

Original Research Article

Online Mango Business Challenges and Opportunities in Rajshahi Division: A Qualitative Approach

ABSTRACT

Aims: The main objective of this study was to investigate the challenges and opportunities of online mango business in Rajshahi division of Bangladesh.

Study design: This study involved fifteen in-depth interviews with students running an online mango business to gather information on their perceptions, feelings, beliefs, business nature, reasons for starting, management of student life, and problems and opportunities of the business. The in-depth interview approach was used to gain a comprehensive understanding of the students' experiences and perspectives.

Methodology: The method and procedures for evaluating data and providing some level of knowledge, explanation, and interpretation of patterns and themes in textual data are referred to as Qualitative Data Analysis (QDA). Words, pictures, observations, symbols, and descriptions make up qualitative data. There are numerous kinds of qualitative data analysis. For this analysis, the researcher used the thematic data analysis method.

Results: The study explored that they have sufficient technological skills to operate their internet activities properly. Most of them has begun businesses since their college period, where some others started during the COVID-19 epidemic, motivated by friends, family, and other entrepreneurs, and eventually got capital support from their families. These students have dedicated customer bases and concentrate a premium on providing high-quality products in order to sales promotion. They actively run their businesses through Facebook, taking advantage of the platform's extent. But most of the entrepreneurs dealing-deal with several issues while manage their enterprises such as payment-related problems, transportation problems, and delivery-related problems etc. The findings also showed that online business alters those student's lifestyles and upbringings, bringing in a new era of self-confidence and self-respect

Conclusion: Financial support, good transportation system, basic training of the online business, different online courses, and workshops for the entrepreneurs should be organized and needful for escalating this easy-access business and look forward with strong business determination.

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Keywords: Challenges, COVID-19, Expenses, Online-Business, Opportunities, Self-dependents.

1. INTRODUCTION

The mango (*Mangifera indica*), a significant and well-liked fruit in Bangladesh, is a member of the Anacardiaceous family. Among the fifty varieties of fruits cultivated in Bangladesh, it takes up an exceptional position in terms of taste, nutritional value, customer choice, etc [19]. For almost 4,000 years, it has been cultivated [20]. Mangoes rank average among fruits in terms of iron content, and their unripe fruits have about 50% more vitamin C than their ripe peers [15]. Mango is the

most popular fruit in Bangladesh and known as the “King of the Fruit” [2]. This fruit is extremely valuable in terms of money and prosperity. But a large number of mangoes are spoiled because of its bulkiness, perishability, seasonality, and insufficient transportation facilities [9]. Besides, it is largely produced seasonal fruit in the north-western part of the country [17]. Particularly, Rajshahi division has a rich history of mango production and trading since ancient times. Popular varieties like Langra, Fajli, Himsagar, Gopalbhogh, Haribhanga, and Amropoli etc. are made this region well-renowned in front of outsiders [8]. Approximately, 85% of people of this division are directly or indirectly dependent on mango business [2]. That's why, it is dominating the economy of the division of Rajshahi [17]. Among the eight districts, Rajshahi is one of the country's leading mango-growing district then others [21].

Online marketing is the most popular form of direct marketing which is growing dynamically. It means the usage of internet for promoting products and services, and build consumer relationships [3]. Because of the rapid development, expansion and use of the internet, social media, mobile devices, and other digital technologies, online businesses have achieved its importance and gained popularity. Sadia and others [14] investigated customer satisfaction in online buying and discovered that service quality and on-time delivery had significant effects on client happiness, whereas pricing had no effect. Srivastava and others [16] highlighted the importance of supply chain management and digital marketing in keeping customers engaged in e-commerce platforms, particularly in agricultural supply chains. Abir and their colleagues discovered favorable relationships between e-commerce customer satisfaction and psychological, economic, and socio-cultural characteristics, while demographic factors had no statistically significant impact [1]. Borisova and others investigated current digital marketing trends and their possible uses in modern agriculture, highlighting the importance of adapting marketing techniques in response to changes in customer behavior [5]. Ramesh [11] highlighted the importance of digital marketing in allowing farmers to reach a larger customer audience and achieve greater pricing for their agricultural products, with a specific emphasis on the impact of COVID-19. Sumi and Ahmed [18] examined youth customer's online purchasing behavior during the COVID-19 epidemic, identifying the impact of both histrionic and economic factors on attitudes and purchasing behavior [17]. The attitudes of internet shoppers strongly predicted their online purchasing behavior.

Selling products online is a wise strategy for businesses to expand during tight economic times like nowadays. A website enables a business to access clients all over the world [22]. An enterprise loses out on a significant opportunity if it does not execute online business properly. A business that does not use the internet for business is at a competitive disadvantage. However, it takes more than just decision to launch an online business; you have to execute it well. Gaining and retaining consumers requires you to know what they believe about how effective your online business is? [12]. It is important that enterprise take quick action and implement suitable steps. Entrepreneurs may connect with the right clients by selling online.

Surprisingly, understanding the scope, students of Rajshahi division have been reveal their interest on seasonal online business of mango in recent years. Because, E-business is a useful instrument which improves student empowerment as well as provides financial freedom, social independence, and a sense of self-sufficient. Online mango businesses inspired students in a way that it's offering opportunities like employment with education to unemployed youngsters, and enabling them to bring balance between education and entrepreneurship. On the other hand, online reviews and selling history influence customers purchasing behavior and customers also get benefited from various online mango shopping pages with their offered conveniences [23]. Trustworthiness and product quality are essential components of their business development [4]. But there are some obstacles in the Rajshahi Division to the empowerment of student entrepreneurs. By using online mango enterprises to empower students, these issues must be resolved. So, the research focuses on the challenges and opportunities of online mango businesses of the particular Rajshahi district. Furthermore, this study can help policymakers to evaluate mango marketing system, provide benefits to online retailers, and modify e-commerce rules and regulations. Besides, the existing literature reveals a wealth of studies on digital marketing, consumer preferences, and mango marketing, both domestically and internationally, with a predominant quantitative focus. However, there is a significant gap in qualitative research specifically addressing the challenges and opportunities of online mango marketing in Bangladesh, particularly in the Rajshahi division. This study seeks to bridge this gap by adopting a qualitative approach to explore the dynamics of online mango marketing in the region.

2. MATERIAL AND METHODS

According to The Business Post, the additional director of the Department of Agricultural Extension (DAE), said there are more than 2.65 lakh mango growers and orchard owners in the region comprising the Rajshahi division. Around 1.30 lakh people are engaged in various activities related to mango harvesting, segregating, packaging, transporting, and marketing. He added that the DAE has set a target of harvesting around 10 lakh tons of mangoes from 80,360 hectares of land in the region this season while last year's production was 8,31,940 tons from 72,909 hectares of land. Many of the young entrepreneurs in the region are selling mangoes online after the best uses of Facebook and WhatsApp like various social media. That's why I chose this region.

In this study, in-depth interviews were employed to gain a comprehensive understanding of students engaged in online mango marketing. The in-depth interview phase involved 15 students engaged in online mango businesses, encompassing graduates from different private and public universities, where the study employed a non-probability sampling method known as snowball sampling to accumulate them. The participants, aged between (15-34), were well-educated and had strong social networks. These interviews focused on the challenges and opportunities faced in running business. The employed data analytical method was Thematic Analysis, which involves identifying patterns of meaning within the collected textual data. The process began with a comprehensive review of the data, including transcripts from in-depth interviews. A codebook was created, utilizing in-vivo codes derived from specific phrases and metaphors used by participants.

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This research is qualitative in nature which focused on the online mango businesses of Rajshahi division in Bangladesh. The study utilizes a qualitative exploratory research design to determine the challenges and opportunities of the online mango marketing business. This study was carried out in Chapai Nawabganj and Rajshahi districts of Bangladesh in July 2023, focusing on students engaged in online mango marketing. Individual interviews are the most common type of data collection for qualitative research [7]. Unlike survey instruments, qualitative interview protocols can be adjusted to my research topic, which is one-way qualitative methods contribute to flexibility [6]. The structure of the interview process itself also contributes to flexibility. The most popular style of interview utilized in research is semi-structured interviews, which allow for "probe questions" in between the predetermined interview questions that you ask each participant. Probe questions allow you to ask participants to elaborate on specific thoughts or experiences raised throughout the interview [10]. This results in deeply complete responses to your inquiries that add essential information to the literature on your topic. The flexibility of qualitative research methods is also great for exploring topics that haven't been studied widely [13], as there might not yet be sufficient research on the topic to generate quantitative hypotheses to test with statistical analysis.

3. RESULTS AND DISCUSSION

3.1 Socio Demographic Status

Figure 1 shows that 40% of the participants fall within the age range of (15 - 24), while 60% fall within the age range of (25 - 34). Among the participants, 40% are undergraduates, where 60% have completed their graduation. In terms of educational backgrounds, 66.67% come from public universities, 26.26% from national universities, and 6.67% from engineering colleges. The majority of the participant's businesses have solo ownership (93.33%), while only 6.67% having joint ownership.

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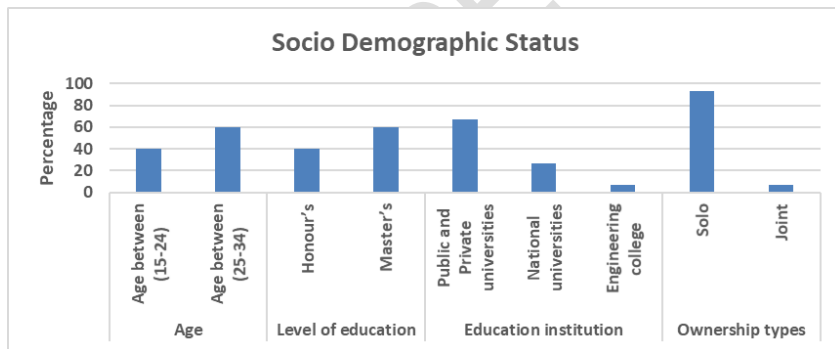


Fig. 1. Socio demographic status of the respondents

3.2 Case Study Analysis

3.2.1 Case study 1

My name is Shamsul Haque. I completed my graduation from Rajshahi College. I have been involved in the mango business since the time of Covid-19 in 2020. I have done my business online. During Covid, I planned to get involved with business at home, like I invested some money online and made some profit. When the mango season came again, I started online mango business with the money from the previous profit. I am from Chapai Nawabganj and my area is famous for mangoes so I had little idea about mango business. Moreover, many friends, classmates, teachers in our college life were talking about bringing mangoes to them, so I thought that I can take order online and deliver mangoes,

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then I did that. And if I gave them mangoes, they would trust me and ask me to supply mangoes. From there my mango business started and it continued. My mango business was going well. The style I followed in my mango delivery was that I advertised mangoes on my Facebook page. Then I advertised mangoes on various Facebook e-commerce groups. Then those who ordered mangoes, I took advance payment first because there is no risk in taking advance payment. Those who are closer, I have given products in advance or cash on delivery from some of them. Then I also contacted an online business or e-commerce company called Sirajganjshop.com. I had a contract with them, they will give me a list of customers, according to that list I will deliver mangoes. Then they will pay me. In this way I continued to deliver, according to the list they gave me, I delivered. But the customer would make an advance payment to the e-commerce company, give me a list of customers who paid, and then I would deliver the mangoes to them. But I used to get payment after 7 to 30 days. Thus, I have a relationship with that e-commerce company. Then I delivered mangoes worth about 100 thousand takas to them, but I did not receive the payment while waiting for the payment. Later, when the e-commerce scandal started in Bangladesh, there were many investigations, including the e-commerce company. Till now I have not received my payment. Even after this happened to me, I wasn't disappointed I got back on track. I already have a lot of customers who order a lot of mangoes from me. At the end of the season, I get a profit of around 300 thousand takas. I can help my house from that money. I have helped in many houses works. I have helped in my studies. Finally, I will say that there is profit in this business, but I don't see the possibility of loss if I don't fall victim to any fraud.

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3.2.2 Case study 2

My name is Rehan. I completed my graduation from Chittagong University. I have been involved in the mango business since the time of Covid in 2020. I have done my business online. I was sitting at home during Covid time so I was already doing some work like investing some money online and making some profit. When the mango season came again, I started online mango business with the money from the previous profit. I am a native of mango area, I had a little idea about mango business. Moreover, many friends, classmates, teachers of our university were talking about bringing mangoes to them, so I thought that I can order online and deliver mangoes, then I did that. Then I contacted an online business or e-commerce company called Sirajganjshop.com. I had a contract with them, they will give me a list of customers, according to that list I will deliver mangoes. Then they will pay me. In this way I continued to deliver, according to the list they gave me, I delivered. But the customer would make an advance payment to the e-commerce company, give me a list of customers who paid, and then I would deliver the mangoes to them. But I used to get payment after 7 to 30 days. This is how my business continued for some time. I sell about 300-thousand-taka worth of mangoes. Thus, I have a good relationship with that e-commerce company. Then again, I delivered about 300 thousand takas of mangoes but waiting for the payment I never received the payment. Then when the commotion about e-commerce started in Bangladesh, there were many investigations, among them were those e-commerce companies. Till now I have not received my payment. Then the mango business was not done anymore due to disappointment. But there is no problem in giving mango to such normal customer. I was a victim of fraud while doing business with e-commerce company. I would say this is mainly a payment related problem because if I had taken the payment in advance I would not have been scammed. Basically, in online mango business we usually take advance payment. There is no chance of getting cheated by taking advance payment.

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3.3 Challenges of Online Mango Business

There are some key challenges associated in this business faced by the students. In this study, the participants faced payment-related problems, transportation problems, and delivery-related problems. Participants said that some fraud customers play tricks for not paying. These Challenges are discussed below:

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3.3.1 Payment related problems

Payment issues can be major obstacles for online businesses. In the field of E-commerce business of in Bangladesh, entrepreneurs faced various types of fraud that had a negative impact upon their business operations, financial stability, and reputation. E-commerce act as a middleman and sometimes fraud with sellers and customers. According to one participant: "In our e-commerce business, the platform acted as a middleman. Customers paid in advance to e-commerce and the platform paid us either weekly or monthly." (In-depth R1, aged 25) E-commerce always delays in repayment after the delivery. But E-commerce always takes advanced payment from the customers but they pay the seller after the delivery or they take around 7-30 days. Along with that, customers are the main core of the online business but some customers are tricky for not paying the seller. A participant said, "In 2020, I faced an issue when I delivered mangoes to a customer without taking advance payment, and later on, the customer denied to provide the payment. He kept me waited for 2 months and finally refused to pay" (In-depth S3, aged 25).

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3.3.2 Delivery-related problems

Transport problems arise during rainy season through damaged roads, especially in least developed and rural areas. "In this business, there are some challenges, where transportation is the major one. The roads got damaged during rainy seasons, and the mango orchards are far away from the highways which create hassle." (In-depth M3, aged 19)

According to the discussion, transportation is the main problem in this business. The roads get damaged during rainy seasons, and the mango orchards are far away from the highway that's why it creates the problem. Besides, running an online mango business involves working with courier enterprises for shipping, which might provide specific challenges. In this context, one participant said, "The cost of delivering mangoes to Dhaka is quite high, around 20 takas per kilogram, which impacts my overall expenses. Moreover, courier services have limited access which limiting my reach." (In-depth S1, aged 25). Incompatible delivery times, mishandling of parcel, and poor customer service all these issues have an impact on overall quality of the courier service. Mangoes are sensitive and easily damaged during transportation if they are not handled properly. Participant have been suffering from this problem since beginning of the business. In this business, during exam time, participant feel a little bit of pressure in management. It is not so hard as they handle this pressure easily. Participant argued that, "During exam times, I face some problems then my cousins help me, and I also receive support from my hired labor during transportation." (In-depth I1, aged 24).

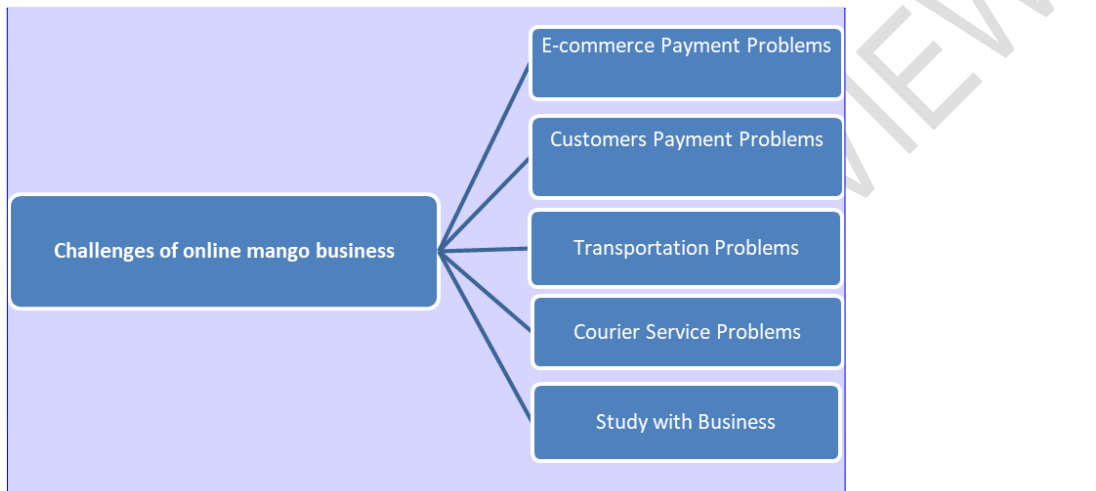


Fig. 2. Challenges of online mango business

3.4 Opportunities from Online Mango Business

There are some opportunities and benefits created from the online mango business. Self-dependent is one of the major ones. Another is Communication skill development. ~~Its-its~~ ~~create-creates~~ employment opportunities for the employees. Businessman achieved love and respect from everywhere for these activities. They got many good reviews for their product.

3.4.1 Self-dependent and employment generation

Self-identity creation is a big challenge nowadays. Everyone needs his identity earning source. It improves his social position If he took a quality education, he must use it and use his knowledge and skill in his business. One participant said, "I became self-dependent. Now I can drive myself." (In-depth S3, aged 25) The participant said that he created his self-identity by conducting online business. He always wanted to do something innovative, he started the business and made his self-identity. By running online business, they could bear their family's normal expenses, daily needs-type expenses. Participant said that, "I usually contribute to the family's normal expenses, not the major ones." (In-depth M2, aged 25). By running online business, they could bear their normal education expenses, and extracurricular activities. In this regard, participant told that, "It has already allowed me to take care of my education expenses since 2022 and support my family financially." (In-depth R3, aged 24). They create employment opportunities for others by running this business. According to participant, "I have two workers who help me with collecting and packaging mangoes, and I also assist them in their tasks. I make sure to pay them regularly." (In-depth M1, aged 25)

3.4.2 Communication skill development

Through this business, a student able to develop his skills and creativity. Participants developed their communication skills through this business. As a student, lot of people know them and also have a lot of friend's circles which makes it easy for him to be in business. Day by day they improved their skills and broadened their business. According to one participant, "My education always helps me in this business. Being educated provides me with knowledge about various

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aspects of business and other areas. Communicated skills are developed through this business. People know me by my study then create a friend circle and start up a business through them.” (In-depth H2, aged 25)

3.4.3 Love, respect, and profit

By running online business, they found love and respect from their family, friends, relatives, and customers. It's a big achievement to gain love and respect by doing an online mango business. They achieved love and respect from everywhere for this business. One participant said, “I found a new world through this business. I got love and respect from this business and enjoy this platform very much.” (In-depth P1, aged 25). According to them, it's a profitable venture, and anyone can start and succeed with dedication and a focus on quality. One participant said that, “I make a profit of 700 to 1000 taka per mound, and by the end of the season, I expect to have a profit of around 2.5 to 3 lakh takas”. (In-depth H1, aged 24)

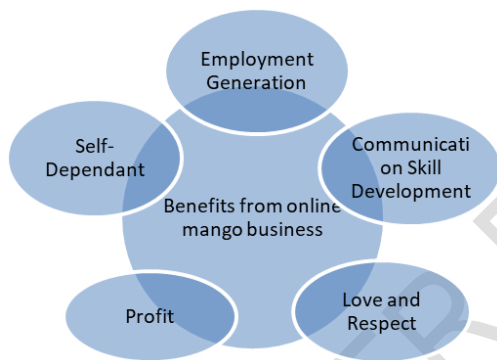


Fig. 3. Benefits from online mango business

4. CONCLUSION

Entrepreneurship is a respectable job in today's society. People are engaging in more diverse activities than in the past. Every educated individual in Bangladesh now wants to achieve something in their early life. Different work opportunities have been developed for our educated generation through governmental and non-governmental support. Everyone in today's society has seen the results of any employment but is not interested in the reasons for starting this business, as well as the present situation and challenges faced by running this online business. Every participant stated that they require self-identity as well as financial freedom. The online platform provides possibilities for students to use their knowledge and skills. They might easily manage their business and do something unique and distinctive in their lifetime provided they receive enough support from their family and social respect. When it comes to starting a business, many students face some challenges starting from the family. The study found that participant's family didn't help them at the start of their business. However, the family supported them after receiving success. Furthermore, during the Corona pandemic, student entrepreneurs launched this digital business and efficiently utilized their time by completing other online businesses and earning money for themselves. But most of the entrepreneurs dealing with several issues while manage their enterprises such as payment-related problems, transportation problems, and delivery-related problems. However, they solve the challenges technically and expand their business. The findings also showed that online business alters those student's lifestyles and upbringings, bringing in a new era of self-confidence and self-respect. It is also discovered that they are satisfied with their business results, but they believe that if they dedicate more time, effort, and ideas to it, it will expand. Although balancing academics and business can be difficult, our students are capable of doing so. If their family and society encourage and value their entrepreneurship, they will find it easier to do so properly and easily in the long run. Finally, financial support, good transportation system, basic training of the online business, different online courses, and workshops for the entrepreneurs should be arranged as they become more aware in conducting business and look forward with strong Business determination.

ETHICAL APPROVAL

Not applicable.

REFERENCES

1. Abir T, Rahman MA, Yazdani DM, Khan RH, Supty SS, Hamid AB. Electronic Word of Mouth (e-WOM) and consumers' purchase decisions: Evidences from Bangladesh. *Journal of Xi'an University of Architecture & Technology*. 2020;12:367-82.
2. Ahmed AK. Production technology of mango. Horticultural Research Centre, BARI, Joydebpur, Gazipur. 1994;1701:122.
3. Armstrong G, Adam S, Denize S, Kotler P. Principles of marketing. Pearson Australia; 2014 Oct 1.
4. Belanger F, Hiller JS, Smith WJ. Trustworthiness in electronic commerce: the role of privacy, security, and site attributes. *The journal of strategic Information Systems*. 2002 Dec 1;11(3-4):245-70.
5. Borisova LV, Baranova IV, Bruzhukova OV. Digital Marketing: Drivers for the Development of the Russian Agricultural Sector. In 2nd International Scientific and Practical Conference "Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth" (MTDE 2020) 2020 May 5 (pp. 177-181). Atlantis Press.
6. Busetto L, Wick W, Gumbinger C. How to use and assess qualitative research methods. *Neurological Research and practice*. 2020 May 27;2(1):14.
7. DiCicco- Bloom B, Crabtree BF. The qualitative research interview. *Medical education*. 2006 Apr;40(4):314-21.
8. Halder S, Panghua L: Amrapali mango production highest among all varieties. *The daily star*, 2024, <https://www.thedailystar.net/business/economy/news/amrapali-mango-production-highest-among-all-varieties-3374591>
9. Miah MA, Hoq MS, Saha MG: Profitability of mango marketing in different supply chains in selected areas of Chapai Nawabganj district. 2018
10. Qu SQ, Dumay J. The qualitative research interview. *Qualitative research in accounting & management*. 2011 Aug 30;8(3):238-64.
11. Ramesh KN. Impact of digital marketing in agricultural sector. *EPRA International Journal of Multidisciplinary Research (IJMR)*. 2022 Mar 5;8(3):18-22.
12. Reibstein DJ. What attracts customers to online stores, and what keeps them coming back?. *Journal of the academy of Marketing Science*. 2002 Sep;30:465-73.
13. Webster S, Lewis J, Brown A. Considerations in qualitative research. *Qualitative research practice: A guide for social science students and researchers*. 2013 Nov 1:77.

14. Sadia A, Hoq MA, Jebu SA. Customer Satisfaction in online shopping: A Case Study on Bangladesh. InMESSAGE FROM THE CONFERENCE CHAIRS 2019 (p. 181).
15. Salunkhe DK, Desai BB. Postharvest biotechnology of fruits. Vol. 1. 1984.
16. Srivastava G, Anand N, Jain AK: Impact of supply chain management on the digital marketing of perishable goods (fruits and vegetables). Journal of Global Economy, 2018; 14(4).
17. Sultana A, Chowdhury MF, Pervez AK. present status of mango cultivation in Bangladesh: Case of Shibgonj upazila of Chapainawabgonj district. Journal of Agricultural and Rural Research. 2018;2(3):47-55.
18. Sumi RS, Ahmed M. Investigating young consumers' online buying behavior in COVID-19 pandemic: perspective of Bangladesh. IIM Ranchi journal of management studies. 2022 Apr 15;1(2):108-23.
19. Ahmed MS, Sanjay S. Studies on extension of storage life of Amrapali mango. Orissa Journal of Horticulture. 2000;28(2):73-6.
20. KALAM M. Marketing activities and post harvest losses of mango in Chapai Nawabganj district of Bangladesh (Doctoral dissertation, DEPT. OF AGRIBUSINESS AND MARKETING).
21. RAHMAN MM. Mango value chain analysis and detection of post-harvest problems at farmer and trader levels (Doctoral dissertation, DEPARTMENT OF PLANT PATHOLOGY).
22. Lincoln SR. Mastering Web 2.0: transform your business using key website and social media tools. Kogan Page Publishers; 2009 Jun 3.
23. Nguyen D. Influences of multi-channel distribution related to consumer buying behavior and profits growth rate.

ABBREVIATIONS

%	:	Percentage	<i>et. al.</i>	:	And others
\$:	Dollar	QDA	:	Qualitative data analysis
kg	:	Kilogram	COD	:	Cash on Delivery
WE	:	Women Entrepreneur	SEM	:	Structural Equation Model
BDT	:	Bangladeshi Taka	OLS	:	Ordinary Least Square
ANOVA	:	Analysis of Variance	TAM	:	Technology acceptance model
E-commerce	:	Electronic commerce		:	