent mechanisms for consumers to directly approach manufactures and sellers with grievances. On the other hand, active e-commerce marketplaces (who typically charge higher commissions from sellers) should discharge greater responsibility for fulfilment of orders, and in redressing consumer grievances. Similarly, large ecommerce platforms should be mandated to publish transparency reports containing seller metrics, locational spread along with details such as return volumes, complaints etc.

The State Government must highlight the need for graded accountability frameworks for e-commerce marketplace platforms under India's national e-commerce policy.

6.8. Strengthening e-Bazaar

The State Government can take the following steps to strengthen e-Bazaar as a strategic asset and drive user metrics and sales on the platform to unlock network effects.



Figure 17: Roadmap for strengthening e-Bazaar

- Step 1. Expanding e-Bazaar's B2C segment
- Seller onboarding. The Department of IT can coordinate with the Department of Industries to leverage the network of DICs and RSETIs in Rajasthan for onboarding of local producers onto e-Bazaar.
- Certificates of authenticity: Local market facilitation agencies such as RAJEEVIKA can issue certificates of authenticity to establish stating that the product is locally made by Rajasthani artisans, weavers and craft persons. In this regard, the Department of Industries along with RUDA+ shall develop and circulate templates of such authentication certificates for locally made products.
- **Market the sustainability angle:** The Department of IT shall highlight the environmentally sustainable characteristics of products listed on e-Bazaar in all marketing and promotional campaigns relating to products on e-Bazaar.

• Step 2. Integration of e-Bazaar with ONDC

Linking e-Bazaar with ONDC will ensure wider discovery of products listed on e-Bazaar as users from any buyer app on ONDC can view and access the listings included in the e-Bazaar ONDC seller app.

The State Government can integrate e-Bazaar with ONDC to leverage the latter's network effects. The Department of IT can undertake a one-time cost develop an ONDC compliant seller application for e-Bazaar through the ONDC Network Participants Form.

Since data is the key engine for growth of enterprises in e-commerce, access to ONDC networks can enable improved data-backed insights for SKUs listed on e-Bazaar. Insights on product sale metrics and consumer preferences will enable granular analyses of high-performing enterprises / clusters. These data-backed

insights in turn will provide insights on the necessary forward and backward linkages as per demand patterns in the State. Notably, the Government of Uttar Pradesh linked its One District One Product (ODOP) mart with ONDC in 2022 on a pilot basis, a move which is designed to local artisans to access newer markets for their products.

• Step 3. Building local capacities to leverage ONDC networks

The Department of Industries, Government of Rajasthan should focus on conducting workshops and training sessions to build capacity for MSMEs to leverage ONDC in a structured and coordinated fashion. To this end, Clause 14 of the Rajasthan MSME Policy, 2022 can be revised as follows:

- "14.2 The State Government envisages to organise as well as promote participation of MSMEs in various national / international fairs and exhibitions, Technical Seminars, marketing campaigns, <u>e-commerce marketplace platforms, ONDC</u> etc. to aggressively increase the outreach of regional products.
- 14.2.1 To create mode business opportunities for MSMEs and to facilitate market linages, the State Government envisages to organise marketing events for MSMEs such as Buyer-Seller Meets, trade fairs & expositions, e-commerce onboarding fairs onto marketplace platforms and ONDC etc.
- 14.2.2 The State Government shall strive to support MSMEs to participate <u>on e-</u> <u>commerce platforms, ONDC</u> and trade events at national and international level.
- 14.5 The State Government envisages providing e-marketing support to MSME entrepreneurs through training sessions highlighting the importance of packaging in the supply of goods in e-marketing, online import-export policies and procedures, <u>mechanisms of harnessing ONDC for growth</u>, latest developments in international/national trade, bar codes, digital marketing, etc."

ONDC capacity building workshops can be conducted with assistance and sponsorship existing ONDC seller apps in key business districts in Rajasthan such as Jaipur and Kota. The subject matter of these workshops shall focus on education, tech-integration, mentoring, and support. 7. ANNEXURES

ANNEXURE 1

Pillar	Parameter	Definition	Source	
	Internet Penetration	Internet subscribers per 100 population (Teledensity, %)	TRAI	
ech Access	Common Service Centres	Total number of functional CSCs in the state (Urban + Rural)	Lok Sabha Question	
	Number of ATMs	Total number of ATM CRMs and WLAs deployed/Total projected population	RBI uidai.gov.in	
	Digital Payment Transactions	Digital Payment Transactions up to September 2022 (per capita: includes BHIM, *99#, RuPay, IMPS, AEPS)	digipay.gov.in	
arameters for Internet ided in Tech Access)	Internet shutdowns	Total number of Internet shutdowns since 2012	internetshutdowns.in	
	Speed of 4G network	Max downloadable speed in Mbps (Airtel, Jio, Vi, BSNL)	TRAI	
	Speed of 3G network	Download speed in Mbps (BSNL)	TRAI	
QoS Pa (inclu	Service Availability of Network	Service availability/uptime for all users in percent	TRAI	
ucture	Gram Panchayats connected with optic fiber	Ratio of service ready* Gram Panchayats/ Total number of GPs	panchayat.gov.in, bbnl	
Tech Infrastr	Smart Cities	Number of smart cities allocated to the state/Total number of districts in the state	Smart Cities Mission, Ministry of Housing and Urban Affairs districts.nic.in	

Table 8: List of Parameters for the Tech Readiness Index

Pillar	Parameter	Definition	Source	
	Electric Vehicles	Total number of e- vehicles/Total number of vehicles in the state	Lok Sabha Question	
	Knowledge Output	NITI Aayog Innovation Index Parameter	Niti Aayog	
ation	Business Orientation	NITI Aayog Innovation Index Parameter	Niti Aayog	
Orienta	Start-up Ecosystem	State Startup Ranking from Startup India	Startup India	
usiness	Knowledge Workers	NITI Aayog Innovation Index Parameter	Niti Aayog	
Tech Bı	Wholesale Markets with e- NAM	Total number of Mandis integrated with e-NAM	enam.gov.in	
	Knowledge Diffusion	NITI Aayog Innovation Index Parameter	Niti Aayog	
Skill Development and Potential (included in Tech Business Orientation)	NIC Standard	Percent distribution of usually working persons in the Information and Communications Industry (NIC-2008)	NIC (2008) for classification and PLFS (2020-2021)	
	Enrolment in PhD per lakh population	NITI Aayog Innovation Index sub-parameter	Niti Aayog	
	Enrolment in engineering and technology (UG, PG, and Diploma level)	NITI Aayog Innovation Index Parameter	Niti Aayog	
S/	IT Policy	Whether the state has a dedicated IT Policy	Individual state websites	
itutions and Law	Cyber Security	Presence of cybersecurity policy in the state	Individual state websites	
	IP Enforcement	Institutional mechanism for enforcing IP rights in the state	Individual state websites	
ech Ins	Data Centre Policy	Presence of data centre policy in the state	Individual state websites	
T	N-LRSI Score	Land Records and Services Index	ncaer.org	

Pillar	Parameter	Definition	Source	
	IT SEZs	Ratio of operational SEZs to notified SEZs	pib.gov.in	
	Online Gaming	Presence of laws/regulations to promote online gaming in the state	Individual state websites	
	Animation and VFX	Presence of a policy for animation and VFX	Individual state websites	
	Tax Aggregators	Presence of regulations and guidelines for taxi aggregators	Individual state websites	
	Digital Skills Policy	Presence of a dedicated digital skills policy	Individual state websites	

Algorithm for Index Construction

- 1. We use data on all 28 Indian states to construct the index and exclude the union territories (UTs) because the policy landscape for them is considerably different. We take the most recent value for each of the parameters listed above for each state.
- 2. There are 28 instances of missing values in a total of 840 required observations (i.e. 28 states x 30 parameters). We approximate the missing values by assuming they are proportional to the ratio of own Net State Domestic Product (NSDP) and the average NSDP of all states. Specifically, for a state *S* missing a value for the parameter *Z*, we use

$$Z^{S} = \frac{NSDP^{S}}{NSDP^{All \ states - S}} \ X \ Z^{All \ states - S}$$

- 3. We transform all continuous variables on a ratio scale, using State NSDP and population as the normalising variables. We then rescale all variables to values between 10 and 100. Rescaling controls for excessive heterogeneity between variables while keeping the interstate variability intact.
- 4. We use principal component analysis (PCA) as the statistical method to aggregate the parameters. PCA entails taking projections of the parameters on fewer dimensions (i.e. the principal components) by giving higher weightage to those that discriminate the most between states.
- 5. We rescale the PCA scores to values between 10 and 100 and rank the states on tech-readiness and the four pillars.
- 6. We use district-level data on enterprises with internet access for inequality adjustments to the scores thus obtained. These data are taken from the 73rd round of the National Sample Survey (NSS), administered in 2015-16. The sample for this NSS round consists of unorganised sector enterprises, excluding those in agriculture and construction.

- 7. We compute intrastate inequality in internet access for enterprises by using the Atkinson measure (AM). The AM is often used in the welfare literature. In the current context, it can be interpreted as the proportionate increase in internet access required to achieve equality between districts, while keeping welfare intact. The AM incorporates a sensitivity parameter (ε) that ranges from zero (representing indifference to the nature of the distribution) to infinity (representing maximum focus on the district with the least internet access). We peg ε at one, following the common practice in the literature.^{li}
- 8. With the Tech Readiness score in step 5 represented as TR^U , we construct the inequality-adjusted Tech Readiness score (TR^A) as in the equation below. We then rescale the scores obtained to values between 10 and 100.

$$TR^A = TR^U * (1 - AM)$$

ANNEXURE 2

High Income States	Per Capita NSDP (Rs Lakh)	Rank	Middle Income States	Per Capita NSDP (Rs Lakh)	Rank	Low Income States	Per Capita NSDP (Rs Lakh)	Rank
Karnataka	2.27	1	Maharashtra	2.02	3	Uttar Pradesh	0.65	9
Tamil Nadu	2.25	2	West Bengal	1.21	10	Rajasthan	1.09	11
Kerala	2.22	4	Andhra Pradesh	1.70	12	Assam	0.87	16
Telangana	2.38	5	Punjab	1.51	13	Madhya Pradesh	0.98	17
Haryana	2.40	6	Odisha	1.10	14	Jharkhand	0.76	18
Goa	4.72	7	Himachal Pradesh	1.83	23	Bihar	0.46	19
Gujarat	2.14	8	Tripura	1.30	21	Chhattisgarh	1.05	20
Uttarakhand	2.03	15	Mizoram	1.87	26	Meghalaya	0.82	24
Sikkim	4.24	22	Nagaland	1.21	27	Manipur	0.85	25
			Arunachal Pradesh	1.70	28			
Average	2.74		Average	1.55		Average	0.84	

Table 9: Tech Readiness Ranks and Per Capita NSDP of States

Source: RBI (<u>Handbook of Indian Statistics, 2020-2021</u>) for Per Capita NSDP. For states that did not have updated figures for 2020-21, data for 2019-20 has been used. Daman and Diu, Lakshadweep and Ladakh were dropped from the index due to missing NSDP values.

Note: (A) States are divided into three categories based on their percentile rankings, that is, states with Per Capita NSDP below or equal to the 33rd percentile as low-income states, those between the 34th and 66th percentile as middle-income states, and those above the 66th percentile as high-income states. (B) The Tech Readiness score and rank has been calculated using a dimensionality reduction method, principal component analysis, as described in Annexure 1. (C) The above rankings are calculated after excluding the Union Territories (Chandigarh, Delhi, Puducherry, the Andaman and Nicobar Islands, and Jammu and Kashmir and Ladakh) from the results.

ANNEXURE 3

Department	Compliance Requirements
Legal Metrology (Weights & Measure) Division, Rajasthan Department of Consumer Affairs	 Licence as dealer, repairer, manufacturer of weights and measures Registration as packer, manufacturer under the Legal Metrology (Packaged Commodities) Rules, 2011
Department of Energy, Government of Rajasthan	 Generator Permission Certificate Transformer / Line Energisation Certificate Application for HT & EHT / Transformers / Lines Equipment / Underground Cables Energisation Application for Diesel Generator / Solar Power / Wind Power and Other Renewable Energy Sources
Factories and Boilers Inspection Department, Government of Rajasthan	 The Boilers Act, 1923 and the Indian Boilers Regulation, 1950 Steam Pipeline Drawing Approval Approval for Boiler Manufacturer Drawing Approval & Certification Registration of Boilers, Economisers under the Factories Act, 1948 and Rajasthan Factories Rules, 1951 Grant of licence Factory building plan approval Notice of occupation / registration Recognition as a competent person (third party)
Labour Department, Government of Rajasthan	 Licences / Registration Licence under the Beedi and Cigar Workers (Condition of Employment) Act, 1966 Registration under the Building & Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996

Table 10: Departmernt wise compliances for businesses in Rajasthan

Department	Compliance Requirements			
	Registration under the Motor Transport Workers Act, 1961			
	• Registration under the Rajasthan Shops & Commercial Establishments Act, 1958			
	 Registration as Principal Employer under the Contract Labour (Regulation and Abolition) Act, 1970 and the Inter-State Migrant Workmen (RE & CS) Act, 1979 			
Local Self Government	Trade licence			
Department, Government of	Approval of building plan			
Rajasthan	Building completion certificate			
	Fire No-objection certificate			
	Layout plan approval			
	Registration under RERA			
	Sewer connection			
Public Health and Engineering Department, Government of Rajasthan	• New water connection			
Public Works Department,	Permission for Road Cutting			
Government of Rajasthan	• Right of Way (ROW)			
Rajasthan State Pollution	General approvals / clearances			
Control Board (RSPCB)	• Authorisation under the E-Waste (Management) Rules 2016			
	 Authorisation under the Solid Waste Management Rules, 2016 			
	• Consent to Establish under the Air and Water (Prevention and Control of Pollution) Act 1981 and the Water Act 1974			
	• Consent to Operate under the Air and Water (Prevention and Control of Pollution) Act 1981 and the Water Act 1974			
	• Registration under the Plastic Waste (Management & Handling) Rules 2016			
	• Special approvals for hazardous substances			
	• Approval of Site under the Manufacturing, Storage, Import of Hazardous Chemical Rules			

Department	Compliance Requirements
	 1989 Authorisation for Management and Handling of Hazardous Waste Authorization For Bio-Medical Waste Management
Registrar, Co-operative Societies, Government of Rajasthan	• Registration as warehouseman under the Rajasthan Warehouse Act, 1958
Urban Development and Housing Department (UDH), Government of Rajasthan	 Approval of building plan Building completion certificate Application for lease deed Layout plan approval

Note: Compliances with the Department of Agriculture, Government of Rajasthan; Department of Medical, Health & Family Welfare, Government of Rajasthan; Rajasthan Renewable Energy Corporation Ltd. (RRECL) are for specialised businesses in the agriculture, medical and renewable sectors respectively.
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