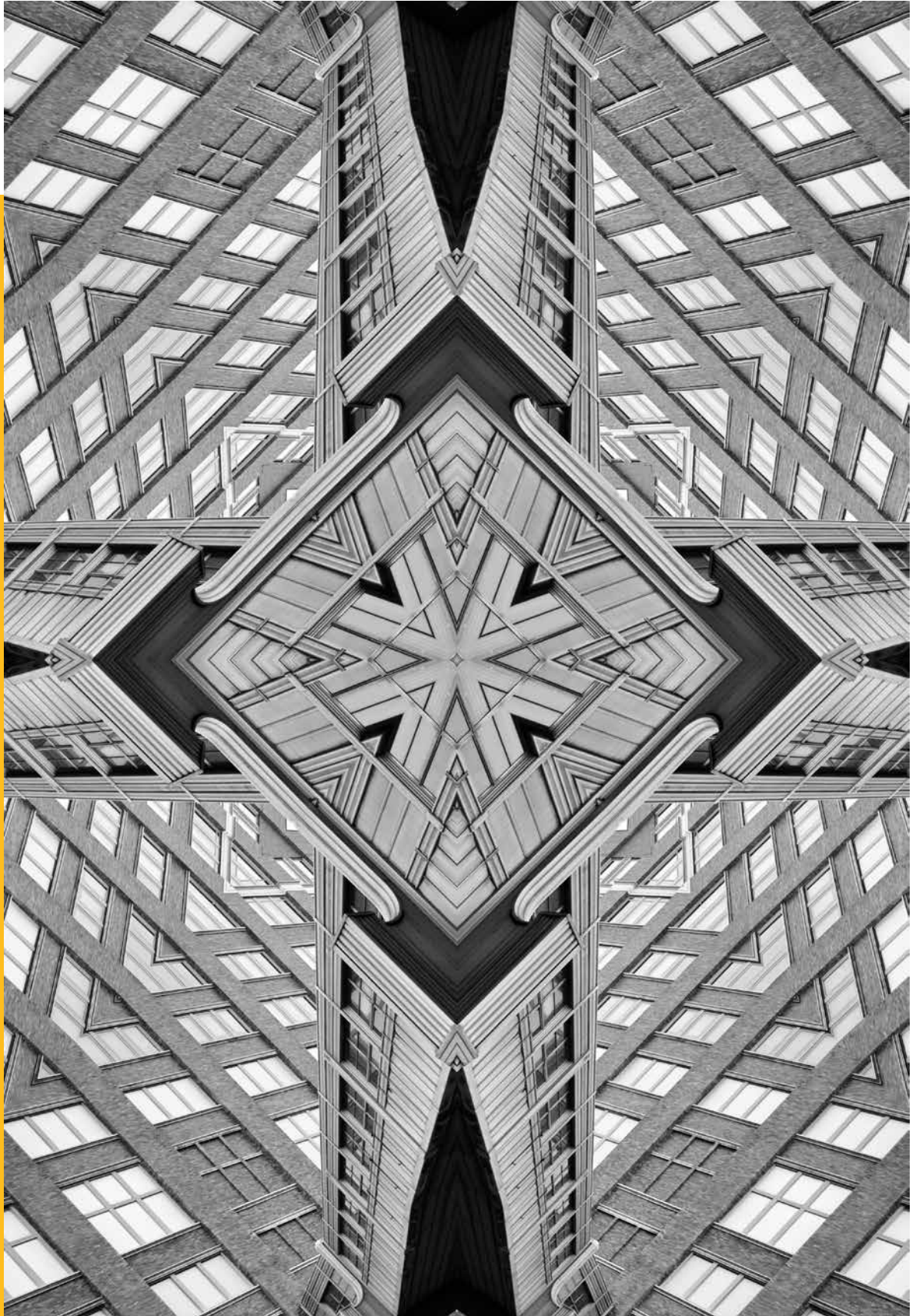


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# Digitising Indian Retail: Analysing Challenges and Exploring Growth Models

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## Abstract

E-commerce has made massive inroads in India's retail sector: 220 million people are expected to shop online by 2025, and the industry is predicted to grow to INR 13,97,800 crore (US\$200 billion) by 2027. Yet, about 90 percent of grocery retail trade in India are still driven by small-format traders and neighbourhood *kirana* (grocery) stores. The evolving retail scenario and changing consumer demands mean that these kirana stores must swiftly embrace digital technologies. This paper analyses digitisation initiatives by the government, large e-commerce companies, and other private players, and identifies current concerns over technology adoption among kirana store proprietors. It recommends that kiranas be digitised through the 'phygital' (physical plus digital) model, or by aiming for convergence with large retailers and e-commerce companies.

According to the United Nations Conference on Trade and Development's B2C [business-to-consumer] E-commerce Index 2019, India ranks 73 out of 152 countries on its readiness to support online shopping.<sup>1</sup> India leads among South Asian countries, while Asian states like Iran (42), China (56), Kazakhstan (57), Azerbaijan (62), Vietnam (64) and Tunisia (70) fare better than it on the index.

Nevertheless, India's domestic e-commerce market is expected to reach US\$99 billion (approximately INR 7 lakh crore) by 2024, increasing at a compound annual growth rate (CAGR) of 27 percent during 2019-2024,<sup>2</sup> and will reach INR 13,97,800 crore (US\$200 billion) by 2027.<sup>3</sup> The grocery and fashion/apparel sectors are poised to drive this growth,<sup>4</sup> triggered by expanding internet and smartphone penetration. India is the second-largest smartphone market, accounting for nearly 10 percent of global smartphone sales, and the number of domestic smartphone users is expected to rise to approximately 450 million by 2021–22, from 260 million in 2016–17.<sup>5</sup> While internet penetration in India grew to nearly 34.42 percent in 2017, from a mere 4 percent in 2007,<sup>6</sup> the number of internet users is expected to rise to 829 million by 2021, from 445.96 million in 2017.<sup>7</sup> Internet penetration in rural India is projected to grow by 45 percent by 2021, up from almost 22 percent in 2019.<sup>8</sup> Online shoppers in India are expected to reach 220 million by 2025, from 120 million in 2018.<sup>9</sup>

Increasing internet penetration and smartphone and social media use have driven the growth of e-commerce in India.<sup>10</sup> Exorbitant real estate prices, high operational costs and the lack of appropriate retail spaces have restricted the expansion of larger physical stores, forcing big retailers to turn to e-commerce platforms as a growth avenue in addition to their websites and existing physical stores, if any.<sup>11</sup> E-commerce has become increasingly popular, even in Tier II and Tier III cities,<sup>12</sup> due to services like cash-on-delivery and free home delivery, deep discounts, flexible payment options and buy-back policies, and the availability of a wide variety of products.

The Indian retail market—the third-largest in Asia and fourth-largest in the world<sup>13</sup>—is expected to grow to US\$1.2 trillion (approximately INR 87 lakh crore) by 2021 and is set to cross US\$1.75 trillion (approximately

INR 126 lakh crore) by 2026,<sup>14</sup> while domestic retail sales are expected to grow at a CAGR of 10.8 percent between 2017-18 and 2021-22.<sup>15</sup> The retail market consists of the unorganised sector, including conventional family-run neighbourhood shops, and organised retail, such as brick-and-mortar large retailers and online shopping sites.<sup>16</sup> Retail is India's largest industry, accounting for over 10 percent of the country's GDP and 8 percent of employment.<sup>17</sup> However, despite its large size, the retail space has remained predominantly unorganised due to the presence of local stores and vendors and the delayed market appearance of large retailers.<sup>18</sup>

The grocery sector accounts for half of India's retail consumption, and *kirana* stores—conventional stores, often family-run, that meet emergency, fill-in and stock-up requirements<sup>19</sup>—account for about 90 percent of the grocery retail market.<sup>20</sup> Currently, there are over 12 million operational kiranas across the country.<sup>21</sup>

Despite the emergence of supermarkets and hypermarkets and the growth of online grocery stores such as BigBasket and Grofers, kiranas remain a preferred option among a majority of Indians since such stores are at the “heart of hyper-local”.<sup>22</sup> Nevertheless, the growing organised grocery retail sector could pose some threats

“Kirana stores constitute about 90 percent of India's grocery retail market.”

to kiranas in terms of volume of business and profits. The share of organised retail in India's total retail was expected to reach 20 percent by the end of 2020, from around 8 percent in 2013,<sup>23</sup> while the share of traditional retail (represented by kiranas) is expected to dip to around 80 percent in the next year or so.<sup>24</sup> The Indian online grocery market is estimated to exceed sales of INR 22,500 crore (US\$3.19 billion) in 2020, rising by 76 percent over the previous year,<sup>25</sup> with serious implications for the livelihood of millions of small format retailers.<sup>26</sup>



Kiranas were extremely important during the COVID-19-induced lockdown,<sup>27</sup> morphing into the “new supermarket”.<sup>28</sup> Although the lockdown and coronavirus mitigation protocols forced more consumers to shop online, the e-commerce industry was hard hit as it was not deemed an essential service (and could not deliver goods)<sup>29</sup> and due to other issues like last-mile logistics. The retail sector incurred massive losses of about INR 5.50 lakh crore (approximately US\$75 billion), and at least 20 percent of Indian retailers shut their businesses due to COVID-19.<sup>30</sup> Even kirana stores were impacted by the lockdown—over 600,000 are estimated to have shut down in the first two months of the lockdown in 2020.<sup>31</sup> To prevent such vulnerabilities, small retailers must digitise their sales and business operations.<sup>32</sup> Acquiring new digitally savvy consumers is a major challenge for kirana retailers, who are mostly digitally-challenged and cannot provide modern services like online ordering.<sup>33</sup>

Small format retailers can widen their customer base by adopting digital technologies and e-commerce models. Additionally, digitisation increases their creditworthiness, as the use of point-of-sale (POS) devices, digital payments, and debit and credit payments generate data, which helps lenders extend credit.<sup>34</sup> For kirana stores, digitisation will mean a shift from cash-based to digital/online payments, the use of apps to manage operations (inventory, billing, finances), and integration into the e-commerce sector.<sup>35,36,37,38,39,40,41</sup>

This paper seeks to answer how small retailers can be encouraged to adopt digital technologies and integrate into the e-commerce ecosystem. It explores the dominant position of kirana stores in India’s retail sector and concerns related to technology adoption. It also examines the role of government and private players in facilitating the digitisation of kirana stores. Finally, it recommends that kiranas digitise through the ‘phygital’ (combining the physical with the digital; where physical retail shops accept digital payments, manage store operations digitally and have an online presence) or the convergence (collaborations between large retailers, kiranas and e-commerce platforms) models.

# Kirana Stores and Going Digital

**K**irana stores are unorganised, small neighbourhood shopping spaces that are mostly cash-based. The stores are viewed as 'riskless' since the customer can evaluate the product and the transaction while making a purchase.<sup>42</sup> Importantly, kiranas are easy to access for those in the locality, and often offer services like credit and home delivery and a personalised experience for customers,<sup>43</sup> in some ways explaining why these stores remain popular.<sup>44</sup>

More than 80 percent of India's retail stores continue to be cash-intensive and operate in the informal economy. Their financial accounts and store operations are maintained manually, and their digital adoption is low. Because of the low levels of digitisation, the ability of kiranas to improve creditworthiness, borrow money and raise capital to expand daily operations are limited, hampering the growth potential.<sup>45</sup> Moreover, such stores are also curtailed by the reliance on physical locations, catering to smaller areas, and managing staff and stock inventories manually. Cash is the preferred mode of payment in kirana stores due to its ease of use, familiarity, and because it provides a sense of control.<sup>46</sup> It also eliminates the need for an app (identical or interoperable platform) to make or receive a payment.

Despite several inefficiencies, kirana stores will continue to exist in India. A kirana store is an established format and follows a demand fulfilment model, while online stores must actively create demand. Consumers may have started to buy groceries online but continue to experiment and explore. Until consumers become entirely familiar with online retailing, e-retailers will have to work with kiranas to successfully sell groceries in India. On the other hand, kirana stores will lose business as the retail industry becomes more organised. As digital technologies advance<sup>47</sup> and consumers seek to reap the benefits, kiranas must act now to embrace digital retail technology to step into the future.

The speed convenience and availability of a wide range of products at low prices have spurred the growth of online retailing in India. Even people living in smaller cities and towns, where large retailers are absent, have turned to online shopping, albeit viewing it with some sense of caution due to the perceived risk<sup>48</sup> of fraudulent transactions and privacy

“As India's retail industry becomes more organised, kiranas risk losing business unless they adopt digital technologies to improve their operations.”

**Table 1:  
Operational and Business  
Dimensions of Kiranas and Online  
Stores (Modified)**

Dimensions	Kiranas	Online Stores
<b>Choice to consumer</b>	Sufficient	Very high
<b>Assortment</b>	Focussed Assortment – localised and sufficiently wide	Enlarged assortment – Multi-category and very wide
<b>Merchandise mix</b>	National, regional and local brands and unbranded;	International, national, regional, mostly known brands
<b>Access</b>	Easy	Easy
<b>Timings</b>	Early morning to late night; opens the shop even late night or on holidays on special request	24x7; 365 days
<b>Home delivery</b>	Yes	Yes
<b>Operational effectiveness</b>	Convenience – time and location	Personalisation
<b>Customer lock-in</b>	Home delivery of single items too, personal relation	Promotions, Customer service,
<b>Touch and Feel</b>	very high	No
<b>Credit (especially small credit)</b>	Yes	No
<b>Supplies</b>	Wholesalers/Distributors	Wholesalers/Distributors
<b>Platform</b>	Single store, could be clustered (several stores closer to each other)	Single store or marketplace
<b>Buying</b>	As per order	As per order
<b>Discounts</b>	Products mostly sold at less than MRP	Yes
<b>Replacement</b>	Yes	Yes
<b>Order on Phone</b>	Yes	No
<b>Profits</b>	Surplus from operations	Market valuation
<b>Consumers</b>	Small and designated consumer base	Consumers are assets who are widespread
<b>Loyalty</b>	Very high	Low to medium
<b>Cost of operations</b>	Low	High

Source: Sinha, Gokhale, and Rawal (2015)<sup>49</sup>

# Kirana Stores and Going Digital

violations. To overcome the challenges, including the non-availability of credit cards, and to build trust among customers, online retailers offer cash-on-delivery services (see Table 1 for a comparison of the operational and business aspects of kirana stores and online retailing). As India's e-commerce industry has grown, several large online retailers, such as Amazon and Flipkart, have become marketplaces for physical retailers that may not have their own e-retailing channels.

Collaborations between traditional retailers (kiranas) and large modern retailers, including online, is expected to help kiranas overcome their operational challenges, such as the inability to use advanced technology, no access to working capital and inefficient POS systems.<sup>50</sup>

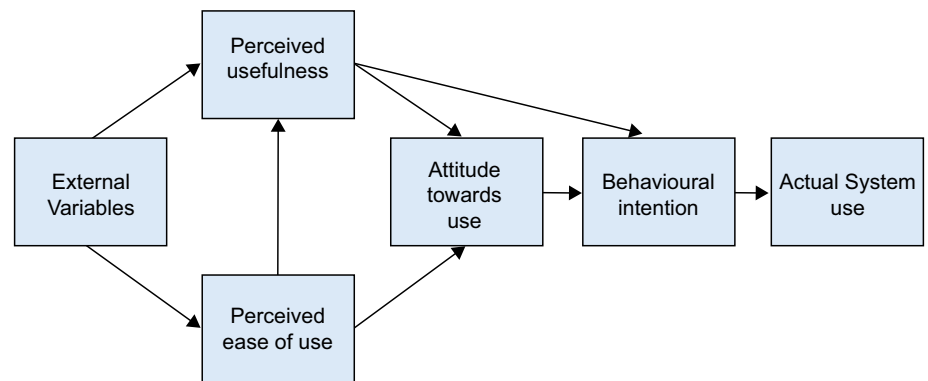
## Concerns Over Digitising

In recent years, the government and private sector have been making efforts to spur the adoption of digital payment solutions since they provide benefits like cost savings induced by improved efficiency and speed, transparency and security, accountability and inclusive growth.<sup>51</sup> But kirana store proprietors appear hesitant to adopt digital solutions—of India's over 12 million kirana stores, only 15,000 have digitised their operations with mobile apps<sup>52</sup>—hindering the integration into the organised retail sector.

The decision to use any technology (for kiranas, digital payment solutions and other technology solutions) is driven by human behaviour, and the Technology Acceptance Model (TAM) provides a framework to understand the factors that influence the decision to accept or reject technology (see Figure 1).<sup>53</sup> TAM focuses more on intrinsic motivations and less on cost-benefit calculations. 'Perceived usefulness' (the extent to which using a specific technology will enhance work performance) and the 'perceived ease-of-use' (how effortless using that technology will be) are important cognitive variables that influence technology adoption.<sup>54</sup> The perceived ease-of-use is strongly influenced by perceived usefulness<sup>55</sup> and both beliefs are also influenced by external variables.<sup>56</sup> Crucially, according to TAM, these beliefs impact attitudes and, eventually, behaviour. With digital payment solutions, the external variables that affect beliefs can include social influence, subjective norms, system features, user characteristics and self-efficacy.<sup>57</sup> These variables could also impact the adoption of other digital technologies. For instance, perceived ease-of-use and perceived usefulness were found to be key factors in the wide adoption and use by retailers of the Paytm digital wallet.<sup>58</sup>



**Figure 1:  
Technology Acceptance Model**



*Source: Davis, Bagozzi and Warshaw<sup>59</sup>*

The perceived ease of using digital payments by kiranas is hampered because many do not understand the basics of online transactions and are fearful of fraudulent transfers and scams.<sup>60</sup> In some instances, kirana owners' attitude towards digital technologies is strongly influenced by the fear of tax implications and additional costs levied by banks on digital transactions, as well as the potential investment needed to use the technologies (such as to buy or hire POS devices). External variables like taxes—for instance, value added tax and goods and services tax (GST)—can also affect pricing and revenue margins and drive a perception that tax compliance lapses will invite harsh penalties and impact a business's reputation.<sup>61</sup> Additionally, an assumed lack of willingness among customers to pay digitally has also resulted in the slow adoption of digital technologies by kiranas.<sup>62</sup>

Research to understand merchants' decision-making process in adopting mobile wallets (digital payment services on a mobile application) found that trust was a major influencing factor, highlighting the importance of elements like usefulness, trustworthiness, and non-fraudulent and error-free transactions.<sup>63</sup> Similarly, trust, subjective norms, personal innovativeness and perceived usefulness were found to be crucial determinants of people's intention to use mobile banking services.<sup>64</sup> Low trust in technology will mean a low intention of its use and reduce the actual usage. This is why cash remains popular among

# Kirana Stores and Going Digital

retailers and customers as there is a fear of fraudulent transactions and scams when using digital payment solutions.<sup>65</sup> For instance, in 2017, a bug in the Unified Payments Interface (UPI) system resulted in the theft of about INR 25 crore from several Bank of Maharashtra accounts.<sup>66</sup>

The security of India's overall digital architecture will need to be fortified to improve trust in digital technologies among merchants and customers.<sup>67</sup> Nevertheless, kirana retailers have already shown some willingness to adopt digital payment solutions. In 2018, while only about 3 percent of kiranas were found to be tech-enabled, about 37 percent of such stores in Tier II cities and 70 percent in the big cities indicated readiness to adopt digital technologies to manage operations.<sup>68</sup> Another study found that post-demonetisation, more than 60 percent of retailers in rural areas were willing to go cashless, driven by factors like customer interest, peer pressure and the perceived value of cashless transactions.<sup>69</sup> In a 2020 survey in the midst of the lockdown, 40 percent of kirana stores polled indicated a willingness to partner with online delivery and supply platforms to help them grow.<sup>70</sup>

“Various factors have slowed the adoption of digital technologies: concerns of ease-of-use, fears over fraudulent transactions, and presumed lack of willingness among customers.”

Given the potential for integrating kiranas into the online retailing landscape, the government and private sector, large retail firms and retail-tech companies have undertaken several initiatives to encourage digital technology adoption.

## Government Initiatives: Focus on Small Format Retailers

India's digitisation efforts have, to a great extent, been driven by the public sector.<sup>71</sup> The government has encouraged the adoption of digital technologies, including cashless transactions in the retail sector, to plug black markets and expand the tax base.<sup>72</sup> Some of the programmes and policies aimed at digitising small format retailers include Aadhaar-based biometric systems, the Pradhan Mantri Jan-Dhan Yojana (PMJDY), the government-promoted Bharat Interface for Money (BHIM) app, Bharat QR code, RuPay cards and the 'Digital India' programme (see Table 2).

Access to a bank account is a critical step in enabling online payments. The PMJDY was launched in 2014 to drive financial inclusion by making banking access to credit, insurance and pension available to every household; by December 2018, over 33 crore Jan-Dhan accounts were operational.<sup>73</sup> The programme was refocused from "every household" to "every adult," and now has 41.88 crore beneficiaries (as of 17 February 2021).<sup>74</sup> The Jan-Dhan accounts are also provided with RuPay cards (international card payment service developed by the National Payments Corporation of India) to facilitate online payments. A similar digital payment transaction system has also been made available through the UPI-based BHIM app, which allows interoperability between banks to make and receive payments,<sup>75</sup> including immediate transactions (which is extremely crucial in the retail space). The Bharat QR code, launched in 2016, is a digital payment solution that eliminates the need for POS devices and any monetary investment to buy/hire and maintain these.

“Government digitisation efforts include BHIM app, RuPay cards, Bharat QR code and the Jan-Dhan Yojana.”



# Existing Digitisation Initiatives

The Aadhaar, a unique identification number that is necessary to open bank accounts and avail services, also enables online financial transactions through the Aadhaar Enabled Payment System (AePS), making banking and financial services accessible to many people,<sup>76</sup> despite its high transaction failure rates.<sup>77</sup>

The digitisation of kirana stores is also embedded in the ‘Digital India’ programme. Digital India is expected to augment manufacturing, e-governance, improve service delivery, connectivity and generate employment,<sup>78,79</sup> and has seen consistent investment by the government. The 2020-21 Union Budget increased the programme outlay by 23 percent over the previous year to INR 3,958 crore (approximately US\$537 million).<sup>80,81</sup>

Other efforts to encourage the use of digital payment solutions include offering subsidies to buy bookkeeping and accounting software,<sup>82</sup> lowering taxation on cashless transactions, offering cashback for making GST payments via the BHIM app and RuPay cards,<sup>83</sup> foregoing service tax or merchant discount rates, the Digi Dhan Vyapar Yojana (2016), and launching digital financial literacy initiatives. Through the Vittiya Saksharta Abhiyan campaign, for instance, digitally-savvy students and faculty at public and private institutions are encouraged to facilitate the digitisation of kiranas by interacting with shop owners.<sup>84</sup>

The commerce and industry ministry is working on the constitution of a National Trader’s Welfare Board to help traders in the unorganised sector by improving their access to funds and simplifying acts and rules applicable to them.<sup>85</sup> The government is also framing a National Retail Trade policy to create a conducive environment for the retail sector, particularly for small retailers, by simplifying rules and regulations.<sup>86,87</sup> The new e-commerce policy is also geared towards incentivising kiranas to integrate their operations on e-commerce platforms.<sup>88</sup> E-commerce marketplaces will provide benefits in the form of “increase in access and economies of scale in operation”.<sup>89</sup> The policy also aims to empower small retailers through skilling and providing institutional support to familiarise them with technology.<sup>90</sup>

The Reserve Bank of India (RBI) has also made several policy decisions to support the adoption of digital payments,<sup>91</sup> detailing its goal in the ‘Payment and Settlement Systems in India: Vision – 2019-2021’ document.<sup>92</sup> It has setup a Payments Infrastructure Development Fund (PIDF) with an initial contribution of INR 500 crore (approximately US\$67 million) to encourage small merchants and retailers in Tier III to Tier VI cities to use POS devices.<sup>93</sup> In 2020, the RBI also announced

plans to set up a pan-India ‘New Umbrella Entity’ (NUE) focusing on retail payments.<sup>94</sup> The NUE will “set up, manage and operate new payment systems especially in the retail space comprising of but not limited to ATMs, White Label, POS and Aadhaar based payments, and remittance services, develop new payment methods, standards and technologies in the country and internationally.”<sup>95</sup>

The RBI is also encouraging payment apps to adopt either of the two interoperable QR codes (UPI QR and BHIM QR) by 31 March 2022, eliminating the need to install multiple payment apps.<sup>96</sup>

**Table 2:**  
**Government Digitisation Efforts**

Functions	Government Initiatives
Access to banks	PMJDY
Facilitate Mobile-based Digital Payments	BHIM App, Bharat QR Code, AePS
Facilitate Online Payments	RuPay Cards, Encourage POS Devices (under PIDF), GST Network
Digital Literacy	PMGDISHA, VISAKA
Incentivising	BHIM Cashbacks, BHIM Aadhar Merchant Incentive Scheme and BHIM referral bonus schemes, Reduction in Taxation, foregoing service tax, Merchant Discount Rates, Cashbacks for GST Payments, Digi-Dhan Vyapar Yojana
Interoperability	UPI QR and Bharat QR, Banning proprietary QR codes
Enabling Ecosystem	New Umbrella Entity, Digital India

## Private Sector Kirana-Tech Initiatives

Private sector initiatives have complemented government efforts to promote digitisation, resulting in an increase in the usage of internet-enabled services by Indian consumers. Large corporations have made substantial investments in India's digitisation efforts.<sup>97</sup> In 2020, Google announced a US\$10 billion 'Google for India Digitisation Fund' to aid and accelerate India's transition to a digital economy.<sup>98</sup> The tech giant will also partner with Jio Platforms to develop affordable smartphones for the Indian market.<sup>99</sup>

Private firms also have a key role in the digitisation of kirana stores (see Table 3). For instance, Amazon plans to invest US\$1 billion to bring 10 million small and medium businesses online, and will offer services like e-commerce on-boarding, imaging and cataloguing and warehousing.<sup>100</sup> Payment platforms like Google Pay, Paytm and PhonePe have allowed kiranas to offer multiple digital payment options (wallet, UPI, QR code-based) to potential customers. Other private firms like OkCredit, KhataBook and Jumbotail provide digital solutions in the form of inventory management, supply chain management and ledger accounting for kirana owners.

Retail-tech entities are also aiming to democratise the retail space by empowering kiranas with technology; for instance, duNOW, a mobile app for small stores, "digitises billing, credit management and customer communication among other operations of a local store".<sup>101</sup> Several private initiatives, such as SnapBizz, are focused on supporting kiranas with easy GST compliance through digital technology solutions.<sup>102</sup>

Through its 'Har Dukaan Digital Pradhan' initiative, PayNearby has been aiming to bring banking services to kiranas and their customers by transforming these small retail stores into fintech marts.<sup>103</sup> The METRO Cash and CarryIndia, a business-to-business wholesaler, has also created an app (Digital Shop) to offer kiranas instant digitisation of operations and provides inventory management, sales tracking and credit facilities. Reliance Retail has also launched an initiative to digitise kiranas by providing an "end-to-end digital and physical distribution stack".<sup>104</sup>



Although the COVID-19-induced lockdown in 2020 badly impacted several sectors, such as hospitality, construction and transport, kirana stores were revitalised, providing essentials to millions of citizens. Given kiranas' access to larger communities and customer base, partnerships between organised retailers and neighbourhood grocery stores will enable organised retailers to expand their clientele in India's food and grocery segment and kiranas to manage their supply chain, working capital, inventory and consumer needs using technology. For instance, the planned integration of WhatsApp with JioMart (through a US\$5.7 billion, or INR 417.56 billion, deal between Facebook and Reliance Jio), will bring numerous kirana stores online,<sup>105</sup> and allow millions of WhatsApp users to order groceries from neighbourhood stores via a message.<sup>106</sup>

**Table 3:**  
**Private Digitisation Efforts**

Functions	Private Players
Digital Payments	Google Pay, PayTM, PhonePe
Digital Services (inventory management, supply chain management and ledger accounting)	OkCredit, Khatabook, Jumbotail, PayNearby, METRO Cash and Carry, Paytm
GST-Compliant Digital Solution	SnapBizz
E-Commerce Solutions (increasing footfall of operations)	Amazon, Reliance, METRO Cash and Carry, ShopX, Swiggy

“Companies like Google, Amazon and Facebook have invested in efforts to digitise India's grocery retail sector.”

# Recommendations: How Kiranas Can Digitise

Online retailing and kirana stores are the dominant retailing channels in India.<sup>107</sup> The importance and convenience of these forms of retailing were most evident at the height of the COVID-19 crisis, with consumer behaviour (and demand and expectations) changing. Kiranas have become more relevant than ever,<sup>108</sup> morphing into the ‘new supermarkets’ during the lockdown.<sup>109</sup> At the same time, social distancing measures led to faster digital adoption by people, resulting in more customers shopping online, using digital payment solutions and opting for contactless deliveries. Amid the lockdown, several large e-commerce firms partnered with kiranas, highlighting the importance—and advantages—of small shops digitising, and of collaborations between kiranas and retail giants. The digitisation of kirana stores should be driven through either the phygital or the convergence models.

## Understanding the Phygital and Convergence Models

The ‘phygital model’ can be viewed as an integration of digital technology (digital) with personal interactions with consumers (physical), to bridge the gulf between the two. It combines the mileage of human service and trust with the efficiency and power of digital technology.<sup>110,111</sup> Under the phygital model, there is scope to transform traditional ‘brick-and-mortar’ stores into ‘click-and-mortar’ ones;<sup>112</sup> if a physical retail shop were to accept digital payments, digitise its operations, leverage digital marketing and have an online presence, it becomes a phygital store.<sup>113,114</sup>

“Kirana stores can be digitised through the ‘phygital’ (physical plus digital) model, or by aiming for convergence with large retailers and e-commerce companies.”

The phygital model also encompasses augmenting the consumer experience beyond digital payments. In a study across Tier I and Tier II Indian cities to understand consumer behaviour and purchasing

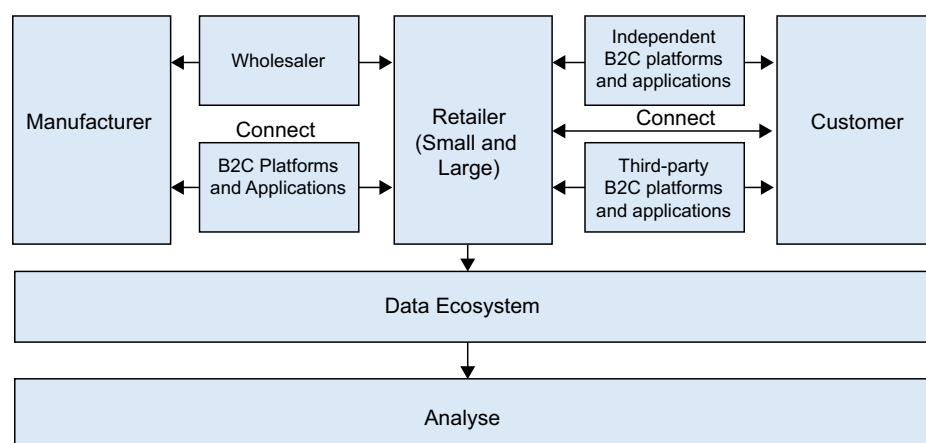
# Recommendations: How Kiranas Can Digitise

patterns, 53.3 percent of respondents said they preferred online shopping while 46.7 percent preferred shopping offline, indicating a persisting preference of visiting physical stores.<sup>115</sup> Contrary to the expectations that the growth of e-commerce retailers will mean doom for physical stores,<sup>116</sup> brick-and-mortar stores will continue to thrive, and both offline and online models can coexist with comparable vitality.<sup>117</sup>

The term phygital can be all encompassing; brick-and-mortars may attempt to digitise the operation, supplement their physical presence and enhance customer experiences.<sup>118,119</sup> Phygital efforts can also include big retailers and e-commerce companies assisting kirana stores in maintaining an online presence and providing them with digitisation support.<sup>120,121</sup> However, such partnerships can transform into the convergence model as they develop.<sup>122,123</sup> Therefore, digitisation attempts for kirana stores, such as accepting digital payments and technology-based inventory management through deals with start-ups—*but barring partnering with big retailers and e-commerce firms*—is viewed as the phygital model.

The convergence model suggests that collaborations and partnerships between big retailers, e-commerce firms and kirana stores is an apt way forward for the retail sector (see Figure 2 for structure of plausible collaborations between kiranas and retail giants after digital applications are extensively adopted).

**Figure 2:**  
**Future Retail Scenario in India**  
**(Modified)**



Source: Based on Kaka, Madgavkar, et.al.<sup>124</sup>



# Recommendations: How Kiranas Can Digitise

Several such partnerships are currently being conceptualised or explored, for instance, the Facebook-JioMart deal to allow consumers to order groceries from local kiranas via WhatsApp. Similarly, Amazon launched an initiative to allow local retail stores to sell their products on its site,<sup>125</sup> and will invest US\$1billion (INR 7,349 crore) to encourage small businesses to move online.<sup>126</sup> This takes forward its existing partnerships with small format traders through the 'I Have Space' programme where local neighbourhood shops receive and deliver goods on behalf of Amazon.<sup>127</sup> Similarly, Flipkart has also partnered with over 35,000 kirana stores,<sup>128</sup> and Paytm has introduced a loyalty programme for kiranas<sup>129</sup> and provides them with a digital ledger through the 'Business Khata' service.<sup>130</sup> During the lockdown, food delivery platform Swiggy also teamed up with several kirana stores to supply groceries.<sup>131</sup>

**Table 4:**  
**Existing Private-Sector Initiatives**  
**(Phygital and Convergence Models)**

<b>Big Retailer/E-commerce firm/ Tech firm</b>	<b>Initiatives/Services</b>
METRO Cash and Carry	Smart Kirana Programme, Digital Shop
Amazon	I Have Space, Digital Haats
Reliance JioMart	Desh ki Nayi Dukaan (Facebook-JioMart through WhatsApp)
Flipkart	Through Big Billion Days sales
PayTM	Business Khata service, Paytm Mall
PayNearby	Digital Pradhan
CAIT	Bharat E Market
Khatabook	Business in the Pocket
LoveLocal (erstwhile mPaani)	Online Presence

# Recommendations: How Kiranas Can Digitise

The evolution from ‘bricks vs. clicks’ to ‘bricks and clicks’, or ‘offline complements online’,<sup>132</sup> will pave the way for an ‘intermix’ retail mode—traditional stores, modern brick-and-mortar stores and online channels, with each complementing the other.<sup>133</sup> Developing such symbiotic partnerships will enable the growth of small stores, including kiranas.<sup>134</sup>

The convergence model is expected to translate into explicit benefits for e-commerce companies, big retailers, kirana stores and consumers. It is expected to transform the kiranas by widening the customer base, expand their marketing potential and increase creditworthiness. Due to e-commerce firms’ higher operating costs, infrastructure and logistic concerns, and relatively poor reach in the rural areas, kiranas can help by providing last-mile connectivity.<sup>135</sup> Meanwhile, customers will be able to choose from a mix of shopping modes.

“Collaborations between big retailers, e-commerce firms and kiranas include the Facebook-JioMart deal to allow customers to order groceries from kiranas via WhatsApp, and Swiggy partnering with small stores to supply groceries during the lockdown.”

# Conclusion

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Rising internet penetration and mobile-phone use has brought about changes in the needs of tech-savvy customers, who now seek benefits of digital technologies while shopping, including a diverse range of brands, ease of use, competitive prices, and access to customer reviews. Today, much of India's retail sector is still dominated by neighbourhood kirana stores, which represent dependability and trust, and are the backbone of the grocery industry, especially during times of crises like the COVID-19 pandemic. However, the growth potential for kiranas remains limited, unless they adopt digital technologies. They must digitise to better engage with existing customers, expand their base, reduce operating costs and increase profitability.


To be sure, many kirana stores were forced to embrace digital technologies during the pandemic.<sup>136</sup> The experience revealed the challenges, primary of which is owners' limited digital technology proficiency in automating internal processes and accepting online orders and digital payments. Other issues include glitches in financial inclusion plans,<sup>137</sup> poor internet connectivity,<sup>138</sup> and lack of reliable power supply.<sup>139</sup>

India must focus on building a robust cybersecurity architecture to ease fears of fraudulent transactions and protect merchant and consumer data.

To encourage small stores, especially kiranas, to digitise, the government, regulators and private players must work to build trust in and increase the perceived usefulness and perceived ease-of-use of digital technologies. It is imperative that the government and the RBI pursue policies through targeted campaigns and investments and offer incentives to procure and sustain the use of digital payment solutions, including POS devices. Efforts must also be made to build a robust cybersecurity architecture in India as fears of fraudulent transactions is a key reason for low digital technology adoption. At the same time, digital service providers must improve their user interface, including making apps available in vernacular languages, which in turn will enhance the perceived ease of use.

Although the commerce ministry has hinted at a potential policy to integrate e-commerce and kirana stores,<sup>140</sup> the Confederation of All India Traders (CAIT) opposes such plans<sup>141</sup> over concerns of e-commerce companies' deep-discounting practices<sup>142</sup> and their alleged non-compliance with foreign direct investment stipulations.<sup>143</sup> Instead, CAIT has proposed a national e-commerce marketplace, Bharat E Market (a phygital platform), to bring millions of kirana stores online.<sup>144</sup> A pilot project was initiated in six cities, and the platform is now available in over 90 cities across the country.<sup>145</sup>

It is crucial that the kirana stores continue to adopt digital tools for payments, ledger keeping and inventory management, have an online presence and embrace the advantages of e-commerce by partnering with startups, big retailers and e-commerce firms through the phygital or convergence models.

Indeed, existing kirana digitisation efforts have already shown the potential of significant impact. During the lockdown, the kirana network was crucial in helping people meet their banking needs, especially in rural areas.<sup>146</sup> In the early months of the nationwide closure, the Indian government also launched the 'Suraksha Store' initiative to convert kiranas into sanitised retail outlets selling essentials while adhering to safety norms, and partnered with private firms to set up many such stores across the country.<sup>147</sup> 

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