Annual Survey of Micro, Small, and Medium Enterprises (MSMEs) in India

Leveraging E-commerce for the Growth of MSMEs

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ICRIER

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All errors are that of the authors.

Abbreviations

AA	Account Aggregators
ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
ASEAN	Association of Southeast Asian Nations
B2C	Business-to-consumer
ERIA	Economic Research Institute for ASEAN and East Asia
G20	Group of Twenty
GDP	Gross domestic product
GST	Goods and services tax
HSC	Higher secondary certificate
IMPS	Immediate Payment Service
KPMG	Klynveld Peat Marwick Goerdeler
MSMEs	Micro, small and medium enterprises
MUDRA	Micro Units Development and Refinance Agency
NBFCs	Non-banking financial corporations
NEFT	National Electronic Funds Transfer
OECD	Organization for Economic Cooperation and Development
PSU	Public sector unit
SMBs	Small and medium businesses
SMEs	Small and medium enterprises
SSC	Secondary school certificate
UNCTAD	United Nations Conference on Trade and Development
UPI	Unified Payments Interface

Executive Summary

It is widely believed that e-commerce platforms have immense potential to enhance market access for micro, small, and medium enterprises (MSMEs) worldwide. By opening up new sales channels, e-commerce platforms allow MSMEs that were previously confined to local markets to reach customers in a wider geographical market. Evidence on the engagement of MSMEs with e-commerce platforms in India is thus far limited as this information is generally proprietary and not available to researchers. This report seeks to fill this gap by undertaking a comprehensive primary survey of MSMEs. Combining data from enterprises that are integrated with e-commerce platforms and those that are not, the report seeks to understand how e-commerce can be leveraged to enable MSME growth in India.

A survey of 2,007 MSMEs was carried out between 4 November 2022 and 20 January 2023. Of the total sample, 65 per cent of the firms were micro in size, 19 per cent were small, and the remaining 16 per cent were medium.[a] At the time of the survey, 1,005 enterprises were already integrated with e-commerce platforms, while the remaining 1,002 were not integrated. MSMEs were selected across six product categories—sports goods (16.7%), toys (15.7%), processed and preserved food products (16.9%), apparel (17%), furniture (17.6%), and handicraft products (16.1%). The survey covered the cities of Ahmedabad, Bhubaneshwar, Delhi, Jaipur, Lucknow, Ludhiana, Jalandhar, Agra, Meerut, Saharanpur, and Chennai. All the enterprises included in the sample were registered on the Udyam portal, a government facility that provides firms with a permanent registration and basic identification number.

In addition to the information on the key performance indicators of firms such as sales, employment, and profitability, the survey questionnaire also captures important characteristics of the businesses such as export orientation, composition of employment and demographics of business owners such as their age, gender, educational qualifications. This allows us to undertake a comparative assessment of MSMEs that are transacting on e-commerce platforms and those that were not. It also enables us to understand how integrated MSMEs transact once they join the platform and whether new business opportunities emerge for them. Notably, the survey is designed in a manner that permits an understanding of the heterogeneities within the MSME sector. This is important as the factors that constrain or enable a firm's decision to join e-commerce platforms and their performance thereafter vary across micro, small and medium enterprises.

To begin with, the survey finds that firms with younger and more educated owners are more likely to be integrated with e-commerce platforms. Women-owned MSMEs are not far behind male-owned firms in terms of integrating with e-commerce platforms, despite the underrepresentation of women in the MSME landscape in general. A higher share of export-oriented firms are found to be integrated with e-commerce platforms compared to firms that do not export, suggesting a positive relationship between firms' export orientation and digitalisation. Given that the more productive firms in the economy are likely to be enaged in export activity, these firms are perhaps better placed to harness the benefits of online sales and are therefore more likely to join e-commerce platforms.

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[a] For this study, the composite criteria of investment in plant and machinery or equipment, and annual turnover of MSME as prescribed by the Department of MSME, Government of India is used. Micro enterprises are classified as units with investment in plant and machinery or equipment not more than INR10 million and annual turnover of not more than INR50 million; small enterprises are classified as units with investment in plant and machinery or equipment not more than INR100 million and annual turnover of not more than INR500 million and medium enterprises are classified as units with investment in plant and machinery or equipment not more than INR500 million and annual turnover of not more than INR2.5 billion.

On other performance indicators, too, integrated firms appear to be better off than non integrated firms on an average; the former report higher turnovers and profitability, and a higher share of permanent employees in their workforce compared to non-integrated firms.

Integration with e-commerce platforms is found to bring important benefits to firms. First, a sizeable percentage of integrated enterprises (over 85%) report an increase in their total sales and profit margins after integrating with e-commerce platforms. Most enterprises typically report increases of upto 30 per cent of their initial sales and profit margins. Second, several firms indicate that they have invested in training employees and purchasing new equipment, machinery and software as they have joined e-commerce platforms. Third, several firms report having launched new products, made improvements in existing product design, and adopted new business practices and organisational methods ever since they integrated with e-commerce platforms. It appears, therefore, that integration with platforms may have fostered investment and innovation at the firm level. However, a relatively small share of integrated firms report hiring new employees after joining e-commerce platforms. This may be due to the fact that the use of online marketing practices may have saved firms labour inputs in some areas, even though they may have created jobs elsewhere through a sales expansion effect.

The results of the survey suggest that MSMEs have witnessed significant gains by integrating with e-commerce platforms. Improved market access is the most widely reported benefit of integration. Therefore, it is unsurprising that a majority of integrated enterprises report their willingness to increase the share of e-commerce sales in their total sales in the future. It is important to highlight the fact that at present, the volume of sales made through e-commerce platforms account for a relatively smaller share of the firms' total sales compared to those made through traditional routes. And therefore, there is significant scope for MSMEs to increase share of online sales in total sales.

The survey also examines the use of digital payments among MSMEs and how integrating with e-commerce platforms impacts their ability to access finance. A majority of the surveyed MSMEs report using digital wallets and mobile payments as the most frequently used payment mode for doing business. On average, cash-based sales are found to be higher for non-integrated MSMEs compared to integrated firms. Further, the use of bank loans is found to be marginally higher among integrated firms compared to non-integrated firms. Significantly, a sizeable percentage of integrated enterprises report that obtaining a loan has become easier after integrating with e-commerce platforms. A small share of integrated enterprises also suggest that they could access loans from fintech companies or non-banking financial corporations by linking their earnings on e-commerce platform stores to their loan accounts. The earnings then serve as a guarantee and thus there was no requirement of collateral. Notably, a significant proportion of non-integrated firms state that their ability to raise external finance would have been greater if they had a presence on e-commerce platforms. More generally, as MSMEs enhance their digital footprint through integration with e-commerce platforms, they are able to establish their credit worthiness and access formal finance more easily.

It is important to recognise that for firms that are unable to join e-commerce platforms, technology may represent a survival threat rather than an opportunity. Firms that are not integrated with e-commerce platforms are likely to find it more challenging to access markets at a time when integrated firms are making deeper inroads into markets by leveraging platforms. Given that the integrated firms are likely to be better off and more productive on average than non-integrated firms, such differences in market access on account of e-commerce platforms can further exacerbate inequities between these firms.

Policymakers and other stakeholders must be mindful of these potential inequities and seek to bridge the divide between the integrated and non-integrated firms. This requires an understanding of the factors that impede firms from joining platforms. In the sample, non-integrated firms indicate that in large part their decision to not join platforms is due to lack of knowledge and information about digital technologies and e-commerce platforms. However, the decision of a firm to join e-commerce platforms is not simply a function of whether it has the knowledge and information about the platform but also the firm's own internal capabilities, which determine whether it stands to benefit from joining e-commerce platforms. This suggests that bridging the gap between integrated and non-integrated firms will not only require investments in technology, digital skills, information, and other factors that are complementary to e-commerce adoption, but also enhancing the capabilities and productivity of MSMEs by providing them with infrastructure services, financial services, managerial and business skills and enterprise support and training.

I. Introduction

Across countries at varied levels of development, Micro, Small, and Medium enterprises (MSMEs) play a central role in economic development and job creation.[b] They account for nearly 95 per cent of enterprises worldwide and 60 per cent of employment.[1] They contribute to approximately 35 per cent of the gross domestic product (GDP) in developing countries and around 50 per cent in developed countries.[2] Further, MSMEs are an important source of innovation and entrepreneurship and boost local development.

MSMEs dominate India's enterprise landscape. According to the Ministry of Micro, Small and Medium Enterprises, India has 63.38 million unincorporated non-agriculture MSMEs engaged in different economic activities.[c] Thus, a vast majority of MSMEs are in the informal sector. On the other hand, there are 17.6 million MSMEs, employing 121.7 million individuals, registered on the Udyam portal, a government facility that provides firms with a permanent registration and basic identification number for their enterprise, thereby making them eligible for priority-sector lending from banks and for availing the benefits of various government schemes and programmes (such as credit guarantee schemes, public procurement policy, and protection against delayed payments)[d]. Of the registered enterprises on the Udyam portal, 96.2 per cent are classified as micro, 3.4 per cent are small, and the remaining are medium enterprises.[3] While 27 per cent of the registered MSMEs are engaged in manufacturing activities, 73 per cent are in services.[4]

Existing literature shows that average productivity levels of MSMEs are lower than those of large enterprises. [5] The low productivity of MSMEs is often attributed to the fact that they are unable to take advantage of economies of scale because of their size. Compared to MSMEs, large firms are more efficient in production because they can use more specialised inputs, coordinate their resources better, avail bank loans more easily, invest more in machinery and skilled workers, and enjoy economies of scale.[6] In contrast, MSMEs tend to face significant bottlenecks in accessing markets, credit, raw materials, technology, and skilled labour, and often function through informal contracts with clients and suppliers.[7]

Digital technologies have the potential to boost MSMEs' productivity and growth as they can reduce the fixed and variable costs of doing business. An important tool in this context is electronic commerce or e-commerce platforms. Integrating with e-commerce platforms can provide a wide a wide range of benefits to MSMEs. To begin with, e-commerce platforms enable MSMEs to enhance market access by enabling them to reach new clients and markets, thereby boosting their sales and revenues. MSMEs often have to incur huge costs to market their products and get their products visibility. E-commerce platforms provide their products exposure to consumers across a wide geographical reach at a low cost. E-commerce platforms also offer a channel through which MSMEs get feedback about their product, thereby allowing them to improve their products. Further, they allow enterprises to conduct businesses during disruptions (such as pandemics). Many e-commerce platforms have in recent times also been providing training, skill development, and mentorship programs to empower

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[b] No universal definition of MSMEs exists in the literature. The existing definitions vary widely across countries, depending on factors such as the business culture in the country, the size of its population and industry and the level of its international economic integration.

[c] Based on the National Sample Survey 73rd Round Survey (2015-16) on Unincorporated Non-Agricultural Enterprises, the MSME Annual Report of 2022-23 reported that a majority of MSMEs are engaged in trading activities (36%), followed by other services (31%) and the manufacturing sector (30%)

[d] This registration information is as of July 19th 2022.

MSMEs and enhance their business acumen. Additionally, they are playing a key role in facilitating access to credit for small businesses, either directly or in partnership with banks or other licensed lenders.

Using the Internet to make purchases online first gained prominence in India when the Indian Railway Catering and Tourism Corporation, an Indian public sector undertaking, introduced an online ticketing reservation system in the late nineties.[8] The convenience of buying train tickets from the comfort of home, without having to queue for long hours at physical ticketing offices or any travel agent charges, was of immense value for the customers. The launch of Fabmart (later rebranded as India Plaza) in 1999 was a significant milestone as it was the first company to enter the online shopping space in India.[9] Initially, e-commerce served a niche market, catering to wealthy households in major cities and focusing on books and electronics. Over the years, it gradually expanded to include a broader range of categories such as fashion, healthcare, groceries, and beauty, reaching a wider range of customers (especially middle-income households). There has been significant consolidation in the number of online retail platforms serving the Indian market. In the period between 2000 and 2010, mergers and acquisitions among local e-commerce platforms saw the emergence of several local firms with a national reach. With liberalisation of the retail sector, international retailers—such as Alibaba, Amazon, and Walmart—entered the Indian market and acquired local online sellers. This process of consolidation of local platforms has made online retail channels more attractive for small businesses, as they can now reach a larger market by selling their products through a single online retail platform.

Today, India is home to a rapidly growing e-commerce market. With 933 million internet users in 2022, India has the world's second-largest internet user base, after China. The United States (US) is third, with approximately 307 million internet users.[11] The growth of e-commerce has opened up new sales avenues for many MSMEs that were previously confined to the local markets. Notably, in India there was a significant increase in the use of e-commerce platforms for buying goods during the pandemic, especially during the early phase with stay-at-home orders. Global evidence, too, suggests that when the pandemic hit and lockdowns were imposed, there was a sudden surge in e-commerce and an increase in the pace of online purchases in most economies[e].[12]

Despite a large consumer base, online sales penetration has not been as extensive in India as in more developed markets. Estimates indicate that the share of e-commerce in India's total retail sales was about five per cent in 2021 which is lower than in developed countries such as the US (17%) and the United Kingdom (24%) and a few developing countries such as China (24.5%) and Indonesia (18.4%).[13] India ranked 71st on the UNCTAD B2C E-commerce Index 2020[f] out of 152; Switzerland topped the list, while China ranked 10th.[14] Given India's growing internet and smartphone usage, and its large consumer market, the country's e-commerce sector has the potential to reach an estimated market size of US$350 billion by 2030, a substantial increase from US$100 billion in 2022.[15]

There are some concerns about the ability of MSMEs to take advantage of the opportunities to sell through large online retailers. Given their limited resources, small businesses often face a disproportionate cost burden when dealing with documentation, information, and logistics requirements typically associated with e-commerce

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[e] E-commerce During Covid: Stylized Facts from 47 Economies by Joel Alcedo, Alberto Cavallo, Bricklin Dwyer, Prachi Mishra, and Antonio Spilimberg; also insert reference 14 here.

[f] The UNCTAD B2C E-commerce Index measures an economy's preparedness to support online shopping.

trading. Large firms, on the other hand, can exploit the vast opportunities provided by e-commerce while MSMEs are left with small consignments.[16] Small businesses are also constrained in developing internal digital infrastructures due to limited financial resources and skills, making it difficult for them to have a greater uptake of online sales to capitalise on the advantages of digitalisation. Therefore, despite the potential for small businesses to reach global markets through digitalisation, evidence shows that many of them have not been able to fully benefit from the technological transition. Larger companies are more likely to speed up their pace of digital innovation, while smaller companies may maintain the same pace or even slow down.[17] This discrepancy may create a digital divide, which will need to be addressed to ensure that all firms, regardless of size, can benefit from digitalisation.

Notably, as the market has grown, India's domestic regulatory space has evolved over the years to address emerging concerns related to e-commerce. For instance, the amended Consumer Protection Act, that came into force in July 2020, includes provisions that provide protection to customers that buy from the e-commerce retailers/platforms. In July 2020, the Department of Consumer Affairs, under the Ministry of Consumer Affairs, Food, and Public Distribution, introduced the Consumer Protection (E-commerce) Rules, 2020, that set out duties (such as the appointment of a grievance officer) that all sellers selling through e-commerce platforms must fulfill, regardless of their size. This has a severe implications on small businesses, particularly in the context of an increased compliance burden, discouraging their participation in e-commerce and adversely affecting market competition in the long run. As of August 2023, India does not have a dedicated e-commerce policy, although reports suggest that the government is in the process of framing a national e-commerce policy.[g] Given the considerable heterogeneity in the size of enterprises who sell using these platforms, it is important that such a policy also adequately addresses the concerns of the MSME sector.

As e-commerce platforms can play a vital role in enhancing market access for MSMEs, government policies on the subject must be informed by evidence-based research. However, evidence on the impact of e-commerce on MSMEs in India is limited. This is not without reason. As several studies have noted, information on e-commerce transactions is generally proprietary and not available to researchers.[18] Further, it is not usually possible to link data on e-commerce transactions to information on firm characteristics or those of the business owner/ entrepreneur. This makes it challenging to understand what are the characteristics of businesses that choose to join e-commerce platforms, how they transact on platforms and what are the benefits of selling through these platforms. Very little is also known at this point about how engagement with e-commerce platforms impacts their ability to access formal finance. More generally, the question of whether e-commerce platforms can serve as an engine of business growth for MSMEs remains unanswered due to lack of information.[19] This report seeks to fill precisely this gap in knowledge.

The report undertakes a comprehensive primary survey, combining data from MSMEs that are integrated with e-commerce platforms and those that are not, to understand how e-commerce can be leveraged to enable MSME growth in India. In addition to collecting information on the key performance indicators of firms (such as sales, employment, and profitability), it also captures the characteristics of the businesses and the business owners, with the objective of undertaking a comparative assessment of those transacting on platforms and those

[g] A draft e-commerce policy was released in 2019, however, no final policy was released thereafter.

that do not. Importantly, the survey is designed in a manner that enables an understanding of the heterogeneity within the MSME sector, allowing an examination of how the constraining and enabling factors that impact a firm's decision to join a platform and their performance vary across the size distribution. The analysis focuses on MSMEs that are registered on the Udyam portal run by the Indian government's Ministry of Micro, Small and Medium Enterprises.

The report is structured as follows. Section II outlines the design of the survey and the sampling strategy. Section III reports the key findings of the survey pertaining to the characteristics of integrated and non-integrated MSMEs, the performance of firms integrated with e-commerce platforms. Further, it examines the use of digital payment methods amongst MSMEs and how access to finance varies across MSMEs that have joined platforms and those that are not yet integrated. Section IV presents key challenges faced by MSMEs and the policy recommendations derived from the in-depth interviews conducted during the course of the survey. Section V concludes.

II. About the Survey

The objective of the survey is to understand the engagement of the MSME sector, in particular MSMEs in the manufacturing sector, with e-commerce platforms. The survey and this particular report is a continuation of ICRIER's previous report, 'MSMEs Go Digital', released in March 2022 that examined the performance of those MSMEs (in select manufacturing sectors) that were integrated with e-commerce platforms.[20]

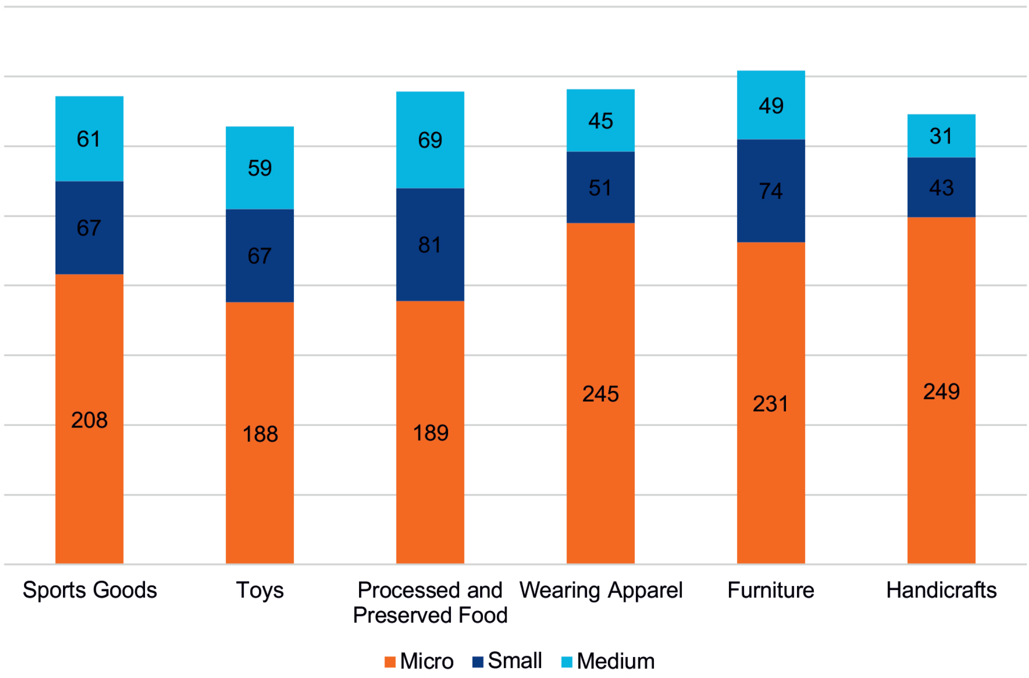
In the previous report, we found that MSMEs have increasingly embraced digital technologies over time. The sample comprised of 1528 firms integrated with e-commerce platforms. These firms were surveyed in 2020-21 and it was found that the share of online sales in total sales increased from 12 per cent in 2018-19 to 27 per cent in 2020-21. After integrating with ecommerce platforms, these firms reported experiencing a growth in sales, turnover, profits, and hiring.

A crucial feedback received from academics and policymakers on the above-mentioned survey was to expand the sample to include enterprises that are not integrated with e-commerce platforms, and, to the extent possible, undertake a comparative assessment of such enterprises with those that are integrated with e-commerce platforms. This specific report is thus based on a survey of both integrated and non-integrated MSMEs. The current sample comprises of 2007 MSMEs (manufacturing units). Of these, 1,005 enterprises are integrated with e-commerce platforms, while 1,002 are not integrated (Table 1). Similar to the previous report, six sectors that have a large MSME presence have been covered—sports goods, toys, furniture, handicrafts, apparel and processed and preserved food. (Figure 1).

Table 1: Distribution of surveyed enterprises by size and status of e-commerce integration (numbers)

Type	Overall	E-commerce Integration	
		Yes	No
Micro	1310	615	695
Small	383	259	124
Medium	314	131	183
Total	**2007**	**1005**	**1002**

Figure 1: Distribution of surveyed enterprises by sector and size (in numbers)



The survey covers six states—Gujarat, Odisha, Punjab, Rajasthan, Uttar Pradesh, and Tamil Nadu—and the union territory of Delhi. Most of the respondents were from Uttar Pradesh (34%), followed by Punjab (23%), and Rajasthan (12.2%). Eleven cities were covered namely Ahmedabad, Bhubaneshwar, Delhi, Jaipur, Lucknow, Ludhiana, Jalandhar, Agra, Meerut, Saharanpur, and Chennai. The selection of states and cities was in line with the previous survey, and was based on a natural fallout of majority clusters in the selected product categories. Local information was gathered to identify the large industrial belts/clusters in a particular city. A detailed state-wise distribution of the respondents by size is presented in Table 2a and by product categories in Table 2b.

Table 2a: Distribution of surveyed enterprises by location and size (in numbers)

<table>
<tr><th>State</th><th>City</th><th>Micro</th><th>Small</th><th>Medium</th><th>Total</th><th>State Total</th></tr>
<tr><td>Delhi</td><td>Delhi</td><td>123</td><td>83</td><td>22</td><td>228</td><td>228</td></tr>
<tr><td>Gujarat</td><td>Ahmedabad</td><td>78</td><td>106</td><td>18</td><td>202</td><td>202</td></tr>
<tr><td>Odisha</td><td>Bhubaneshwar</td><td>9</td><td>13</td><td>28</td><td>50</td><td>50</td></tr>
<tr><td>Punjab</td><td>Ludhiana</td><td>125</td><td>51</td><td>82</td><td>258</td><td rowspan="2">460</td></tr>
<tr><td>Punjab</td><td>Jalandhar</td><td>132</td><td>55</td><td>15</td><td>202</td></tr>
<tr><td>Rajasthan</td><td>Jaipur</td><td>231</td><td>15</td><td>0</td><td>246</td><td rowspan="4">246</td></tr>
<tr><td>Uttar Pradesh</td><td>Lucknow</td><td>148</td><td>10</td><td>67</td><td>225</td></tr>
<tr><td>Uttar Pradesh</td><td>Agra</td><td>167</td><td>21</td><td>7</td><td>195</td></tr>
<tr><td>Uttar Pradesh</td><td>Meerut</td><td>144</td><td>5</td><td>1</td><td>150</td></tr>
<tr><td>Uttar Pradesh</td><td>Saharanpur</td><td>53</td><td>12</td><td>48</td><td>113</td><td>683</td></tr>
<tr><td>Tamil Nadu</td><td>Chennai</td><td>100</td><td>12</td><td>26</td><td>138</td><td>138</td></tr>
</table>

Table 2b: Distribution of surveyed enterprises by location and product categories (in numbers)

Location	Sports Goods	Toys	Processed and Preserved Food	Wearing Apparel	Furniture	Handicrafts
Ahmedabad	31	41	44	32	33	21
Bhubaneshwar	1	3	11	1	21	13
Delhi	49	37	33	37	35	37
Jaipur	65	47	74	19	10	31
Lucknow	40	38	35	23	44	45
Ludhiana	22	36	34	82	48	36
Jalandhar	38	20	16	51	56	21
Agra	33	18	34	37	32	41
Meerut	32	24	25	22	26	21
Saharanpur	19	32	8	13	17	24
Chennai	6	18	25	24	32	33
Overall	336	314	339	341	354	323

The pilot survey was conducted between 1st – 15th September 2022, following which the questionnaire was revised and fine-tuned. The main survey was conducted between 4 November 2022 and 20 January 2023. Only MSMEs registered on the Udyam portal of the Indian government's Ministry of Micro, Small and Medium Enterprises were considered for survey. Data input, cleaning, and processing was completed by 31 March 2023.

The majority of enterprises in the sample are primarily micro-enterprises, followed by small and medium enterprises. This distribution aligns with commonly observed trends based on previous enterprise surveys conducted in India. Studies based on Annual Survey of Industries and the National Sample Survey of Unincorporated Enterprises point to the predominance of micro-firms in India's firm landscape.[21] Further, as we see in Table 1, even with the sub-groups of integrated and non-integrated MSMEs, micro-firms dominate the sample.

Additionally Table 3 examines the distribution of employment in the entire sample, and then separately in the micro, small and medium categories. Overall, in the entire sample, 64 per cent of firms have fewer than 10 employees. Approximately 28 per cent have between 10 and 50 employees, while the remaining have more than 50 employees. Thus, in the sample of this survey, as seen across official enterprise surveys, firms employing less than 10 workers dominate the landscape.

Table 3: Distribution of firms in the sample by employment (in percentage)

Number of Employees (Range)	Overall	Micro	Small	Medium
Less than 10 employees	63.23	77.48	66.32	0
10 – 50 employees	28.05	22.52	32.11	46.18
51 – 250 employees	8.32	0	1.57	51.27
More than 250 employees	0.4	0	0	2.55
Total	**2007**	**1310**	**383**	**314**

Table 4 below provides a snapshot of some basic characteristics of the sample of this survey, with respect to both firm owners and the firms. To begin with, in terms of owner characteristics we examine the age distribution of the business owner. Approximately 44 per cent of firms in the sample are owned by individuals in the age cohort of 25-35 years and 41 per cent are owned by those in the age group 36-50 years. Across micro, small and medium sized firms separately too, it is the age groups of 25-35 and 36-50 which dominate. The average age of owners in the sample is 36 years. In terms of educational qualifications of the owners, we find that the firm owners in the sample are highly educated on average. Approximately 60 per cent of owners have graduate degrees and above. This holds true across the micro, small and medium bins separately as well. Notably, women owned enterprises account for only 5.1 per cent of the sample. While, this is indeed a very small share, other studies have also highlighted low levels of women entrepreneurship not just in India but most other economies as well.[22]

In terms of firm characteristics, we examine firm age based on year of establishment. Over 23 per cent of firms in the sample were established between 2011 and 2015. Another 18 per cent were established between 2006 and 2010, while 14 per cent were established between 2001 and 2005 and 13 per cent between 1996 and 2000. An overwhelming share of firms are either middle aged (between 5 and 9 years) or old (10 years and above). The share of new firms (i.e. those established in 2020 or thereafter) is very small at 5 per cent. In terms of export orientation, a relatively small share i.e. 15 per cent of firms in the sample are engaged in export activity.

Amongst the surveyed firms, 60 per cent of MSMEs are operating out of business clusters; while the remaining operate out of household clusters. A cluster is a group of enterprises located within an identifiable and as far as practicable, contiguous area and producing same/similar products/services. Discussions with MSME bodies reveal that a cluster can be a business cluster, organised in an area designated for industrial development or it can be a household cluster. The essential characteristics of enterprises in a cluster are (a) similarity or complementarity in the methods of production, etc (b) similar level of technology and marketing strategies/practices (c) channels for communication among the members of the cluster (d) common challenges and opportunities.[23]

Table 4: Characteristics of the Survey Sample

Categories	Size of Enterprise			E-commerce Integration		
	Overall	Micro	Small	Medium	Yes	No
OWNER DEMOGRAPHICS						
Age of Primary Owner						
18-24 Years	133	96	20	17	76	57
25-35 Years	882	598	141	143	488	394
36-50 Years	816	502	185	129	380	436
Over 50 years	176	114	37	25	61	115
Gender of Primary Owner						
Male	1905	1252	372	281	959	946
Female	102	58	11	33	46	56
Education of Primary Owner						
Not literate	1	1	0	0	0	1
School up to 4 Years	2	2	0	0	1	1
School 5-9 years	92	58	20	14	30	62
SSC/HSC (completed 10th/12th class)	712	472	142	98	341	371
Graduate and above	1197	774	221	202	631	566
Any other	3	3	0	0	2	1
FIRM CHARACTERISTICS						
Location						
Delhi	228	123	83	22	165	63
Ahmedabad	202	78	106	18	96	106
Bhubaneshwar	50	9	13	28	2	48
Ludhiana	258	125	51	82	136	122
Jalandhar	202	132	55	15	98	104
Jaipur	246	231	15	0	138	108
Lucknow	225	148	10	67	103	122
Agra	195	167	21	7	102	93
Meerut	150	144	5	1	75	75
Saharanpur	113	53	12	48	45	68
Chennai	138	100	12	26	45	93
Exports - Yes/No						
Yes	302	119	94	89	189	113
No	1705	1191	289	225	816	889
Age of the firm						
1960-1975	24	19	3	2	11	13
1976-1980	30	18	8	4	11	19
1981-1985	12	6	1	5	7	5
1986-1990	84	58	18	8	43	41

1991-1995	118	77	26	15	60	58
1996-2000	272	187	41	44	132	140
2001-2005	286	176	51	59	156	130
2006-2010	369	252	57	60	199	170
2011-2015	471	288	123	60	236	235
2016-2019	234	156	45	33	107	127
2020	51	30	6	15	19	32
2021	43	34	3	6	19	24
2022	13	9	1	3	5	8
Number of firms operating out of business cluster and household						
Operating out of business cluster	1213	582	317	314	649	564
Operating out of his/her household	794	728	66	0	356	438
Base	**2007**	**1310**	**383**	**314**	**1005**	**1002**

Before proceeding to present the findings of the survey in Section III, we will outline the survey methodology. The selection of states and cities for the survey was based on the natural distribution of majority clusters within the selected six sectors mentioned above. Based on prior experience, secondary research and exhaustive local information, multiple industrial belts/clusters were identified within each city using purposive sampling. A cluster based approach was adopted to identify MSMEs within the selected sectors. Once the cluster was identified, a known landmark was selected as the 'starting point' to apply the 'right-hand rule' method to identify MSMEs. The investigator then visited the MSMEs located on the right side of the starting point to ensure no MSMEs were excluded from within the identified sectors in the selected clusters. Eligibility of the targeted respondent within MSME was determined using screener questions. Only eligible respondents proceeded for survey. Thus, the selection of enterprises within a cluster, is also purposive.

Either 'owner' or 'key decision maker' were interviewed within MSMEs. As mentioned above, only MSMEs registered under the Udyam registration of the Department of MSME, Government of India were considered for survey. Interviews were conducted via physical visits to the facility. Structured questionnaires, prepared in English, were used for the interviews. The questionnaire was translated in the vernacular language most spoken in the respondent's state. Show cards and Definition Sheet were shown to respondents wherever required to proceed with the questions. The translated questionnaire was carefully scanned by a language expert to ensure all questions retained the original meaning and intention. The length of each interview with selected MSMEs was approximately 30 minutes. The field survey was substantiated by interviews with key informants covering e-commerce platforms, government officials, industry associations, and academicians, among others.

It is worth noting that the integration of MSMEs with e-commerce platforms and their export behavior emerged naturally as a result of the survey design. This approach ensured that the survey captured a diverse range of MSMEs, allowing for a comprehensive understanding of their e-commerce integration and export activities.

Before concluding this section, we note the sources of potential sample bias. First, the chosen sample which focuses exclusively on selected six industries may not accurately represent the entire MSME population, leading to an under or over-representation of certain types of industries. Second, the sample of MSMEs chosen for the survey within industrial belts/ clusters, might not accurately represent the entire MSME population if certain types of MSMEs are over or underrepresented in the sample within the selected city. Third, MSMEs which do not operate out of the industrial belts/clusters do not fall in the sampling consideration. Fourth, the MSMEs in the sample are those registered on the Udyam portal but a vast majority of MSMEs in India are informal enterprises. Finally, in terms of non-response bias, firms who chose not to participate in the survey may have had different characteristics or experiences compared to those who did participate, leading to a potential bias in the results.

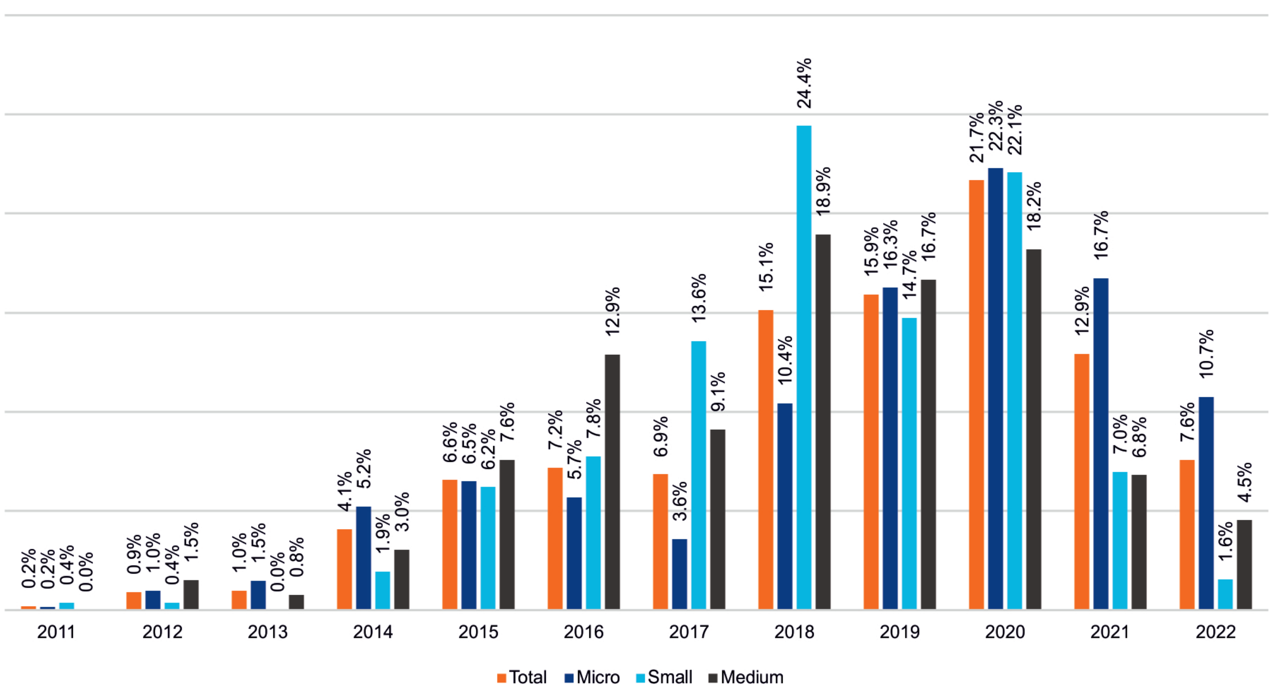
III. Survey Findings

In this section we present the key finding of the survey covering 2007 MSMEs in the sample. We begin by examining the growth of e-commerce integration by analysing the time period over which MSMEs integrated with e-commerce platforms. Next, we study the characteristics of firms that join e-commerce platforms and those that do not join. For the latter, we seek to understand why they do not join platforms. Next, we present findings on the performance of firms that are integrated with platforms. We also analyse the use of digital payment among MSMEs and how engagement with e-commerce platforms impacts the ability of MSMEs to access finance.

A. Growth of E-commerce Integration

The use of e-commerce platforms for sales has accelerated in recent years. Of all the integrated MSMEs surveyed in 2022, 12.7 per cent joined e-commerce platforms between 2011 and 2015, approximately 45 per cent joined the platforms between 2015 and 2019, 22 per cent reported doing so in 2020, 13 per cent joined e-commerce platforms in 2021. The remaining MSMEs integrated with e-commerce platforms in 2022. More than 40 per cent of the integrated firms started selling on e-commerce platforms after the onset of the COVID-19 pandemic in 2020 (see Figure 2). Indeed, several studies have indicated that e-commerce platforms across the world witnessed accelerated participation by MSMEs once the pandemic hit.[24]

Figure 2: Distribution of e-commerce-integrated MSMEs by year of integration



The share of microenterprises that joined e-commerce platforms since the onset of the pandemic is higher than that of small and medium enterprises. Among those microenterprises that reported being integrated in 2022, almost 50 per cent reported having joined an e-commerce platform in 2020 or thereafter (see Table 5). On the other hand, among small and medium enterprises, about 30 per cent in each group reported having integrated with e-commerce platforms since Covid-19 struck. A larger share—61 per cent of small enterprises and 57 per cent of medium enterprises—reported to have joined e-commerce platforms prior to the outbreak of Covid-19 (between 2016 and 2019).

Table 5: Distribution of e-commerce-integrated MSMEs by year of integration for each size bin and sector (in numbers and percentages)

Year	2011 to 2015	2016 to 2019	2020	2021	2022
Overall	128 (12.7)	453 (45.1)	218 (21.7)	130 (12.9)	76 (7.6)
Type of Enterprise					
Micro	88 (14.3)	221 (35.9)	137 (22.3)	103 (16.8)	66 (10.7)
Small	23 (8.9)	157 (60.6)	57 (22)	18 (7)	4 (1.5)
Medium	17 (13.0)	75 (57.3)	24 (18.3)	9 (6.9)	6 (4.6)
Type of Industry					
Sports goods	25 (14.2)	71 (40.3)	36 (20.5)	33 (18.8)	11 (6.3)
Toys	17 (11.7)	75 (51.7)	26 (17.9)	22 (15.2)	5 (3.5)
Processed and preserved food	24 (16.3)	67 (45.6)	39 (26.5)	10 (6.8)	7 (4.8)
Wearing apparel	21 (11.2)	84 (44.7)	41 (21.8)	19 (10.1)	23 (12.2)
Furniture	14 (8.4)	62 (37.1)	46 (27.5)	29 (17.4)	16 (9.6)
Handicraft items	27 (14.8)	94 (51.7)	30 (16.5)	17 (9.3)	14 (7.7)

A majority of the surveyed MSMEs reported joining e-commerce platforms to increase their sales. MSMEs reported integrating with e-commerce platforms to increase their sales, expand their customer base, reduce costs, improve market linkages, and scale up. However, it was found that 75 per cent of the surveyed firms who had joined e-commerce platforms did so to increase sales. The other common reasons were the onset of the COVID-19 pandemic (48%), the ability to build better market linkages through platforms (31%), and a desire to scale up (30%). Other studies also corroborate these findings. In a study on Indian SMEs conducted by KPMG in 2015, 85 per cent of surveyed SMEs reported that the adoption of e-commerce was primarily driven by the perception that it is a cost-effective way to increase sales.[25] Similarly, a 2018 study by the Economic Research Institute for ASEAN and East Asia (ERIA) on MSMEs across the ASEAN member states reported that the main benefits of digitalisation (including adoption of e-commerce) as perceived by firms were increasing their customer base (72%) and reducing costs (44%).[26]

B. Characteristics of Firms Integrated with E-commerce Platforms

This section examines the characteristics of those MSMEs that have chosen to join e-commerce platforms to sell their products online.

On an average, integrated firms are owned by younger and more educated individuals compared to non-integrated firms. Among the integrated firms, 56.2 per cent were found to have owners in the age group of 18-35 years. In contrast, in the case of non-integrated firms, 45 per cent had owners in the age bracket of 18-35 years (see Figure 3). A majority (55%) of the owners of non-integrated firms were found to be above 36 years of age. In terms of the education level of firm owners of integrated firms, 63 per cent had graduate degrees and above (see Figure 4). For non-integrated firms, the corresponding share was about 56 per cent. This is in line with the findings of other studies. A recent OECD report (2021) on the financial and digital competencies of MSMEs (across the G20 member states and a few non-G20 countries) also found that higher education levels

Figure 3: Distribution of MSMEs by the age of owner

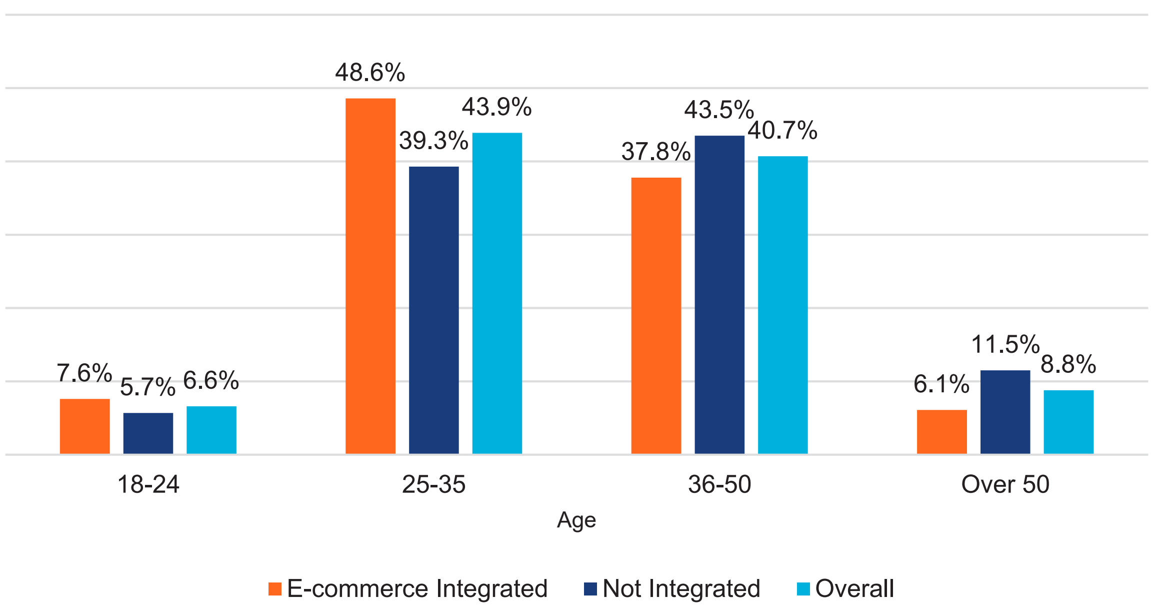
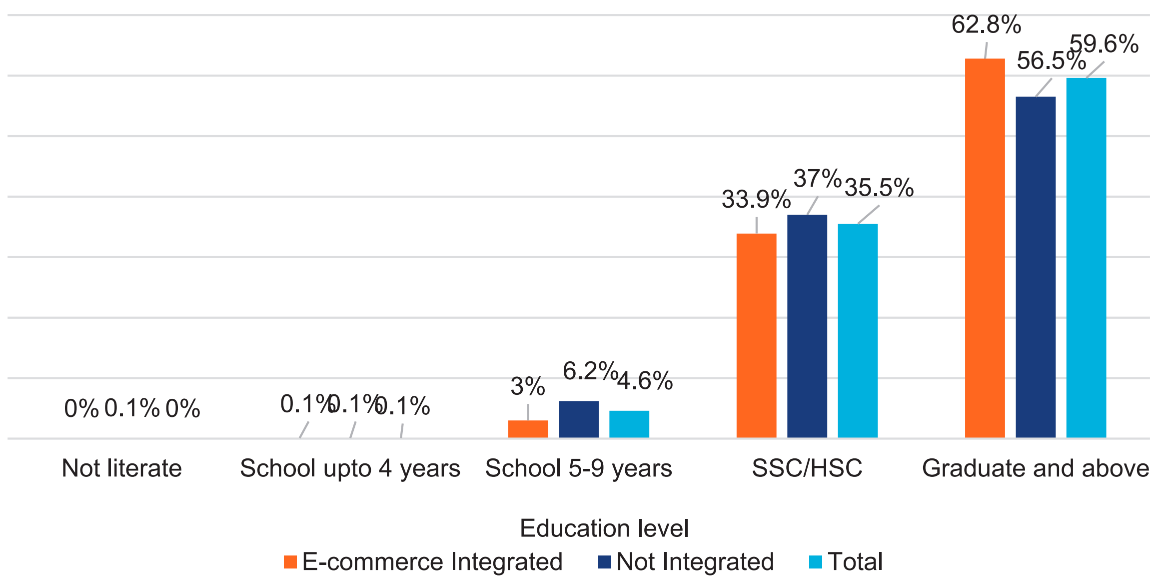


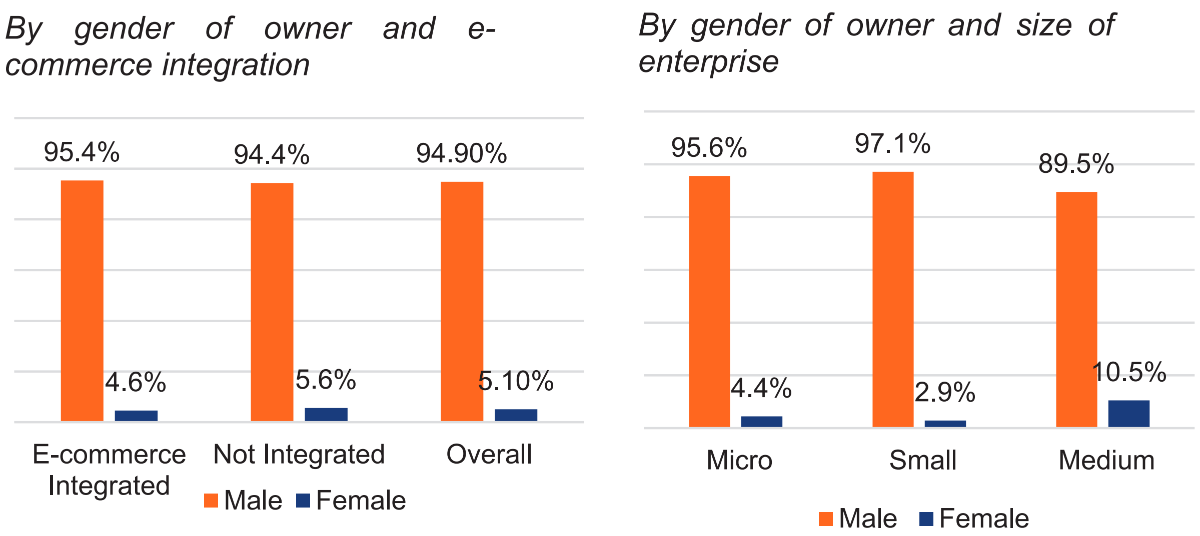
Figure 4: Distribution of MSMEs by educational qualifications of owners



(upper secondary or tertiary education) of MSME owners tend to be positively associated with higher levels of digitalisation.[27]

Women-owned MSMEs are not far behind male-owned MSMEs in integrating with e-commerce platforms. As mentioned in the preceding section, women-owned enterprises accounted for less than 5 per cent of the surveyed enterprises (Table 4). Among the integrated firms surveyed, a mere 4.6 per cent are owned by women (see Figure 5). However, it is worth noting that among the enterprises owned by women, 45.1 per cent were integrated with e-commerce platforms. For male-owned enterprises, 50.3 per cent reported to be integrated with e-commerce platforms. This suggests that notwithstanding the underrepresentation of women in the MSME landscape, MSMEs owned by women are not far behind those owned by men in the use of e-commerce as a sales channel. This may be a consequence of the fact that women business owners face greater difficulty in accessing traditional markets compared to male business owners due to social and cultural norms that constrain their ability to travel or negotiate with buyers. On the other hand, when selling through e-commerce platforms, women may not have to face regressive social norms. Other studies,too, have noted that women-led small and medium businesses (SMBs) have reported higher proportions of sales made digitally compared to those led by men. Women-led SMBs, with 50 per cent to 75 per cent of their sales made digitally, reported 5 percentage points higher digital sales compared to those led by men (in the 30 days preceding the date of the survey).[28]

Figure 5: Distribution of MSMEs by gender of owners



A higher share of export-oriented firms report being integrated with e-commerce platforms compared to those that do not export. As outlined in Section II, less than one-fifth of the surveyed MSMEs export their products. Among the group of MSMEs that are engaged in exporting units, approximately 63 per cent reported being integrated with e-commerce platforms. Among non-exporting units, the share of integrated firms is lower, at 48 per cent (see Figure 6). A recent ADBI study on MSMEs in Asia also found a significant positive relationship between export-oriented firms and digitalisation. Export-oriented firms tend to have a larger share of online sales compared to non-export-oriented firms.[29] A large body of literature shows that the more productive firms in an economy are likely to be engaged in exporting activity.[30] The greater adoption of e-commerce among exporting units may, therefore, be a consequence of their high productivity which positions them well to harness the benefits of integration.

On an average, integrated firms report higher turnovers and profitability compared to non-integrated firms. Among integrated firms, 60.4 per cent report a turnover of more than INR 5 million compared to 47.6 per cent in the case of non-integrated firms. Significantly, among integrated firms, approximately 35.5 per cent report a turnover between INR 10 million and INR 500 million. Among the non-integrated firms, the share of firms in INR 10-500 million turnover bin is considerably lower, at 15.6 per cent (see Figure 7). These ratios pertain to the reference period of 2021-22.[31] In terms of profitability, approximately 40 per cent of integrated MSMEs reported profit margins of 15 per cent or below, while among non-integrated firms, the corresponding share was 58 per cent. On the other hand, among integrated firms, 57 per cent of firms reported profit margins of above 15 per cent. For non-integrated firms, the corresponding share was 40.5 per cent (see Figure 8).

Figure 6: Distribution of exporting and non-exporting units by e-commerce integration status

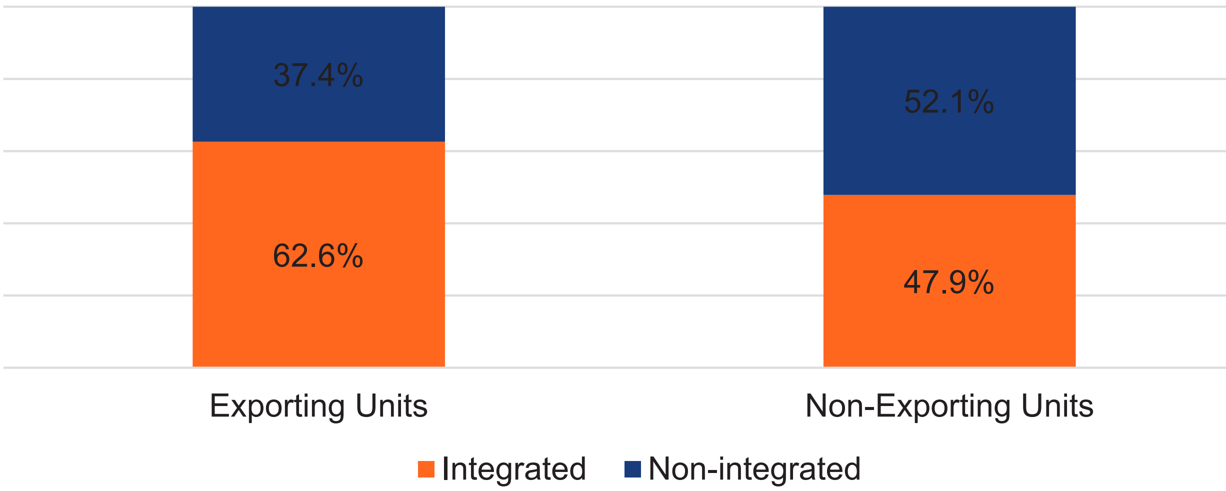
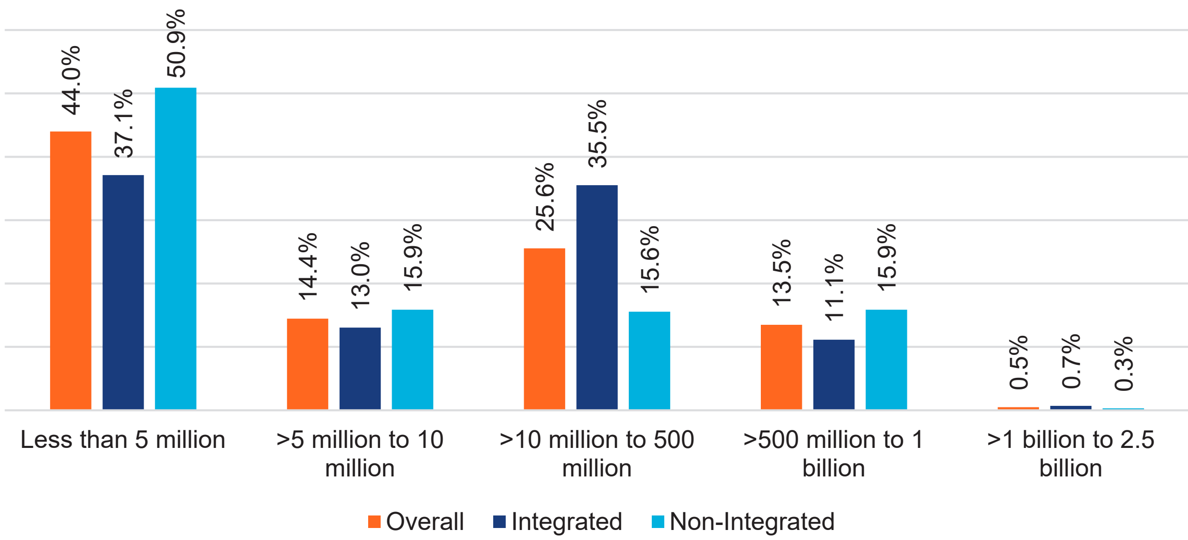


Figure 7: Distribution of MSMEs by turnover (2021-22)



Integrated firms reported having a higher share of permanent employees in their workforce compared to non-integrated firms. In the case of integrated firms, 40.8 per cent reported that over 50 per cent of their workforce comprised of permanent employees. In the case of non-integrated firms, the corresponding share was lower, at 32.9 per cent (see Figure 9). It is also worth noting that in the case of non-integrated firms, approximately 35% of firms reported that 20 per cent or fewer workers were permanent employees. For integrated firms, the corresponding share was lower, at 23.8 per cent.

Figure 8: Distribution of MSMEs by profit margins (2021-22)

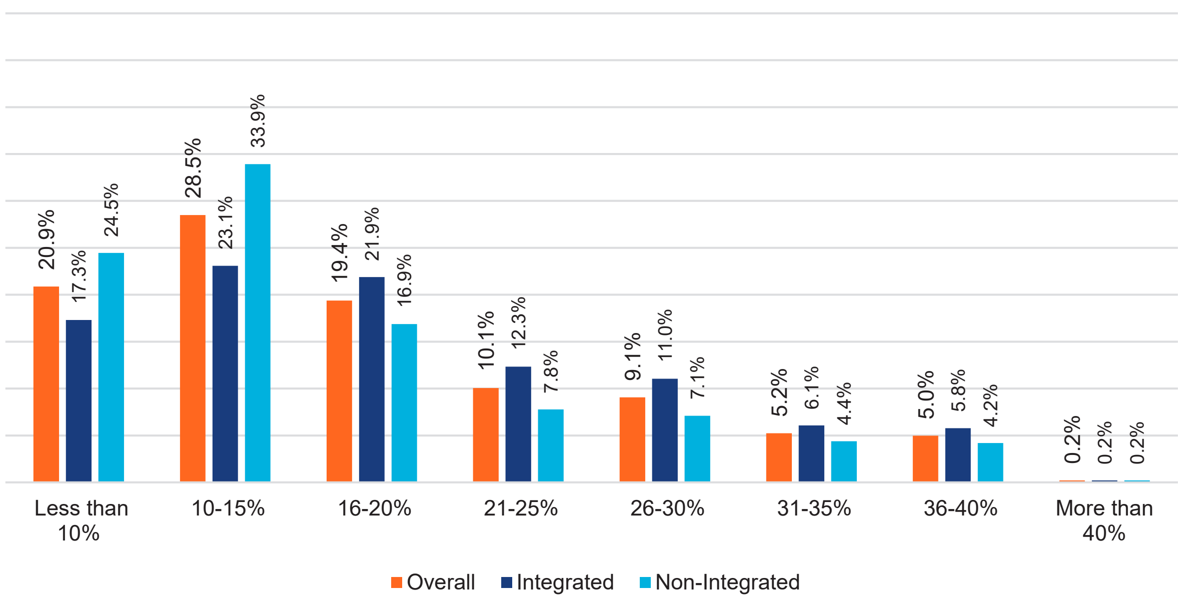
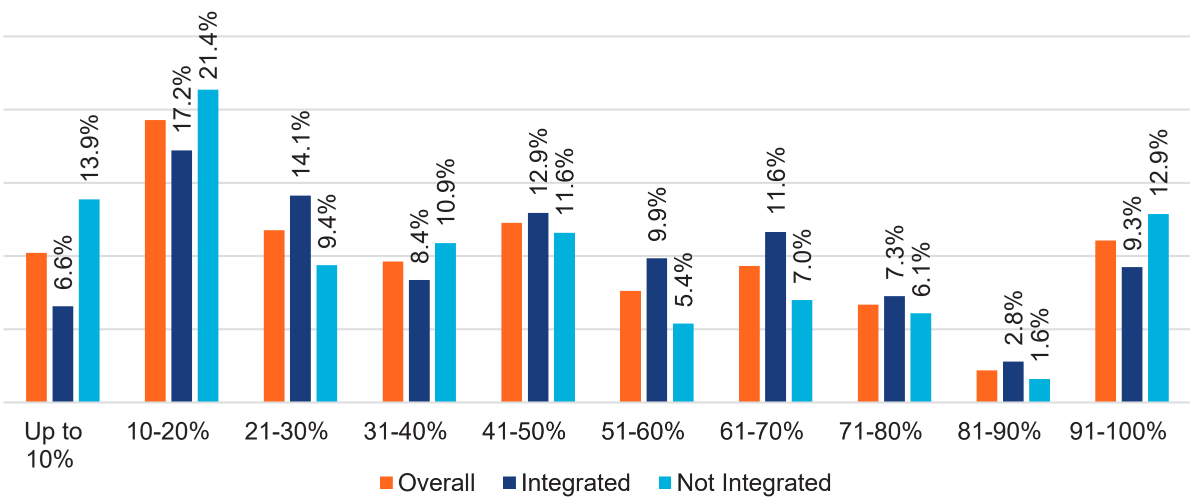


Figure 9: Distribution of MSMEs by the share of permanent employees in workforce (2021-22)



Firms that are integrated with e-commerce platforms have a greater online presence, in general. Integrated firms reported a significantly higher usage of social media platforms, such as Facebook, Whatsapp, and Instagram, and own websites for selling online compared to non-integrated firms. Nearly 58 per cent of integrated firms made online sales through social media and their own websites. In contrast, among non-integrated firms, only 15.9 per cent used these other channels.

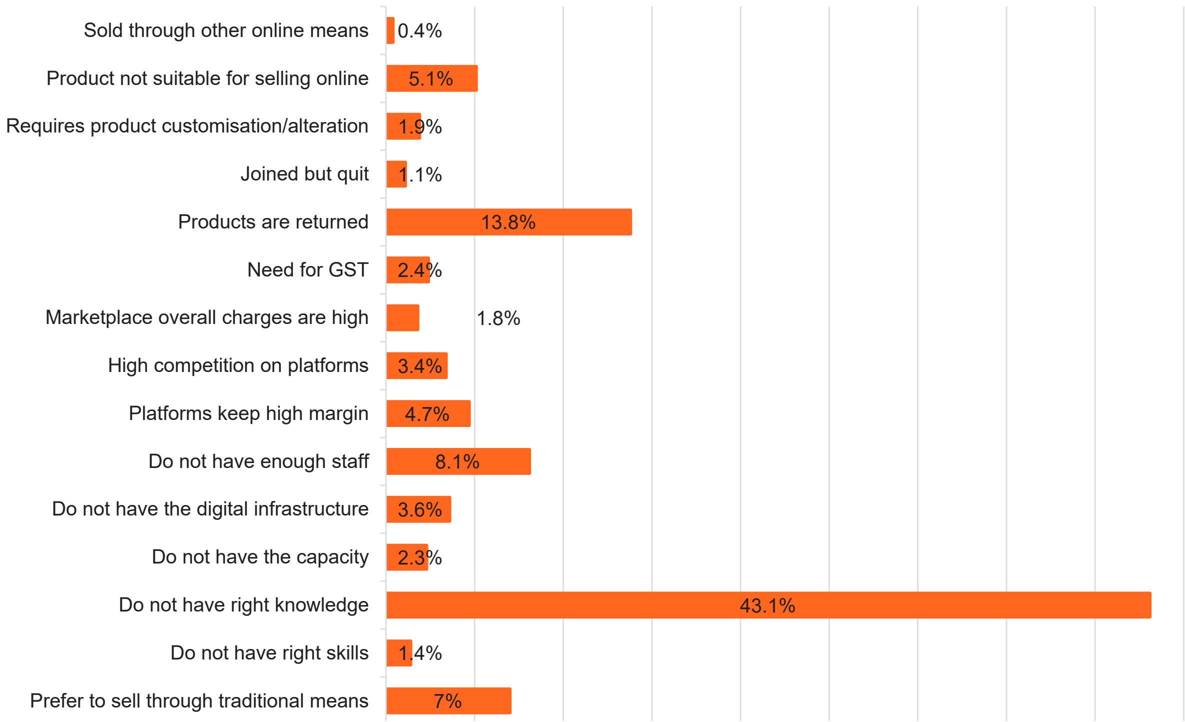
Integrated firms are more likely to be operating from business clusters compared to non-integrated firms. A relatively higher share of integrated firms (64.6%) reported operating out of business clusters compared to non-integrated firms (56.3%). Business clusters tend to offer better digital infrastructure (such as internet connectivity) and physical infrastructure (such as transport and logistical connectivity), which are key enablers of online business.

C. Reasons for Not Integrating with E-Commerce Platforms

A lack of knowledge about how to effectively utilise digital technologies and e-commerce platforms is the primary factor constraining MSMEs from using these as a sales channel. Of the 1,002 firms in the sample that are not integrated with e-commerce platforms, about 43 per cent reported not integrating with such channels because they do not have the appropriate knowledge to engage with digital platforms (see Figure 10). For microenterprises, this was a particularly significant constraint, with 48 per cent of them reporting a lack of knowledge and information as a reason for non-integration, compared to 21 per cent of small firms and 38 per cent for medium-sized firms. Around 13 per cent of the non-integrated MSMEs indicated that they chose not to join platforms as they often faced problems when customers tended to return the products sold through e-commerce platforms. Another 8 per cent of MSMEs said they did not integrate with the platforms as they did not have skilled staff, while 7 per cent suggested they chose to not join platforms as they preferred selling through traditional avenues. Interestingly, less than 5 per cent of non-integrated firms in the sample indicated that they did not sell through e-commerce platforms due to the latter's high profit margins.

A very small number of non-integrated firms have quit e-commerce platforms after joining them previously. Of the 1,002 firms that were not integrated in 2022, only 11 MSMEs (less than one per cent) reported to having previously used e-commerce platforms. Of these firms, seven indicated that they did so because they did not have the right knowledge to sell effectively through the digital platform. The 2021-22 survey also indicated that a lack of training in digitisation of business processes and digital marketing skills such as product cataloguing are among the key challenges faced by MSMEs in e-commerce integration.[32]

Figure 10: Distribution of non-integrated enterprises by reasons for not integrating with e-commerce platforms



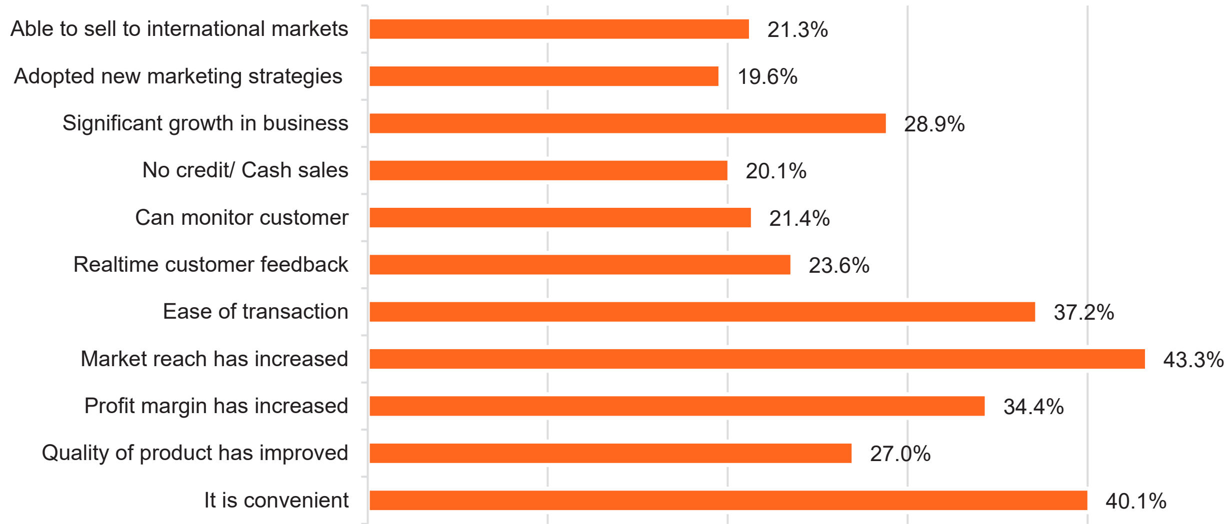
Micro and small enterprises reported a greater willingness to integrate with e-commerce platforms in the future as compared to medium enterprises. Of all the non-integrated firms in the sample, 27.3 per cent reported an interest in joining e-commerce platforms in the future, while 46 per cent reported that they would not like to do so. The remaining firms indicated that they had not made up their mind about whether they wanted to join e-commerce platforms in the future. Among microenterprises, 30.3 per cent reported a willingness to join e-commerce platforms in the future. The corresponding share for small enterprises was 25.8 per cent, and for medium enterprises it was 16.9 per cent (the lowest share among the three categories of firms surveyed).

D. Performance of Firms Integrated with E-commerce Platforms

Improved market reach is one of the most widely reported benefit of integrating with e-commerce platforms. Integrated firms indicated several benefits of e-commerce integration. Approximately 43 per cent of integrated enterprises reported that e-commerce integration enabled them to enhance their market reach. About 40 per cent of integrated enterprises reported that it was convenient to sell through e-commerce platforms and transactions had become easier to conduct. Another key benefit of e-commerce integration was higher profit margin. About 34 per cent of integrated firms pointed out that this was an important benefit of selling through e-commerce platforms (see Figure 11).

Integrated firms reported an increase in total sales after joining e-commerce platforms. Among all integrated enterprises, 86.5 per cent reported an increase in their total sales after joining e-commerce platforms (see Figure 12). Approximately 34 per cent of integrated MSMEs reported an increase of less than 10 per cent in total sales, 27 per cent reported an increase in sales in the range of 10-20 per cent, and 15 per cent of integrated enterprises reported an increase in the range of 20-30 per cent of their total sales. Among the integrated MSMEs, small enterprises appear to have done better in terms of sales performance, with 54 per cent reporting a sales increase

Figure 11: Benefits of e-commerce integration by percentage of MSMEs

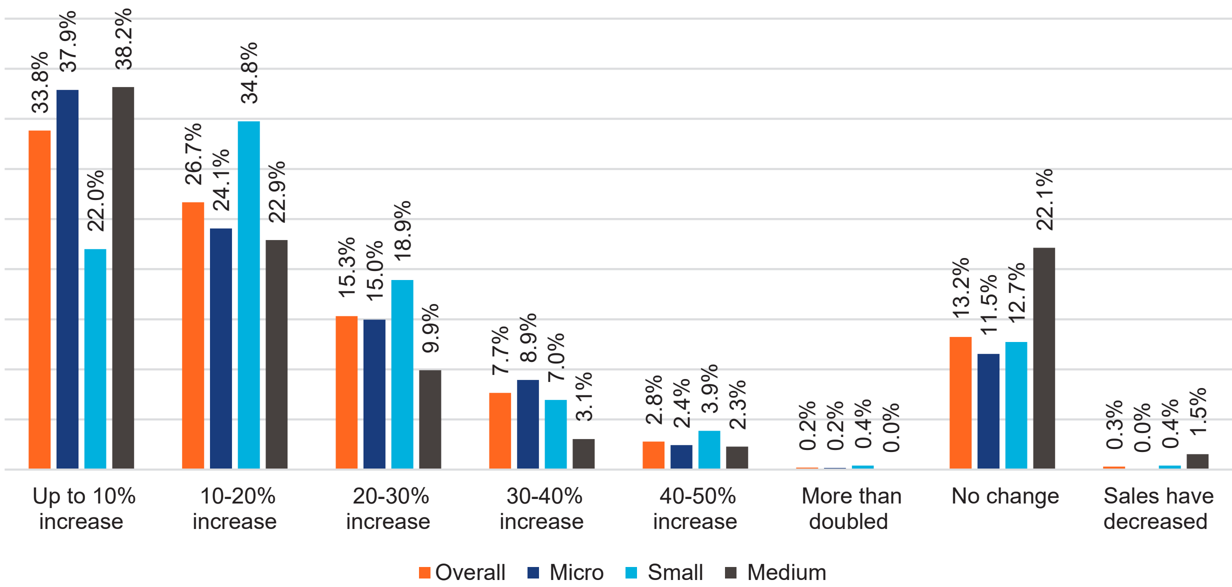


Note: This was a multiple choice answer.

in the range of 10-30 per cent compared to 39 per cent microenterprises and 32 per cent for medium-sized enterprises. Other studies have also highlighted the potential of e-commerce to enhance sales. In rural China, for instance, a World Bank research study found that integrating with e-commerce platforms enabled MSMEs to expand sales for standardised, labour-intensive products by allowing entrepreneurs to remotely connect with consumers. This resulted in an increase in online retail sales in rural China from RMB 180 billion (in 2014) to RMB 1.24 trillion (in 2017).[33]

Integrated enterprises report an improvement in profit margins after joining e-commerce platforms. Nearly 90 per cent of the integrated firms reported an increase in their profit margins since joining e-commerce platforms (see Figure 13). About 30 per cent of the integrated firms reported an increase in profit margin of up to 10 per cent compared to pre-integration levels, 28.4 per cent reported an increase in the range of 10-20 per cent, and 18.5 per cent reported an increase in the range of 20-30 per cent. Among the surveyed MSMEs,

Figure 12: Distribution of MSMEs by the range of reported increase of total sales after integration

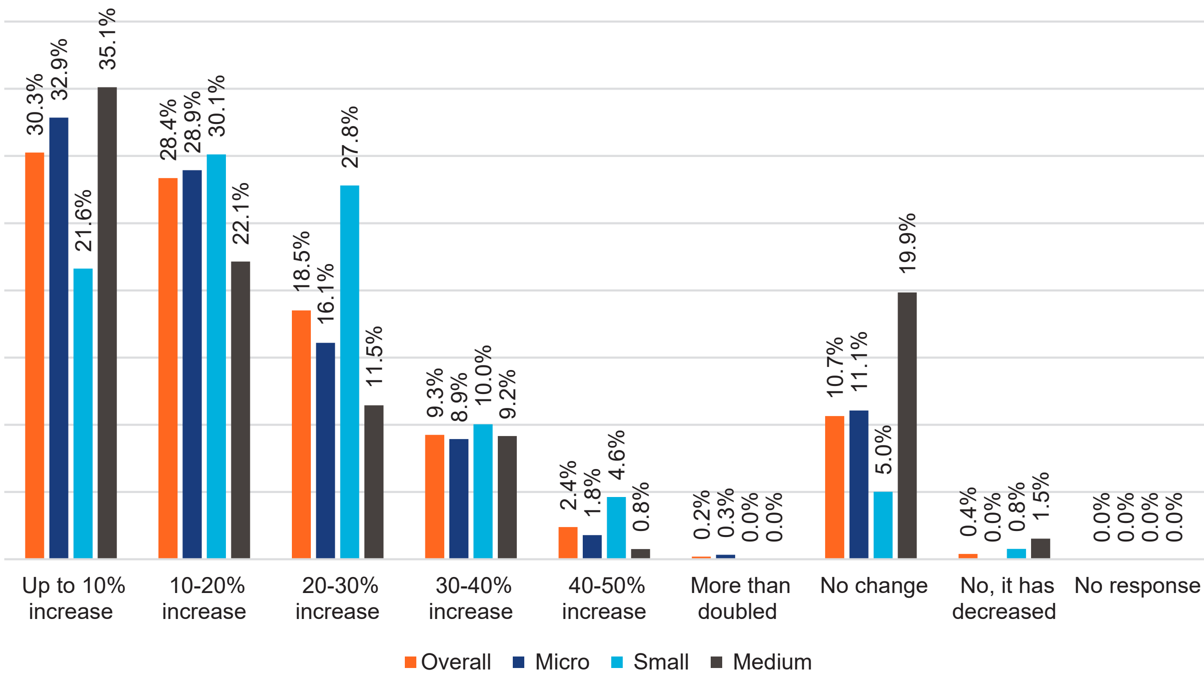


small firms appear to have performed better compared to micro- and medium-sized enterprises. About 58 per cent of small firms, 45 per cent of micro firms, and 34 per cent of medium enterprises reported an increase in their profit margin in the range of 10-30 per cent. It is important to state that the analysis here does not assert any causal relationship between e-commerce integration and a firm's sales and profit margin. However, several studies have observed that improved profit margins, improved productivity, customer loyalty, cost reductions, new product offerings, and increased revenue are important benefits of digital transformation initiatives.[34] Digital advancements have resulted in higher revenue growth and lower operating costs, which in turn have led to improved profitability.[35]

A relatively small share of integrated firms reported hiring new employees after joining e-commerce platforms. Approximately 14 per cent of integrated firms reported hiring new employees after joining e-commerce platforms. Notably, the share of firms that reported an increase in the hiring was higher for small and medium enterprises (22% in each size category), compared to micro enterprises (9%). That a significant share of firms did not report an increase in hiring is in line with analysis from emerging markets where it has been noted that although the expansion of sales resulting from joining e-commerce platforms may create jobs, the use of online marketing and sale of products may save labour input, resulting in no net positive effect on employment in the enterprise.[36]

Several MSMEs report that they had to invest in training employees and purchasing new equipment and machinery, and software when they joined e-commerce platforms. To conduct e-commerce operations, nearly 65 per cent of the surveyed enterprises reported having made some investments in training their employees, research and development, or in new equipment and machinery, or software. About 44 per cent of integrated

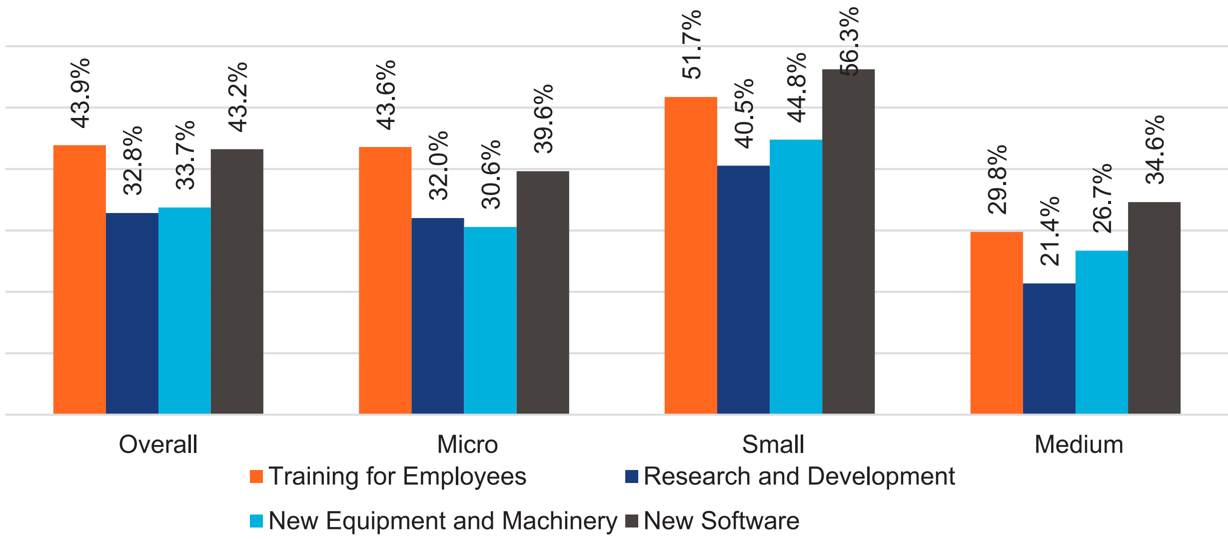
Figure 13: Distribution of MSMEs by the range of reported increase in profit margins after integration



firms reported investing in employee training, 43 per cent reported investments in new software, 34 per cent in new equipment and machinery, and about 33 per cent firms in research and development. Significantly, among the integrated MSMEs, an overwhelming share of medium-sized enterprises (approximately 60%) reported not making any new investments in the above-mentioned categories (see Figure 14). This could be a result of the fact that relatively larger firms are better equipped to operate on e-commerce platforms compared to small and microenterprises.

On joining e-commerce platforms, several firms reported launching new products, making improvements in existing product design, and adopting new business practices and organisational methods, suggesting that e-commerce integration may have fostered innovation at the firm level. Since joining e-commerce platforms, about 33.9 per cent of integrated MSMEs launched a new product, made improvements to design of existing products, or diversified their product basket; 33.7 per cent adopted new organisational methods in business practices and workplace management, or established external relations; 31.5 per cent started new business processes such as new production or delivery/distribution method or marketing process; 27.6 per cent undertook organisational innovation; and about seven per cent started exporting. Significantly, 33.6 per cent of medium-sized enterprises indicated they had not undertaken any of the above-mentioned improvement efforts. The corresponding share for micro and small enterprises was lower, at 24 per cent and 21 per cent, respectively, suggesting that the latter had to put in greater effort in adapting to cater to online markets (see Figure 15). This may be a consequence of the fact that medium-sized firms are better equipped to adapt to e-commerce platforms.

Figure 14: Percentage of MSMEs that reported an Increase in investments after joining e-commerce platforms by type of investment

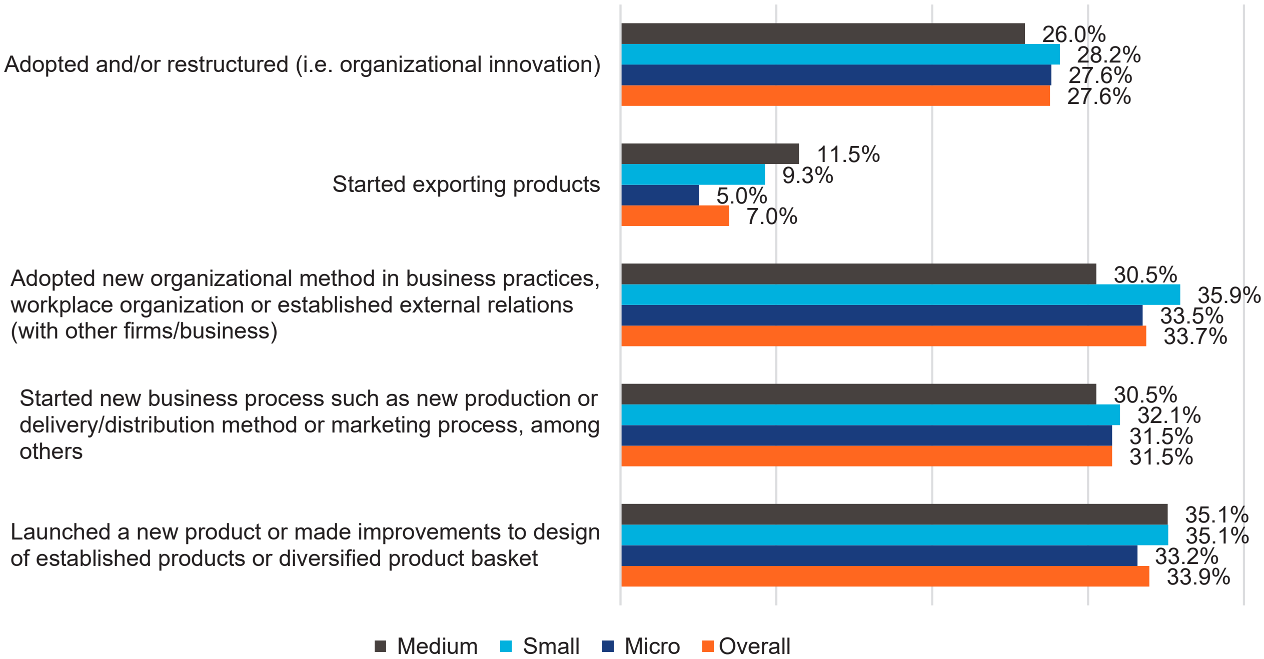


Note: This was a multiple choice answer.

An overwhelming majority of integrated enterprises reported a desire to increase the share of e-commerce sales in their total sales in the future. Given the significant benefits from joining platforms (as described above), it is unsurprising that over 70 per cent of integrated MSMEs expressed a desire to increase the share of their e-commerce sales further (see Figure 16). Nearly 90 per cent of those integrated MSMEs that indicated a desire to increase the share of e-commerce sales said that they would attempt to increase sales by up to 30 per cent. About 80 per cent of small-sized enterprises, 70 per cent of microenterprises, and 56 percent of medium firms expressed an inclination to increase online sales. The survey established that firms that already engaged in online sales before the pandemic and found it profitable or beneficial were more inclined to increase their share of online sales.[37]

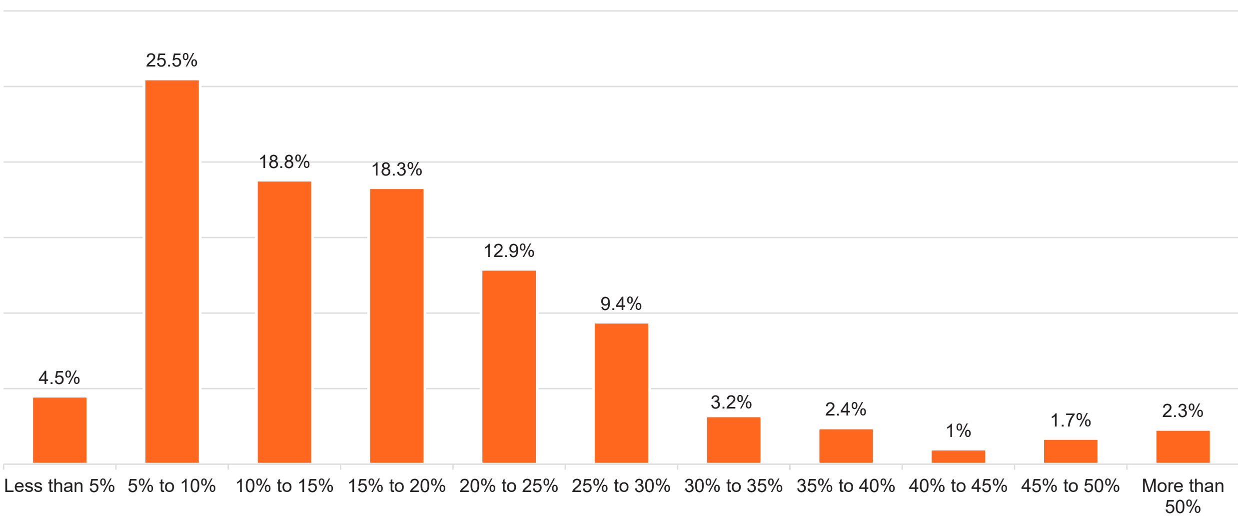
While several integrated MSMEs indicate a willingness to improve the share of online sales, it is important to note that at present the volume of sales made through e-commerce platforms by these firms accounts for a smaller share of firms' total sales compared to those made through traditional routes. In 2021-22, over half of all integrated MSMEs reported that sales through e-commerce platforms accounted for between 10 per cent and 20 per cent of their total sales (see Figure 17). On disaggregating across micro, small and medium firms, it is noted that a little less than 50 per cent of micro and small firms reported that sales through e-commerce platforms accounted for between 10 per cent and 20 per cent of total sales. The corresponding share for medium sized firms was 63.4 per cent. Other sources of data suggest that the shares of e-commerce sales in total sales are broadly in the same range as those reported in this survey. In 2021, e-commerce accounted for nearly 19 per

Figure 15: Percentage of MSMEs that have undertaken innovations and made changes in business model after intergrating with e-commerce platforms by type of innovation



Note: This was a multiple choice answer.

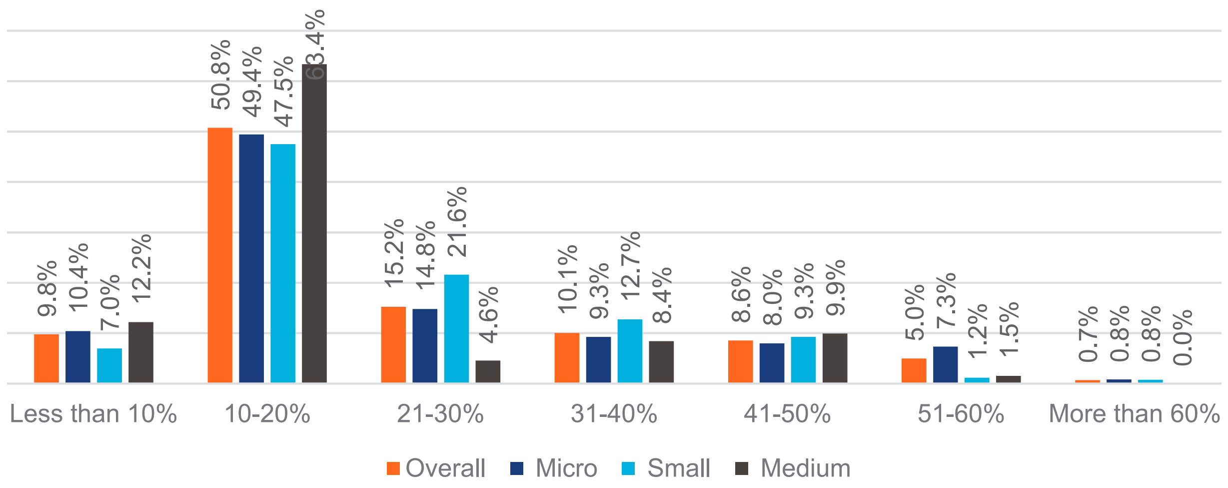
Figure 16: Distribution of integrated MSMEs by the desired increase in share of online sales over the next 2 years



cent of retail sales worldwide.[38] According to the International Trade Administration, in 2020, retail consumer goods e-commerce accounted for 18 per cent of total global retail sales.[39] In the US, in 2022, e-commerce sales accounted for 14.6 per cent of total sales.[40]

An important tool used by integrated MSMEs to boost their online sales was to provide prompt customer service. To promote their products on e-commerce platforms, nearly 31 per cent of the surveyed MSMEs mentioned that they sought to provide prompt customer service as this helped enhance customer experience

Figure 17: Distribution of MSMEs by share of e-commerce sales in total sales



and build customer loyalty. Integrated MSMEs mentioned using several other tools as well. Approximately 28 per cent said that they offered deals, 27 per cent reported partnering with influencers, 26.4 per cent sent emails to market their products, and about 26 per cent encouraged customers to post reviews. A relatively higher percentage of small-sized firms (29.3%) preferred paid promotions such as sponsored advertisements as a marketing tool in comparison to medium (26.7%) and micro firms (23.2%). Similarly, a relatively higher percentage of medium enterprises (26.7%) preferred sponsored product listing, also known as search engine optimisation in comparison to micro (21%) and small enterprises (20%).

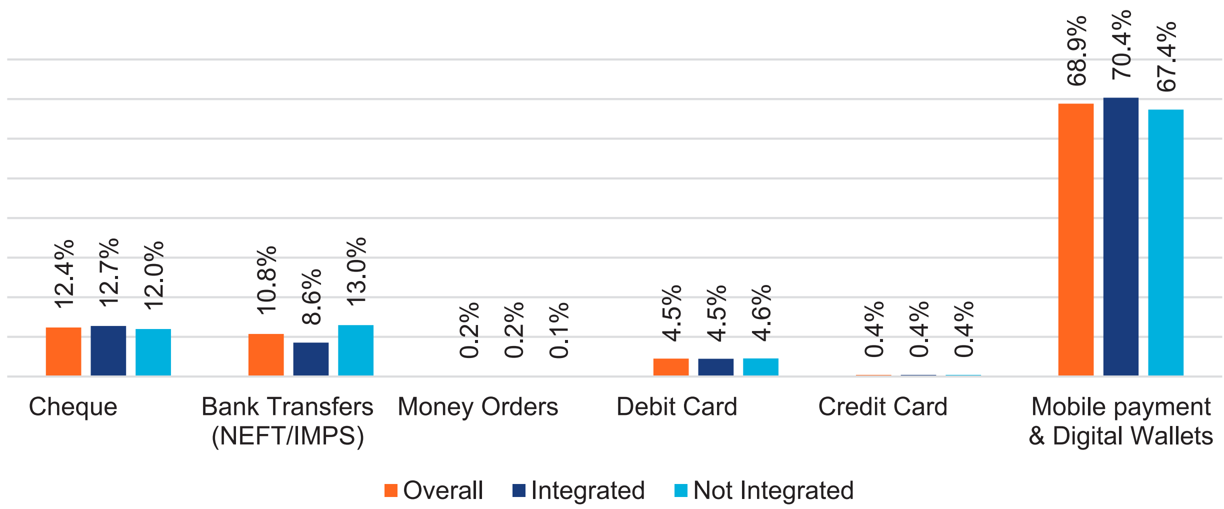
E. Use of Digital Payment Methods

A significant share of surveyed MSMEs (both integrated and non-integrated) reported digital wallets and mobile payments as their most frequently used payment mode for doing business. Approximately 69 per cent of the surveyed MSMEs reported the use of the above-mentioned modes as their most frequently used means for payments (see Figure 18).[h] Amongst integrated enterprises, the corresponding share stood at about 70 per cent

[h] Either a National Electronic Funds Transfer (NEFT) or Immediate Payment Service (IMPS) transaction.

while for non-integrated enterprises it was 67.3 per cent. After digital wallets and mobile payments, cheques and bank transfers were reported as the next most widely used mode of payment. The shares of surveyed MSMEs (integrated and non-integrated) reporting these channels as the most frequently used mode of payment were considerably smaller compared to digital payments and wallets. Only about 12 per cent of all surveyed firms reported cheques as their most frequently used payment mode. For bank transfers, the corresponding shares stood at 10.7 per cent.

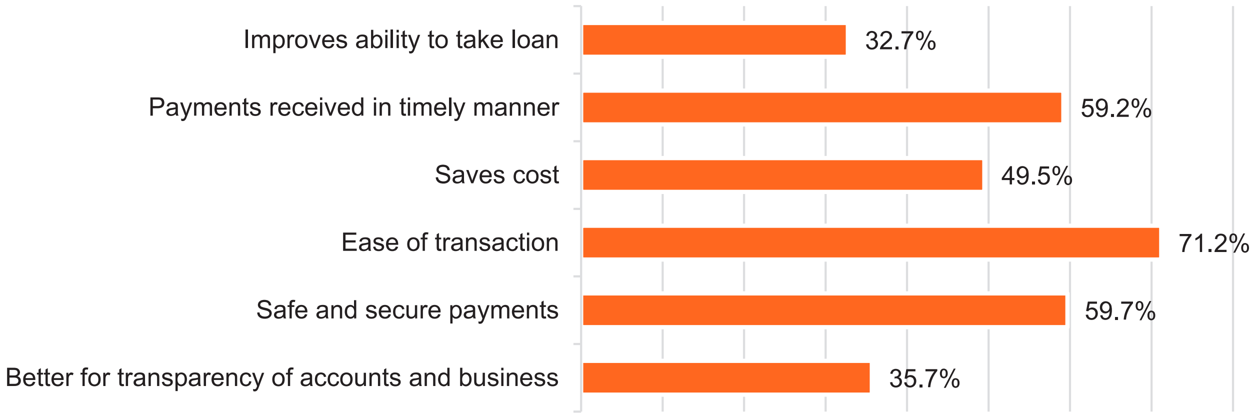
Figure 18: Distribution of MSMEs by most frequently used mode of payment



On an average, non-integrated MSMEs reported more cash-based sales than integrated firms. Of all the surveyed enterprises (both integrated and non-integrated), approximately 67 per cent reported that cash-based sales accounted for less than half of their total sales, while nine per cent reported that over three quarters of sales were in cash. When we examine integrated and non-integrated enterprises separately, we find that among the former, 73 per cent reported that cash-based sales accounted for less than half of their total sales. For non-integrated enterprises, the corresponding share was lower, at 62.5 per cent. Approximately 14 per cent of the non-integrated enterprises reported that over three quarters of their sales were cash based. Non-integrated enterprises appear to be more inclined towards cash-based sales.

The convenience of doing transactions digitally is reported as a top benefit of digital payments. About 71.2 per cent of all surveyed MSMEs (integrated and non-integrated) indicated that they preferred using digital payments due to the ease of transaction. Safety and security considerations (59.7%) and timely receipt of payments (59%) were also reported as among the main benefits of online payments (Figure 19). Existing studies have also highlighted that digital payments can enhance an entrepreneur's profitability by offering convenient, safer, and cheaper financial transactions to customers, suppliers, and the government. It can also help build an entrepreneur's credit history, thus improving access to credit.[41] This aspect is explored in the next sub-section of this report.

Figure 19: Benefits of digital payments, by percentage of respondents



Note: This was a multiple choice answer.

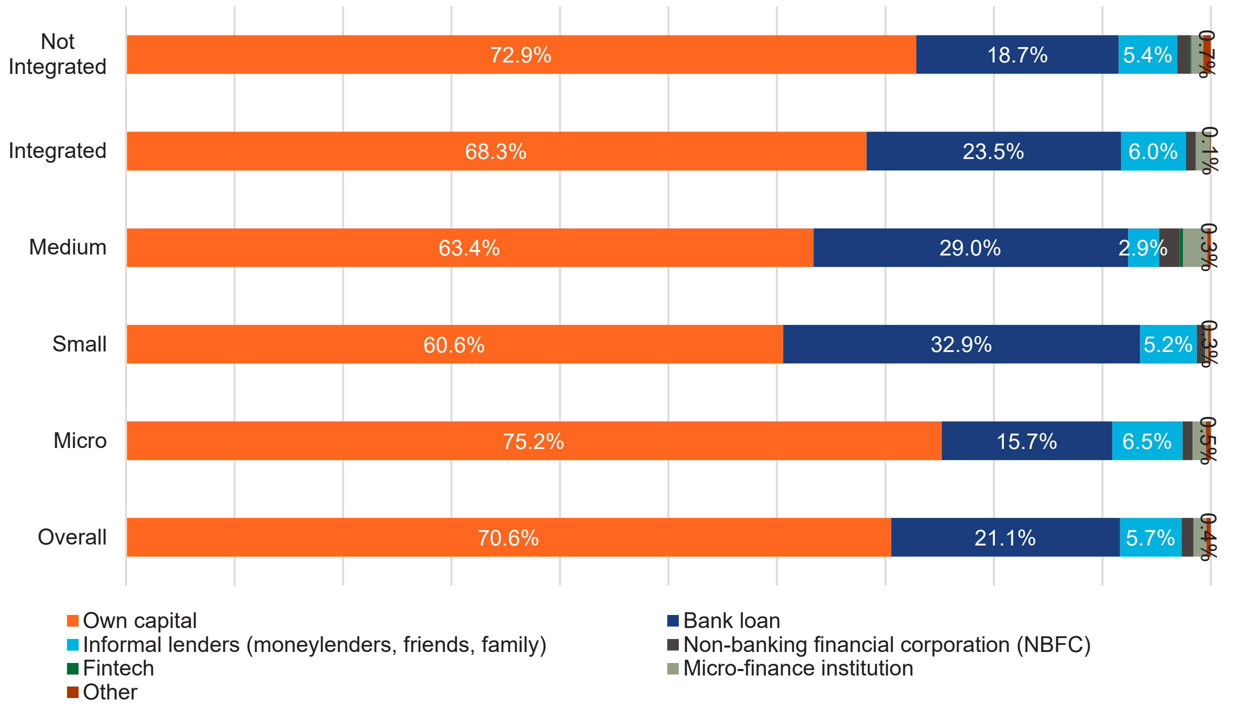
F. MSMEs' Access to Finance

Own capital i.e. capital contributed by the owner of a business (for example, by means of saving or inheritance) is the primary source of finance for MSMEs, while bank loans are a distant second. Approximately 70 per cent of all surveyed MSMEs reported own capital as the major source of financing their business, followed by bank loans (21%), and loans from informal lenders including moneylenders, friends, and family (5.7%). A relatively higher percentage of micro firms rely on own capital (75.1%) compared to small (60.6%) and medium firms (63.4%). On analysing integrated and non-integrated firms separately, it is found that about 68 per cent of the former and 73 per cent of the latter use their own capital as the major source of finance for their business.

The ability to access bank loans appears to be correlated to firm size and integration status of firms. On analysing the sources of finance by firm size, it is found that approximately 33 per cent of small-sized enterprises and 29 per cent of medium-sized firms use bank loans as a source of finance, compared to 15.7 per cent of micro enterprises (see Figure 20). Importantly, across integrated and non-integrated enterprises separately, 23.5 per cent of integrated firms report bank loans as a major source of finance, while 18.7 per cent of non-integrated firms do so. Notably, for female-owned enterprises, the use of bank loans as a source of finance is relatively higher among integrated firms. About 10 per cent of all female-owned MSMEs accessed bank loans. Of these, 60 per cent are firms integrated with e-commerce platforms.

A higher share of integrated MSMEs reported having active loans compared to non-integrated ones and a majority of these loans were from formal financing channels. Overall, about 26.8 per cent of the surveyed enterprises reported having an active bank loan at the time of survey.[42] Amongst the integrated firms, the share of those reporting an active loan was approximately 30 per cent; while amongst the non-integrated firms the share stood at 24 per cent. Nearly 85 per cent of all firms (integrated and non-integrated) with active loans reported having

Figure 20: Major source of finance for MSMEs (by percentage)



obtained them from banks, while 12 per cent indicated they had taken them from informal moneylenders (see Figure 21).[i]

Integration with e-commerce platforms makes it easier for MSMEs to access loans. Approximately 42 per cent of integrated enterprises reported that taking a loan was easier post integration. The percentage is slightly higher among female-owned enterprises, with nearly 48 per cent reporting that loan accessibility was easier after joining e-commerce platforms. Notably, a higher share of integrated small- and medium-sized enterprises (approximately 47% in each group) reported ease of loan accessibility compared to 38.1 per cent of microenterprises after integrating with e-commerce platforms (see Figure 22).

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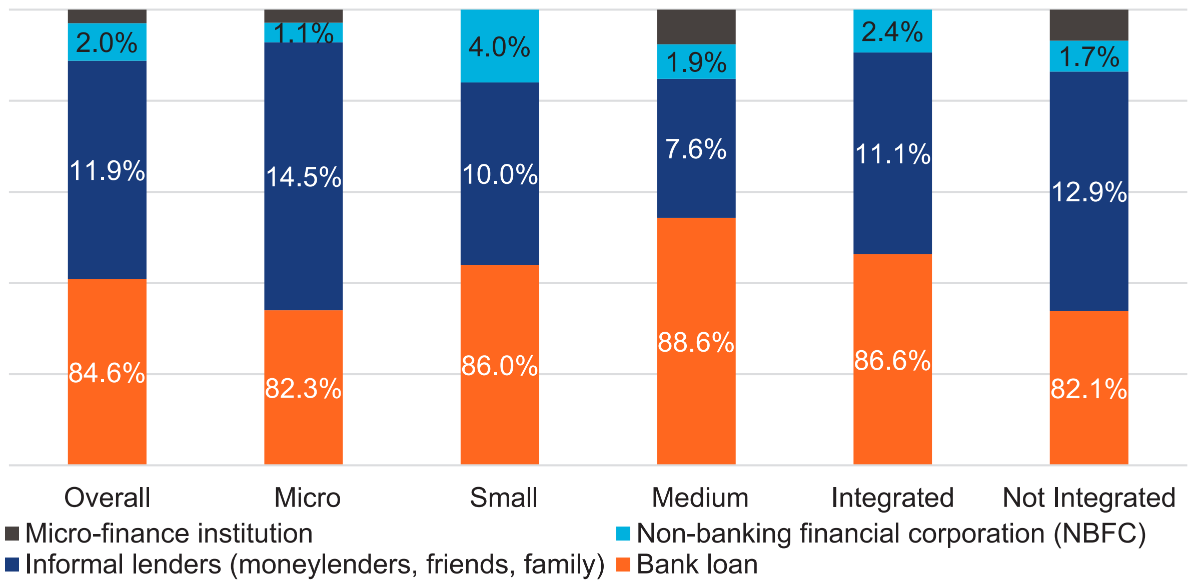
[i] It is also worth noting that across the sample, a higher share of small- and medium-sized firms report having active bank loans compared to micro-enterprises. As mentioned above, 26.8 per cent of all surveyed MSMEs (integrated and non-integrated) report having an active bank loan. On disaggregating across the micro, small and medium segment, it is found that about 40 per cent of small enterprises and 33.4 per cent of medium enterprises had an active loan. Compared to this, only 21.6 per cent of micro enterprises had an active loan. What is more, microenterprises have a relatively higher share of informal sector loans in total active loans (at 14.5%) compared to small (10%) and medium enterprises (7.6%). This is unsurprising as global evidence suggests that the financing gap is larger for micro enterproses compared to small and medium enterprises. Analysis from World Bank Enterprise Survey, also reveals that relatively smaller-sized firms are less likely to have access to outside capital, hindering their ability to expand and improve productivity. Such firms also tend to rely more on informal sources of capital, which can have a negative effect on their growth and performance. For details see **https://www.worldbank.org/en/topic/smefinance and https://www.worldbank.org/en/results/2013/04/05/msme-finance-expanding-opportunities-and-creating-jobsa**

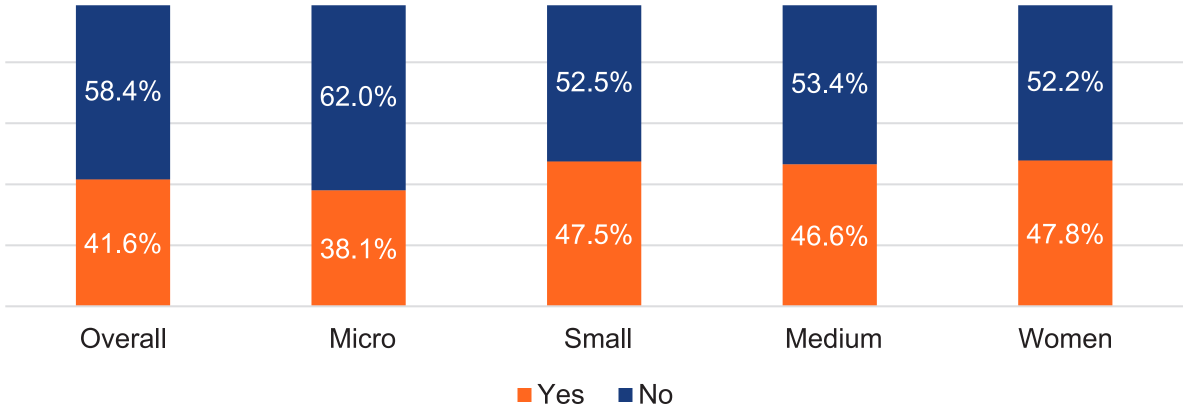
Figure 21: Distribution of MSMEs with active loans by the source of loan



A small share of integrated enterprises indicated that they had been able to access loans from fintech companies or non-banking financial corporations by providing their earnings on e-commerce platforms as guarantees and not providing a collateral. About 12.3 per cent of the integrated enterprises reported having been able to do so. The share of medium enterprises who reported being able to access loans by providing their e-commerce earnings as guarantees was 16.8 per cent, compared to 13.1 per cent of small-sized firms and 11.1 per cent micro enterprises. In general, the rapid growth of e-commerce has resulted in a rise in digital financial services that are accessible to small businesses and consumers. Digital platforms have now broadened their range of services from just facilitating payments to providing credit and other financial services. The vast amount of payment and transaction data compiled through these platforms are being utilised to establish the credit worthiness of MSMEs. The rise of embedded financial solutions has enormous potential to enhance access to finance for MSMEs integrated with e-commerce platforms, leading to decreased expenses and increased productivity in the digital economy.[43]

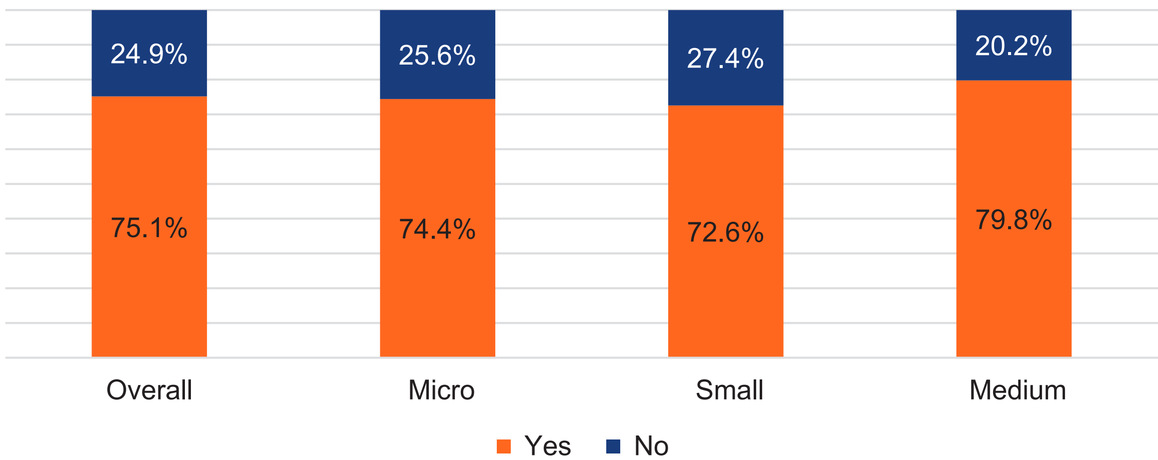
Significantly, a large proportion of non-integrated firms believe that their ability to raise external finance would have been greater if they had a presence on e-commerce platforms. Around 75 per cent of the enterprises that are not integrated with e-commerce platforms indicate that they would have been able to raise external finance more easily had they been integrated on e-commerce platforms (see Figure 23). The perceived benefits are slightly higher among medium-sized enterprises, with 80 per cent of such firms reporting that their ability to raise external finance would have been greater had they been integrated on e-commerce platforms, as compared to 74.4 per cent of micro firms and about 72.6 per cent of small enterprises.

Figure 22: Percentage of integrated MSMEs reporting whether access to loan has improved since joining e-commerce platforms



As MSMEs enhance their digital footprint through integration with e-commerce platforms they are not only able to improve access to markets but also access to finance. MSMEs face twin challenges of inadequate and delayed credit as they often lack sufficient collateral and are unable to establish their credit-worthiness. As a result, they are compelled to rely on unsecured loans at higher interest rates. The emergence of digital financial services embedded in e-commerce platforms can potentially provide viable solutions to some of the challenges

Figure 23: Percentage of non-integrated MSMEs reporting whether their ability to raise external finance would have improved on joining e-commerce platforms



faced by MSMEs in accessing credit. E-commerce platforms can play an important role as critical intermediaries for digital financial services, integrating payment and credit services into their interfaces and aggregating detailed data on MSMEs. This enables them to gain insights into the risk profiles of particular groups and develop targeted financial products that cater to their unique needs.[44]

Improving access to finance is vital for MSMEs as debt repayments remains one of the biggest financial challenges faced by the sector. About 32.6 per cent of all the surveyed enterprises reported that since March 2020, one of the biggest challenges they have faced is the inability to make debt payments on debt on time and/ or in full. Another challenge reported by 30.9 per cent of surveyed firms is difficulty in covering their operating expenses. Existing studies highlight that the several financial challenges faced by MSMEs in large part arise from the long delays in receiving payments. Global Alliance for Mass Entrepreneurship (GAME) has estimated that the problem of delayed payments to MSMEs is in the magnitude of Rs. 10.7 lakh crore, with 80 per cent of this being attributable to delays to micro and small enterprises.[45] This adversely affects their ability to access finance, especially loans.

IV. Key Challenges and Policy Recommendations

In addition to the questions posed in the survey pertaining to the firm characteristics and their relationship with e-commerce platforms, a series of in-depth interviews with MSME owners were also conducted. Respondents offered important insights into the challenges faced by MSMEs in general, and those pertaining to e-commerce integration, in particular. With the objective of informing the policy discourse on MSMEs in India, this section outlines some key policy recommendations based on these interviews.

A vast majority of the surveyed enterprises reported that the inability to access markets, retain customers, and effectively market their products were among the top challenges faced by them. Given that market access and marketing-related challenges are a significant constraint to their growth, MSMEs recognise the potential of e-commerce to expand their reach to a wider geographical coverage. However, leveraging platforms to enable MSMEs to expand access to markets and grow their businesses requires an enabling environment in the form of the right policy support from the government. It also requires a greater collaboration with stakeholders from the private sector, particularly from e-commerce platforms.

Apart from challenges pertaining to access to markets, surveyed MSMEs also indicated several other challenges relating to physical infrastructure bottlenecks, lack of access to credit and skilled labour and problems of delayed payments. To address these bottlenecks, Central and State governments have put in place various schemes that provide financial assistance, access to technology and upgradation facilities, infrastructure development, skill development and training. These include Emergency Credit Line Guarantee Scheme, Credit Guarantee Fund Trust for Micro and Small Enterprises, and the Credit Linked Capital Subsidy Scheme (at the central level), and the MSME Sarthak Scheme (Karnataka), Uttar Pradesh government's One District One Product (ODOP) scheme and the Rural Craft & Cultural Hubs (West Bengal), amongst others. Survey respondents strongly felt that there is a need for consolidation and rationalisation of the schemes. The respondent MSMEs highlighted the importance of effective co-ordination between the State and Central governments and the significance of having a comprehensive MSME policy that will allow such firms to find policy incentives and programmes in a single place. Further, they noted that it was also essential for governments at all levels to create greater awareness about the various incentives and programmes for a higher uptake.

Cluster development policies play a crucial role in the growth of manufacturing-sector MSMEs. They are particularly significant in the context of MSMEs as they enable such firms to intensify cooperation, collectively achieve economies of scale, and pool resources to ultimately improve their efficiency, productivity, and attractiveness to foreign direct investments. In the context of e-commerce integration, MSME respondents indicated that state governments can identify manufacturing and MSME clusters in their jurisdictions and initiate programmes that enable firms in the identified clusters to join e-commerce platforms, leverage the One District One Product programme to promote targeted products, and tap into the expertise of industry stakeholders to promote exports and e-commerce.

Surveyed MSMEs indicated that there was scope to promote exports through e-commerce platforms as well. Many MSME owners noted that apart from expanding their reach in domestic markets, e-commerce platforms could also allow them to go international, thereby boosting scalability and optimizing resources and costs. India's recent Foreign Trade Policy (2023) has provided several incentives and support measures for MSMEs that are engaged in e-commerce exports by reducing compliance costs. It also encourages cross-border trade in the digital economy through e-commerce exports by providing MSMEs with access to international platforms through the Niryat Bandhu Scheme.[j] The policy also intends to build e-commerce hubs to facilitate cross-border activity, as well as to operationalise Dak Ghar Niryat Kendras for artisans to facilitate overseas market access[k]. Survey respondents indicated that for enabling exports through e-commerce platforms, there was also a need for setting up dedicated e-commerce-MSMEs export promotion cells within the exisiting export promotion councils, trade promotion organisations, and trade bodies (at the district or cluster level). Such promotion cells can provide information on the destination market; collate demand data; and conduct training exercises on using e-commerce platforms, e-commerce exports procedures, brand building, and digital marketing in partnership with private sector players and government bodies.

The respondents were of the belief that enabling goods and services tax (GST) parity between offline and online sellers with respect to registration procedures is important to encourage MSMEs to integrate with the e-commerce ecosystem. Prior to the 47th GST Council Meeting in June 2022, online sellers selling through e-commerce had to mandatorily register for GST irrespective of their annual revenue, whereas for offline sellers, there was an exemption up to INR 4 million annual revenue (INR 2 million in some States). This created an imbalance between online and offline selling and acted as a barrier for the sellers to sell online. However, at the 47th GST council meeting it was decided that any online or offline seller having an aggregate turnover on all India basis below the range of INR 4 million, would be exempt from mandatorily registering for GST. This is indeed a positive development, however the existing GST regime needs further simplification to reduce the compliance burden particularly with respect to the issue of principal place of business (PPOB). For online sellers, which tend to have inter-state operations and sales, the compliance obligations associated with PPOB (such as providing seller records, maintaining books of accounts, interacting with their authorised representatives and assisting tax authorities) are significant as they have to comply with these norms in every state they are trading and operating. For MSMEs in particular, these compliance burdens are significant compared to bigger sellers who can provide PPOB in every state. Several MSME respondents felt that permitting MSME sellers to obtain State level GST registration with a single national PPOB for online sales would enable MSMEs to integrate with the e-commerce eco-system. Further, they noted that there was a need for greater clarity on the definition and various dimensions of PPOB.[46]

The private sector, particularly large e-commerce companies, also have an important role to play in creating an enabling environment for MSMEs to leverage platforms for their growth. The government and the private sector must collaborate to improve the skilling and training ecosystem for the MSME sector, thereby closing the skills gap faced by these firms and facilitating their smoother integration with e-commerce. Apart from skill development and training programmes, respondents also emphasised the government's and e-commerce companies' roles

[j] The Niryat Bandhu scheme aims to "mentor new and potential exporters on the intricacies of foreign trade through counselling, training, and outreach programmes" so that they can get into international trade.To boost exports from India. This initiative would be a 'hand-holding' experiment for the youngsters in international business enterprises. Exporters from MSMEs are also guided under the scheme.

[k] To promote e-commerce through post offices, Department of Posts has launched the initiative to set up Dak Ghar Niryat Kendras (DNKs) with ease in booking and transmission, electronic filing of Postal Bill of Export, and customs clearance while ensuring visibility and transparency in the whole process. The integration of DNKs with e-marketplace / aggregators will ensure end-to-end logistic support to the exporters registered on such e-marketplace.

in providing MSMEs with market development assistance, supply chain and logistics management and support for technology adoption. For e-commerce companies specifically, MSME owners highlighted the importance of undertaking measures to enhance overall customer experience on the platform, boosting MSMEs' reach to customers and improving profit margins for MSMEs to support their growth.

In terms of access to finance, it was recommended that tie-ups between e-commerce platforms and fintech companies would be beneficial for MSMEs as they provide the latter with several benefits. The respondents indicated collaboration between fintech and e-commerce businesses will make it possible for them to accept digital payments, which will not only lower operating costs but also accelerate the shift to the digital economy, especially in rural areas. They felt that fintech solutions that provide low-cost technology alternatives like "Buy Now, Pay Later" and "Pay by Link" will encourage local retailers to switch from traditional offline to online business models. It was unanimously agreed that fintech will empower local retailers by offering loans at concessional rates and with less paperwork, in addition to the convenience and efficiency in business operations that such partnership delivers. Additionally, in some cases, fintech's collateral-free offerings would make it easier for MSMEs to receive loans without facing too many obstacles.

Going forward, fintech companies can potentially help underwrite the cashflows of MSMEs because they have access to real-time data via tech-based solutions such as the Account Aggregators (AA). These are non-banking financial companies regulated by the Reserve Bank of India (RBI), introduced to empower citizens through explicit consent-based data sharing and digital data portability. At present, any registered and regulated entity under RBI, Pension Fund Regulatory and Development Authority, Securities Exchange Board of India, and Insurance Regulatory and Development Authority of India can be part of the AA ecosystem. However, with the recent Data Protection Bill, there is a possibility that MSME owners can also share their proprietary data. In such a scenario, by working with large e-commerce companies, the AA can enable improved access to finance for MSMEs by allowing them to share their transactions and credit flow information on these e-commerce platforms, to establish their creditworthiness.

V. Conclusions

Indian policymakers have been formulating policies and designing programmes to support MSMEs with the objective of creating jobs and achieving inclusive growth for decades. While the programmes have helped increase the number of enterprises, MSMEs continue to face barriers to growth. As economies rapidly digitalise, MSMEs will need to embrace digital solutions to compete and survive.

The analysis from the survey suggests that MSMEs which adopt e-commerce platforms as a sales channel tend to be those that are owned by younger and more educated individuals. A higher share of export-oriented MSMEs are found to be integrated with e-commerce platforms compared to firms that do not export, suggesting a positive relationship between firms' export orientation and e-commerce adoption. On an average, integrated MSMEs appear to be better off than non integrated firms on key performance indicators such as turnover, profitability and share of employment benefits. This is perhaps because such MSMEs are better placed to harness the benefits of online sales and are therefore more likely to join e-commerce platforms. Integration with e-commerce platforms are found to bring important benefits to MSMEs such as an improvement in some key performance indicators (total sales and profit margins), investment in employees and machinery and equipment (including software), and innovation in products and business processes. Survey findings suggest that integration with e-commerce platforms not only enable MSMEs to improve their access to market but also access to finance, thereby alleviating critical barriers to their growth. Thus, for MSMEs to be effective engines of inclusive growth, their digital transformation must be a priority.

While the results of the survey suggest that e-commerce platforms can serve as a promising driver of business growth for MSMEs, it is important to highlight two issues that merit greater attention in the future discourse. One, while there has been a paradigm shift in consumer habits after Covid-19 with consumers now having the convenience to buy and compare products online and paying digitally, the question of whether e-commerce sales are sufficiently stable to serve as a reliable source of revenue remains unanswered. Recent research on e-commerce across 47 economies and 26 industries during the COVID-19 pandemic using aggregated and anonymized transaction-level data from Mastercard, shows that the share of online transactions in total consumption increased during the pandemic (and by more in economies with higher pre-pandemic e-commerce shares). However, the spikes in online spending shares are dissipating at the aggregate level.[47] Second, while we seek to understand the heterogeneity within the micro, small and medium enterprises, we are unable to conclusively establish whether the process of integration with platforms is more beneficial for micro or small or medium sized firms.

While there are gains to MSMEs by integrating with e-commerce platforms, it is important to recognise that for firms that are unable to join e-commerce platforms, technology may represent a survival threat rather than an opportunity. Firms that are not integrated with e-commerce platforms are likely to find it more challenging to access markets at a time when integrated firms are making deeper inroads into markets by leveraging platforms. Given that the integrated firms are better off on average than non-integrated firms, such differences in market access on account of e-commerce platforms can exacerbate inequities between these firms.

Policymakers and other stakeholders must be mindful of these potential inequities and seek to bridge the divide between the integrated and non-integrated firms. This requires an understanding of the factors that impede firms from joining platforms. In the sample, non-integrated firms indicate that in large part their decision to not join platforms is due to lack of knowledge and information about digital technologies and e-commerce platforms. However, the decision of a firm to join e-commerce platforms is not simply a function of whether it has knowledge and information about the platform but also the firm's own internal capabilities which determine whether it stands to benefit from joining e-commerce platforms. This suggests that bridging the gap between integrated and non-integrated firms will not only require investments in technology, digital skills, information, and other factors that are complementary to e-commerce adoption, but also enhancing the capabilities and productivity of MSMEs by providing them with infrastructure services, financial services, managerial and business skills and enterprise support and training.

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2 Ibid

3 As of May 2023. These are classified MSMEs, implying those registered MSMEs, which have been classified as micro, small and medium as per the eligibility criteria. The Government of India started an online system for registering MSMEs launched by the Union MSME Ministry on July 1, 2020, called Udyam registration; ***https://udyamregistration.gov.in/Government-India/Ministry-MSME-registration.htm;*** Udyam Registration, also known as MSME Registration, involves the government sign-off and the provision of an Udyam Recognition Certificate and a Unique Number.

4 See MSME Annual Report 2022-23.

5 ADB (2010); World Bank Enterprise Survey.

6 ibid

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[31] It is important to clarify that in the above we are not implying that the higher turnovers, on average, amongst integrated firms are a consequence of being integrated. We are simply looking at characteristics of integrated firms compared to non-integrated ones.

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Notes

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