Exploring Key Growth Drivers and Strategies for Enhancing Performance of Indian Food Tech Startups

Angad Munshi [1]
Ashim Raj Singla [2]

Abstract

The startup food tech business is a promising option due to its massive size and high repeat ordering behavior, besides the high margins emanating from it. Thus, to remain competitive and factor sustainability, the sector needs to revisit strategies, more so post 2019 due to the challenges posed by the COVID-19 pandemic. It is time to focus on the adoption of strategic options for improving the performance of startup food tech platforms while taking cognizance of various critical growth drivers. This paper explored the key growth drivers and challenges startup food tech platforms face and suggested strategies for enhancing their performance. The empirical study was undertaken using a fully structured questionnaire to collect data from the delivery staff of startup food tech platforms in seven major cities in India. The primary data thus collected was used for the descriptive analysis based on the respondents' demographic information. Confirmatory factor analysis (CFA) was carried out to support construct validation to assess the validity of the survey items based on the overall fitness of the model. Structural equation modeling (SEM) was used to test the hypothesized relationships between latent factors. The key growth drivers and their corresponding impact on other variables were worked out. This study recommended innovative strategies that can make the food delivery business more successful. The finding revealed that the key growth drivers included personalization & focused marketing, quality assurance, extended convenience, and value to consumers, and their corresponding strategies were reconnoitered. The paper would aid the concerned food tech sector further develop and implement strategic options for enhancing its business performance.

Keywords : **startup food tech platforms, online food delivery, key growth drivers, challenges, strategies, performance improvement**

Paper Submission Date : April 10, 2021 ; Paper sent back for Revision : September 3, 2021 ; Paper Acceptance Date : November 26, 2021 ; Paper Published Online : January 15, 2022

Startup entrepreneurs in India have access to staggering opportunities. A majority of them in the country are information technology (IT) service firms, followed by health care and life science-based firms, and agriculture and food sector firms (Dwivedi, 2019). The food-tech industry represents a fusion of food and technology (Gupta & Sarraf, 2019), characterized by technological development in food and related activities, including preparation, storage, and delivery. Startups share certain common features with each other, including access to insufficient resources, having to function in uncertain situations, severe time pressure, and the need for flexibility for venturing into rapidly growing markets (Korreck, 2019). The need for nurturing the idea, innovating, and venturing into potential new markets for ensuring growth and sustainability (Sharma & Goyal, 2020) is at the core of the constant endeavors required to be made (Jang, 2020; Raman, 2018). The

[1] *Research Scholar,* Indian Institute of Foreign Trade, IIFT Bhawan, B - 21, Qutab Institutional Area, New Delhi - 110 016. (Email : angadmunshi85@gmail.com ; angadres2020@gmail.com) ; ORCID iD : https://orcid.org/0000-0001-7446-1246
[2] *HOD (IT and Knowledge Management),* Indian Institute of Foreign Trade, IIFT Bhawan, B - 21, Qutab Institutional Area, New Delhi - 110 016. (Email : arsingla@iift.edu)

DOI : https://doi.org/10.17010/ijom/2022/v52/i1/159847

evolution of an online food culture indicates that life is getting busier, especially in the cities. This has led to the emergence of several food-tech aggregators in urban areas, including Swiggy, Zomato, FreshMenu, Faasos, HungerBox, Box8, and Curefit, which satiate the appetite of customers who lack the time and energy to cook at home or visit restaurants on a regular basis (Hasan et al., 2020). India's online food delivery business is burgeoning while witnessing prospective development (Ray et al., 2019). The food delivery business has excellent prospects as an online platform in the retail sector, next only to electronics and fashion products (Li et al., 2020). The online food delivery business is a promising option due to its massive size and high repeat ordering behavior, leading to brand creation and promoting strong long-term loyalty among customers. From the point of view of Bagla and Khan (2017), paucity of time to prepare food, variety of items available, and cashbacks and rewards are some of the core factors leading to the mass popularity of online food ordering. In addition, the high margins emanating from it make it a fundamentally strong business, while the absence of large multinational brands in this area provides the relatively smaller aggregators an opportunity to offer branded services at reasonable costs (Munshi, 2019). Thus, for a promising sector like the food delivery business, it becomes imperative to strategize and adopt strategic options for improving the performance of startup food tech platforms while taking cognizance of personalization, focused marketing, quality assurance, extended convenience, and value to consumers.

This research paper is based on the empirical exploration of existing food tech platforms in India written from the viewpoint of their delivery staff. While several studies have been carried out in this area, most of the studies have limited themselves to a single city while taking on board only a couple of significant variables. None of the studies reviewed here have involved an assorted platter of variables included in the present study that can lead to a sustainable conceptual model.

The uniqueness of this research work lies in the simultaneous incorporation of different key growth drivers and challenges as antecedents that propose a more complete conceptualization of the strategies for improved performance. The paper would aid the concerned food tech sector in further developing and implementing strategic options for enhancing their business performance. The paper analyzes startup food tech platforms' key growth drivers and challenges and delineates a strategic model for ensuring improved performance.

Review of Literature

One of the important aims of conducting the literature review for this empirical paper is to examine the antecedents and consequences of research activities pertaining to similar studies in the past. This review highlights the key growth drivers and strategies for improving the performance of startup food tech platforms and the challenges faced by them, as propounded below.

Key Growth Drivers

Li et al. (2020) studied the economic, social, and environmental impacts of food tech startups in India. From the economics point of view, food tech startups are seen to provide better job opportunities and encourage the creation of new business models as compared to the traditional restaurant patterns. However, this new business model may initially entail a lower level of job satisfaction than other business ventures. Socially, this model has a range of repercussions in terms of changing the human–food and human–human relationship patterns and providing comfort in the hectic pace of urban life, but it simultaneously signifies a threat to public health and also adversely impacts traffic in the urban landscape. The environmental impact of this business model is seen in the generation of food waste and plastic waste and an increase in the carbon footprint. Annaraud and Berezina (2020) explored the advocacy factors of online food delivery. They found that an increase in the daily number of orders led to large headroom for expanding reach and engagement. The study also found that ordering food through the online

delivery mode has become a habitual tendency for many customers of food tech startups. While attempting to understand the effect of availability and transaction reliability of the food delivery service apps, Verma (2020) found that positive reviews from family and friends motivated many customers to try this method of food purchase. Hence, food delivery applications or websites should be featured in such a way as to enable customers to compare and choose from a wide range of service providers and restaurants (Bajaj & Mehendale, 2016). This study, while using data till March 2016, examined the critical success factors and focused on the viability of the food-delivery business.

Currently, there is a high demand for healthy variants of food items among many customers of online food delivery services in India (Singh & Kaur, 2020). This study also found a set of people looking for home-cooked meals, thereby leading to meal subscription options. The empirical study conducted by Sivathanu (2017) in one city examined the impact of food marketing techniques on adolescents' food choices and showed that food marketing targeted at adolescents affected their food choices and influenced their health due to unhealthy food choices, making them vulnerable consumers.

Yeo et al. (2017) studied their sampled respondents' intentions, experiences, and attitudes toward online food delivery. They discovered that despite enjoying a positive reputation and popularity among their clients, many service providers still largely depended on restaurants for a smooth delivery experience. Besides, many of the respondents in this study expressed the desire to explore and try different cuisines. Tittle et al. (2020) analyzed the impact of service failures on the behavioral loyalty of the respondents. This is ostensibly a serious problem that needs to be addressed urgently by ensuring hassle-free delivery of customers' orders, leaving no room for confusion and misunderstandings, which emerges as a major motivating factor for startups engaged in this business. The research also outlined the benefits of taking orders 24/7 for the startups. Further, the availability of multiple payment options encourages more customers to utilize the app-based system for buying food. The assurance of minimum delivery time plus the offer of additional services like cash on delivery (COD) and Global Positioning System (GPS) to enable people to track their orders also attracts more customers to use this option (Gendron & Audet, 2012).

Hirschberg et al. (2016) closely examined the market for food delivery and realized that though delivery service providers are not involved in the preparation of food, they win the trust of people because of their service quality. Many customers accept the need for levying of delivery charges, and some of them buy food through the food apps whenever they get discount coupons. Many such customers also asserted that they never had any payment problems in this system (Crotts et al., 2008). Quynh (2019) studied the relationship between customer engagement (CE) and customer loyalty by investigating the diverse nature of the relationships among marketing structures and CE and suggested that the moderating influence of brand image weakened the relationship between the two. The importance of customer loyalty in the online environment also influences the re-ordering or repurchase behavior (Kurup & Jain, 2018). The study suggested some focus areas for e-marketers to remain competitive.

While for the construct key growth drivers, the variables like CE, loyalty, and service quality are critical, however, there ought to be many more variables that can act as key growth drivers and drive the sector. Most of the studies have limited themselves to a single city or so. None of the studies analyzed have holistically taken an assorted platter of variables on board that can lead to a sustainable conceptual model.

Challenges Facing the Food Tech Startups

Syamala Rao and Nagaraj (2018) surveyed users of online food delivery services and identified certain challenges. These included lack of knowledge and proficiency of use of mobile applications for utilizing the service among customers, delivery time issues for clients residing in remote or difficult-to-locate areas, the tendency of this

service to compel certain buyers to spend more than their buying power, and the challenges associated with a multicultural and multi-ethnic clientele with diverse food preferences. Salamzadeh and Kesim (2015) identified certain other challenges — encountering a startup business, including financial problems, the need to hire efficient delivery staff, problems of accessing support mechanisms, and lack of understanding of critical environmental issues. Korreck (2019) also came across certain typical challenges that startups in the online food delivery business all over the world struggle with. These include the selection of the right investor, the need for raising sufficient funds, understanding the requirements of customers in different regions, competition from large corporate-funded startups that are adept in capturing a large section of the market, price sensitivity that hampers the creation of effective customer strategies in Indian markets, working for a startup being an unattractive career option for many job-seekers, the existence of a complex regulatory framework, and bureaucratic procedures.

Maimaiti et al. (2018) offered distinctive viewpoints on the opportunities and challenges of shifting from offline to online food purchasing habits of the Chinese, bringing to the food environment, health outcomes caused by related behavior change, and its broader influence on the social environment. Although these food tech companies have several merits, they also encounter some problems such as accountability diffusion, improper supervision, and poor service standards. Hasan et al. (2020), through an empirical analysis, identified the following challenges of the food tech startup business model in the form of online food delivery platforms:

- There is very little loyalty among customers in this type of business, as different offers and food varieties offered by the competitors make the customers easy brand switchers.
- There is no standard model for pricing this service. On entering into this business, many startups provide unbelievable offers and discounts, which makes the pricing model more complex and unpredictable.
- On the other hand, many startups also face the dilemma of having to choose between maintaining a customer relationship or optimizing profits while offering delivery to a customer if the cost of delivery is not profitable.
- Despite the efforts of the service providers to ensure fresh food delivery, this can never compare with the hot food delivered straight from the kitchen to the dining table in a restaurant.
- During peak lunch or dinner times or even weekends, the large quantity of orders poses a struggle to many restaurants of prioritizing between walk-in customers and online delivery orders.

Kurode et al. (2016) broadly analyzed these challenges and offered some ideas to overcome these problems. These are delineated below :

- The plan of action developed by a startup should be both sustainable and profitable rather than a unique idea that ends in failure during implementation.
- It is critical to assess monetary requirements at a particular stage, including whether to raise capital by giving a portion of the proprietorship to an external investor, and the debt and equity ratio.
- The startup needs to weigh the pros and cons of employing human resources with a high potential that could also lead to high monetary outflows in terms of remuneration, especially since such staff is often likely to switch to big firms with better business sustenance possibilities.
- The management needs to take the crucial decision of selecting an appropriate market location, be it a single territory, or a state, or the whole country.
- The startup must not ignore the crucial concept of marketing its service, including the costs and benefits of specialized advertising.

↳ Last but not the least, the startup has to consider the cut-throat competition that prevails in this business and accordingly choose the sectors and product lines that it wishes to enter.

As is evident from the above, there are several challenges that ought to be converted to opportunities to remain competitive. It is also true that challenges crop up with the changing environment. Having said so, it becomes pertinent to identify and inclusively address the key challenges that can factor not only sustainability, trust, loyalty, and ensure quality assurance, besides other things. While relevant studies included above identified some such core issues that could be instrumental in performance disruption, it is inevitable to ascertain and recognize associated variables that are liable to impact the market in this sector.

Strategies for Improved Performance

Korreck (2019) studied the present environment of startups in India and identified three goals for successful performance — proper identification of factors for motivating growth, listing out the challenges that disrupt them, and formulation of strategies that support the development of these startups. Sparta et al. (2019) developed a case study on Zomato to understand its operational strategy. They found that Zomato's strategy is based on their value-driven parameters as they keep increasing their restaurant tie-ups. Listing of a restaurant's name on the Zomato app certainly increases its visibility, thereby reaching wider audiences. The food app is designed in such a way that it facilitates easy location of restaurants as well as food choices.

Further, Zomato also incorporates a 'delight' offering as a feature of its marketing strategy to entice customers. Saxena (2019) empirically analyzed the business models of the Swiggy and Zomato apps in India and identified some pros and cons. The pros include the convenience of ordering, variety and availability of food choices, ease of use of the app, ease of payment, timely delivery, and regular discounts on the orders. On the other hand, some of the cons, as pointed out by some respondents, included the compromised quality of the food, technical glitches in delivery, occasional failure to satisfy customer preferences, and lack of the human touch in an online delivery service vis-à-vis a restaurant serving an onsite customer. Das and Ghose (2019) also analyzed the impact of food delivery apps on the traditional restaurant business and found that a majority of the restaurants concerned used third-party apps, which has a considerable impact on their business performance.

Despite these studies, a cohesive and holistic approach to understanding the challenges and opportunities to lead to a sustainable strategic model has not been forestalled. Thus, based on the literature analysis, the research gaps observed and the research endeavors carried out to present a sustainable performance model are given below.

Research Gaps and Problems

The successful performance of a startup food tech platform is dependent on two aspects. First, it must be able to serve the needs and expectations of its existing consumers. Second, the increasing number of food delivery apps also leads to increasing competition among them (Ray et al., 2019). In this scenario, these firms need to understand the challenges and opportunities for improving their performance in the Indian market (Bhotvawala et al., 2016). They need to realize that they can increase their market size while achieving steady performance only by implementing a sustainable strategic model (Meenakshi & Sinha, 2019).

However, despite the existence of several studies on identifying the challenges, not enough empirical analyses have been conducted on critical issues in this domain (Gandhi et al., 2019). Further, no research has yet been done by collecting information from the delivery staff who work for various food tech platforms in India. The present study addresses these gaps by focusing on the key growth drivers and challenges faced by app-based food delivery firms and explores various opportunities to overcome these challenges. Simultaneously, this research attempts to offer a strategic model for augmenting a business's success.

Objectives of the Study

Keeping the above in context, the objectives of this study are to:

(1) Understand the key growth drivers that shape the startup food tech platforms in the Indian market.

(2) Identify the existing challenges faced by food tech startups in India with a special reference to online food delivery apps.

(3) Explore opportunities for improving the performance of these online food delivery service providers.

(4) Frame an innovative strategic model that would lead to successful business performance.

Research Questions

Based on the above objectives, this research seeks to answer the following research questions:

- **RQ1 :** What are the key growth drivers that shape startup food tech platforms in the Indian market?
- **RQ2 :** What are the existing challenges that lead to complications for online food delivery firms?
- **RQ3 :** What are the opportunities that can help in improving the performance of online food delivery firms?
- **RQ4 :** What are the innovative strategies that can make the food delivery business more successful?

Methodology

The study employed a cross-sectional survey research design (Coggon et al., 1997). The data for the study were collected by administering a fully structured questionnaire exclusively designed for this research. The survey was conducted among 180 delivery staff working for various online food delivery firms such as Swiggy, Zomato, FreshMenu, Faasos, HungerBox, Box8, and Curefit, in seven cities (Delhi, Mumbai, Kolkata, Chennai, Pune, Bengaluru, Hyderabad) across India in October 2020. These cities were identified based on the average monthly order volume. A simple random sampling method was used in this study to select these respondents (Fink, 1995). The research instrument consisted of questions pertaining to the demographic data of the respondents, questions measuring key drivers for the food tech platforms, challenges faced by the food tech platforms, and the strategies for overcoming these challenges.

The study considered the validity and reliability of the research instruments and the results. The quantitative method was used for the analysis of the data. Descriptive analysis was used for categorical variables described in terms of frequencies and percentages. Thereafter, inferential analysis was done using appropriate statistical tools (SPSS 21).

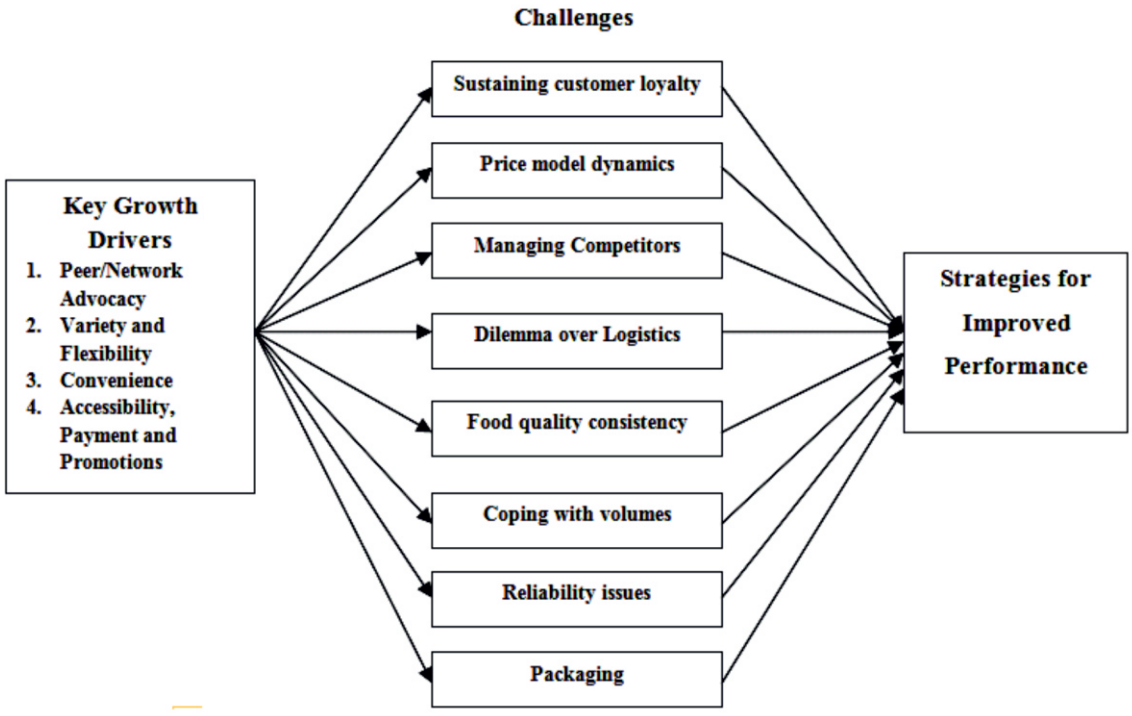
In all, for three constructs, that is, key growth drivers, challenges, and strategies for improved performance, 16 variables were identified, having 57 items or statements that were worked out based on the previous research studies. The key growth drivers comprise of four variables, of which the first, namely, 'peer/network advocacy,' has three items, taken from Li et al. (2020), Annaraud and Berezina (2020), and Verma (2020), respectively. The second variable, that is, 'variety and flexibility,' has five items taken from Bajaj and Mehendale (2016) and Singh and Kaur (2020). The next variable, 'convenience,' has four items adopted from Yeo et al. (2017), Tittle et al. (2020), and Gendron and Audet (2012), respectively. The last variable under the key growth drivers, that is, 'accessibility, payment, and promotions,' consists of four items developed from Hirschberg et al. (2016) and

Crotts et al. (2008). The second construct, that is, the challenges facing the startup food tech platforms, contains eight variables. Among these, the variable, 'sustaining customer loyalty,' has three statements developed from Korreck (2019) and Syamala Rao and Nagaraj (2018). The variable, 'price model dynamics,' has four items developed from Salamzadeh and Kesim (2015) and Korreck (2019). The variable, 'managing competitors,' holds only two items taken from Maimaiti et al. (2018) and Syamala Rao and Nagaraj (2018). The variable 'dilemma over logistics' contains five statements adopted from Hasan et al. (2020) and Korreck (2019). The next variable, 'food quality consistency,' has three items adopted from Kurode et al. (2016) and Korreck (2019). The variable, 'coping with volumes,' has three items taken from Salamzadeh and Kesim (2015) and Korreck (2019). The variable, 'reliability issues,' has five items adopted from Hasan et al. (2020) and Korreck (2019) ; whereas, 'packaging' has four items taken from Korreck (2019) and Syamala Rao and Nagaraj (2018). The dependent variable, 'strategies for improved performance' is measured in terms of the following four sub-variables with the number of concomitant items for them listed in parentheses against each of them: personalization and focused marketing (three items); quality assurance (three items); extended convenience (three items); and value to consumers (three items) adopted from Korreck (2019), Sparta et al. (2019), Saxena (2020), and Das and Ghose (2019), respectively.

All the constructs are measured using a 5 - point Likert scale with multiple item choices ranging from *'strongly disagree'* to *'strongly agree.'* The confirmatory factor analysis (CFA) is carried out to assess the validity of the survey items based on the overall fitness of the proposed model. The convergent validity and discriminant validity are assessed using CFA. Structural equation modeling (SEM) is used to test the hypothesized relationships between the latent factors.

The conceptual model depicted in Figure 1 shows the relationship between the antecedents, namely, the key

Figure 1. ***The Conceptual Model for Improved Performance of a Food Tech Startup***



growth drivers for startup food tech platforms, the challenges faced by them, and their impact on strategic options.

In accordance with this, the following three main hypotheses are tested :

- H_{01} **:** There are many drivers/no key drivers that shape startup food tech platforms in the Indian market.
- H_{a1} **:** There are four key growth drivers (Peer/ network advocacy, variety & flexibility, convenience and accessibility, payment & promotions) that shape startup food tech platforms in the Indian market.
- H_{02} **:** Food tech startups have many challenges that cannot be linked to the key growth drivers.
- H_{a2} **:** The food tech startup has eight main challenges that can be linked to four key growth drivers.
- H_{03} **:** It is not possible to construct a simple conceptual model using a variety of growth drivers and challenges as variables.
- H_{a3} **:** It is possible to construct a conceptual model with key growth drivers (four variables) and challenges (eight variables) as independent variables and using their relationship to arrive at strategies for improved performance (four dependent variables).

Analysis and Results

This research comprises three sections of data analysis. The first section contains descriptive analysis based on the respondents' demographic information. The second section discusses the validity of the research variable based on confirmatory factor analysis. The third section, which concludes the analysis, examines the structural equation modeling and tests the hypothesized relationships. The three types of analyses are detailed below.

Demographic Profile of the Respondents

The outcome of the study included 158 properly filled questionnaires. Table 1 summarizes the important demographic characteristics of the respondents. As shown in Table 1, among the online food delivery staff who responded to the survey questionnaire, 53.80% were in the age group of 21 – 30 years, 17.72% were in the age group of 31 – 40 years, 26.58% were between 41 – 50 years of age, and 1.90% were above 50 years old. As regards the organizations the respondents were working for, Swiggy employed 13.92%, 19.62% each were employees of Zomato and FreshMenu, respectively; 25.94% were working for Faasos, 6.96% were with HungerBox, 6.33% with Box8, and 6.96% were working for Curefit. As far as the locations are concerned, 14.56% were working in

Table 1. ***Demographic Profile of the Respondents***

Demographic Information	Frequency	Percentage
Age Group (in Years)		
21 – 30	85	53.80
31 – 40	28	17.72
41 – 50	42	26.58
Above 50	3	1.90
Organization		
Swiggy	22	13.92

Zomato	31	19.62
FreshMenu	31	19.62
Faasos	42	25.94
HungerBox	11	6.96
Box8	10	6.33
Curefit	11	6.96
Service Location		
Delhi	23	14.56
Mumbai	24	15.19
Kolkata	21	13.30
Chennai	30	18.99
Pune	18	11.39
Bengaluru	22	13.92
Hyderabad	20	12.66
Total	158	100.0

Table 2. ***Results of Confirmatory Factor Analysis***

Construct/Variables	Chi- Square Value	*P* - Value	GFI	AGFI	CFI	RMSR	RMSEA
Strategies for Improved Performance	4.338	0.411	0.976	0.943	0.991	0.025	0.032
Sustaining Customer Loyalty	4.221	0.311	0.995	0.977	0.998	0.011	0.020
Price Model Dynamics	3.212	0.432	0.991	0.923	0.993	0.031	0.053
Managing Competitors	3.422	0.432	0.991	0.923	0.993	0.031	0.053
Dilemma Over Logistics	3.315	0.322	0.996	0.979	0.999	0.014	0.015
Food Quality Consistency	2.543	0.623	0.966	0.921	0.936	0.032	0.021
Coping with Volumes	3.126	0.168	0.997	0.967	0.991	0.025	0.058
Reliability Issues	4.654	0.074	0.991	0.956	0.966	0.021	0.072
Packaging	3.750	0.430	0.990	0.970	0.987	0.019	0.035
Key Growth Drivers	3.665	0.234	0.981	0.950	0.987	0.032	0.077

Note : GFI = Goodness of fit index ; AGFI = Adjusted goodness of fit index ; CFI = Comparative fit index ; RMSR = Root mean square residuals ; RMSEA = Root mean square error of approximation.

Delhi, 15.19% in Mumbai, 13.30% in Kolkata, 18.99% in Chennai, 11.39% in Pune, 13.92% in Bengaluru, and 12.66% in Hyderabad.

Validity

Confirmatory factor analysis was carried out as part of the data validity test to assess the validity of the survey items based on the overall fitness of the model and the construct validity (Hair et al., 2010). In other words, this analysis aims to determine whether the model fits the data. After the data were collected, the convergent validity and discriminant validity were assessed using confirmatory factor analysis (Anderson & Gerbing, 1988), the results of which are shown in Table 2.

The results of confirmatory factor analysis reveal that all the values of chi-square, *p*-value, GFI, AGFI, CFI, RMR, and RMSEA fall within the acceptable range, which makes the model acceptable.

Results of Structural Equation Modelling

As per the results of structural equation modeling, the calculated *p*-value is 0.191, which is more than 0.05, indicating a good fit. Here, both the goodness of fit index (GFI) and adjusted goodness of fit index (AGFI) values are greater than 0.9, indicating that it is a good fit. The calculated comparative fit index (CFI) value is 0.901, which implies that it is a good fit, and the root mean square residuals (RMSR) value is 0.021, which is less than 0.036, and the root mean square error of approximation (RMSEA) value is 0.080, which is slightly higher than the expected value, indicating that it is acceptable.

The coefficient of key growth drivers towards sustaining customer loyalty is 0.35, representing the partial effect of key growth drivers towards sustaining customer loyalty, holding other variables as constant. The estimated positive sign implies that such an effect is positive and that sustaining customer loyalty would increase by 0.35 for every unit of increase in the key growth drivers, and this coefficient value is significant at the 1% level. The key growth drivers also correspondingly impact the other variables, that is, 'price model dynamics' by 0.17, 'managing competitors' by 0.36, 'dilemma over logistics' by 0.17, 'food quality consistency' by 0.28, 'coping with volumes' by 0.19, 'reliability issues' by 0.19, and 'packaging' by 0.18. As regards the impact on the dependent variable, the impact of 'sustaining customer loyalty' on 'strategies for improved performance' is 0.56, which means that given the impact of key growth drivers on the variable 'sustaining customer loyalty,' the impact on the variable 'strategies for improved performance' is 0.56. The impact of the other variables can also be seen in the SEM output diagram (Figure 2). These findings confirm that the key growth drivers should be mainly concentrated on sustaining customer loyalty, food quality consistency, and reliability issues to ensure better strategies for improved performance.

Thus, based on the above analysis and validation:

- **H01 :** The null hypothesis is rejected.
- **Ha1 :** The alternate hypothesis is accepted.
- **H02 :** The null hypothesis is rejected.
- **Ha2 :** The alternate hypothesis is accepted.
- **H03 :** The null hypothesis is rejected.
- **Ha3 :** The results of CFA reveal that all the values are within the acceptable range, which makes the model acceptable. Hence, the alternate hypothesis is accepted.

Managerial and Theoretical Implications

An important contribution of this research effort is the simultaneous incorporation of the different key growth drivers and challenges as antecedents of strategies for improved performance. Since the challenges faced by food tech platforms have been studied extensively in isolation, this study proposes a more complete conceptualization of the 'strategies for improved performance.' Likewise, the impacts of key growth drivers on the challenges and subsequently on the strategies for improved performance have also been studied. The study confirms that effective management of challenges, especially food quality consistency and reliability issues, plays a crucial role in building strategies for improved performance. Thus, the paper would aid the concerned food tech sector to further

Figure 2. ***Structural Equation Modelling Output***

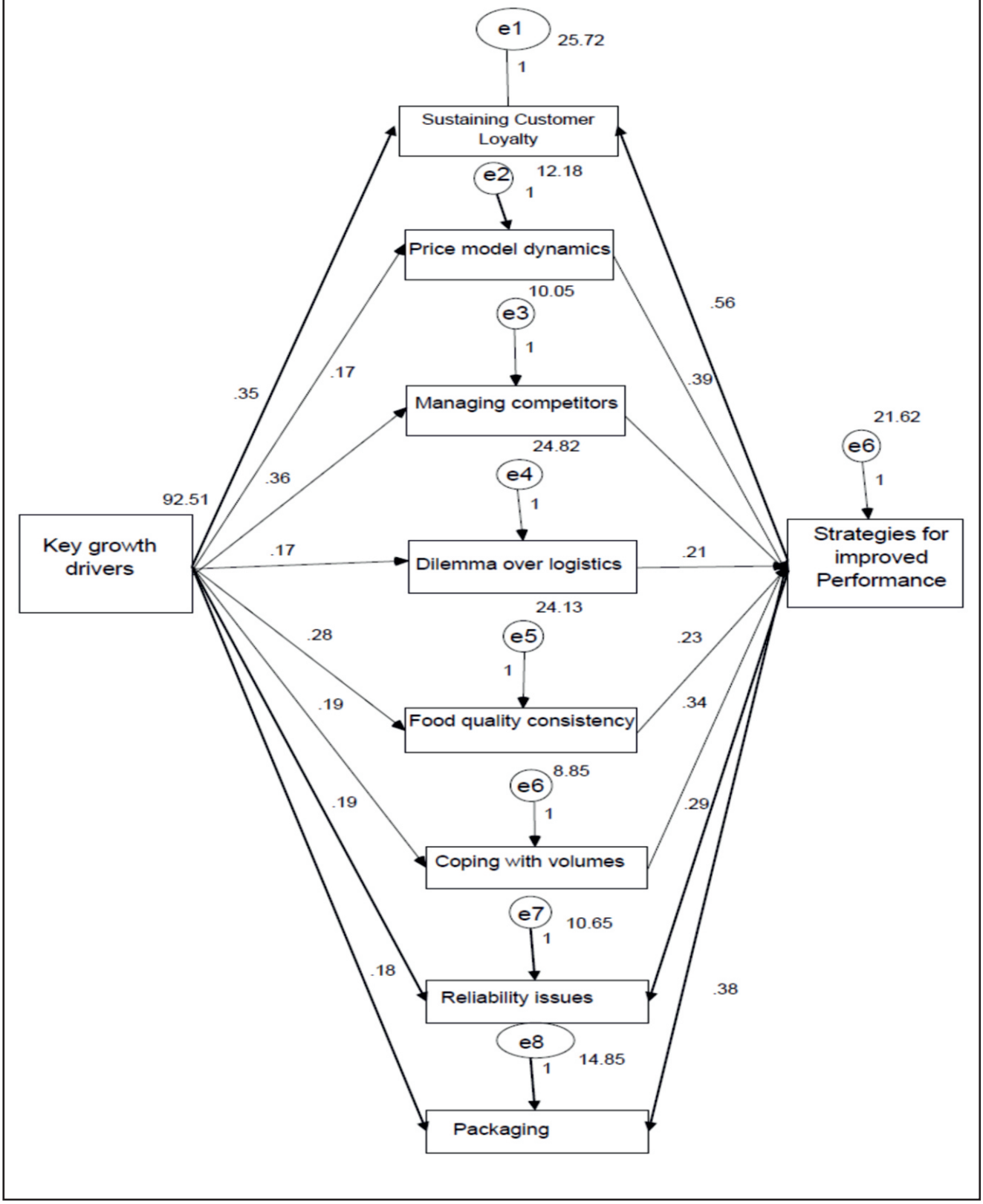


Table 3. ***Strategies for Improved Performance of Startup Food Tech Platforms***

Personalization and Focused Marketing	• Frequent buyers could be rewarded with customized offers.
	• App experience and user interface could be improved.
	• User ordering patterns could be analyzed to afford personalized offers and subscriptions for frequent buyers.
Quality Assurance	• Assurance should be given with respect to the presence of ingredients mentioned in the description.
	• Environment-friendly packaging can be made mandatory for all orders.
	• Thermostat bags could be used for temperature maintenance.
Extended Convenience	• Flexible order updating option could be offered.
	• A combination of restaurants could be created on the basis of proximity for the convenience of both customers as well as service providers.
	• Some 'bundles' of benefits could be offered to consumers as a part of a 'combo' deal.
Value to Consumers	• Minimum delivery charges should be positioned appropriately.
	• Frequent buyers could be randomly offered deep discounts or free delivery.
	• Customers can be informed that the delivery fee would be the lowest at a particular time of the day.

Source : Author's development - outcome based on discussions with the survey respondents.

develop and implement strategic options for enhancing its business performance. Table 3 lists the strategic options for improving the performance of startup food tech platforms based on discussions with the respondents at the end of the survey.

Conclusion

Consumers cannot see, touch, taste, smell, or listen to the products on an online platform. They thus assess the quality of the product they propose to buy by relying on the picture and the given description of the products and services on the web page. Hence, it is vital to provide clear and understandable information to maximize the customer's trust. This information should also be accompanied with a reasonable explanation to increase the reliability of the service and quality of the food being provided. This will help create satisfied customers, who will give repeated orders and also recommend the products to others. Finally, it is crucial to address other factors like the quality of the food, the temperature at which it is maintained, as well as efforts to provide proper responses to customers' queries. This kind of comprehensive service and adherence to high product quality will enable food tech platforms to enhance their performance and expand their customer base across all cities in India. Thus, this study recommends some strategies for improving the performance of startup food tech platforms. Personalization and focused marketing, quality assurance, extended convenience, and value to consumers are core strategic options. Simultaneous incorporation of different key growth drivers and challenges as antecedents has resulted in proposing a more complete conceptualization of the strategies for improved performance.

Limitations of the Study and Scope for Further Research

As this study focuses only on startup food tech platforms, the outputs cannot be generalized for use in other industries, and related research pertaining to other online service providers needs to be cross-validated to the findings. Furthermore, the use of self-reported scales to measure both the independent and dependent variables may imply the possibility of a common method bias for the results. Therefore, qualitative studies may be considered to verify these findings amongst the same respondents (that is, delivery staff) and the managerial staff of delivery services and restaurants.

Authors' Contribution

Angad Munshi conceived the idea and developed qualitative and quantitative design to undertake the empirical study, extracted research papers with high repute, filtered these based on keywords, and generated concepts and codes relevant to the study design. The data collection and analysis, as well as the computations, were done by Angad Munshi using SPSS 21.0. Dr. Ashim Raj Singla verified the analytical methods, supervised the study, and aided in numerical computations. The manuscript was written in consultation with the co-author.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

Funding Acknowledgment

The authors received no financial support for the research, authorship, and/or for the publication of this article.

References

Anderson, J.C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two step approach. *Psychological Bulletin, 103*(3), 411– 423. https://doi.org/10.1037/0033-2909.103

Annaraud, K., & Berezina, K. (2020). Predicting satisfaction and intentions to use online food delivery: What really makes a difference? *Journal of Foodservice Business Research, 23*(4), 305–323. https://doi.org/10.1080/15378020.2020.1768039

Bagla, R. K., & Khan, J. (2017). Customers' expectations and satisfaction with online food ordering portals. *Prabandhan: Indian Journal of Management, 10*(11), 31–44. https://doi.org/10.17010/pijom/2017/v10i11/119401

Bajaj, K., & Mehendale, S. (2016). Food-delivery start-ups: In search of the core. *Prabandhan: Indian Journal of Management, 9*(10), 42 – 53. https://doi.org/10.17010/pijom/2016/v9i10/103073

Bhotvawala, M.A., Balihallimath, H., Bidichandani, N., & Khond, M. P. (2016). Growth of food tech: A comparative study of aggregator food delivery services in India. In, *IEOM Society International – Proceedings of the 2016 International Conference on Industrial Engineering and Operations Management*, Detroit, Michigan, USA, September 23–25, 2016, 140–149. http://ieomsociety.org/ieomdetroit/pdfs/49.pdf

Coggon, D., Rose, G., & Barker, D. J. (1997). Case-control and cross-sectional studies, Chapter 8. In, *Epidemiology for the uninitiated* (4th edition). BMJ Books. https://www.bmj.com/about-bmj/resources-readers/publications/epidemiology-uninitiated/8-case-control-and-cross-sectional

Crotts, J.C., Pan, B., & Raschid, A. E. (2008). A survey method for identifying key drivers of guest delight. *International Journal of Contemporary Hospitality Management, 20*(4), 462–470. https://doi.org/10.1108/09596110810873552

Das, S., & Ghose, D. (2019). Influence of online food delivery apps on the operations of the restaurant business. *International Journal of Scientific & Technology Research, 8*(12), 1372–1377. http://www.ijstr.org/final-print/dec2019/Influence-Of-Online-Food-Delivery-Apps-On-The-Operations-Of-The-Restaurant-Business-.pdf

Dwivedi, R. (2019). Indian startups: Analyzing their vulnerabilities and prevailing challenges. *SMS Journal of Entrepreneurship & Innovation, 6*(1), 61–79.

Fink, A. (1995). *How to sample in surveys* (The Survey Kit, Vol. 6) (1st ed). Sage Publications.

Gandhi, D., Batra, N. K., & Gupta, T. (2019). Startup India: Opportunities and challenges. *Invertis Journal of Management, 11*(2), 97–104. https://www.indianjournals.com/ijor.aspx?target=ijor:ijm6&volume=11&issue=2&article=005

Gendron C., & Audet, R. (2012). Key drivers of the food chain. In J. Boye & Y. Arcand (eds.), *Green technologies in food production and processing. Food Engineering Series* (pp. 23 – 42). Boston, MA: Springer. https://doi.org/10.1007/978-1-4614-1587-9_2

Gupta, V., & Sarraf, S. (2019). Perception of food retailers towards online food delivery apps. *International Journal of Advance and Innovative Research, 6*(3), 59 – 62. http://www.iaraedu.com/pdf/ijair-volume-6-issue-3-i-july-september-2019-part-1.pdf

Hair, J. F., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis: A global perspective* (7th ed., pp.218–235). Pearson. https://www.pearson.com/uk/educators/higher-education-educators/program/Hair-Multivariate-Data-Analysis-Global-Edition-7th-Edition/PGM916641.html

Hasan, S., Deogaonkar, P., Seelam, S., & Vichoray, D. (2020). Food channel distribution in the Internet era — The aggregator model boost to channel power. *International Journal of Management, 11*(3), 337–345.

Hirschberg, C., Rajko, A., Schumacher, T., & Wrulich, M. (2016). *The changing market for food delivery*. McKinsey & Company. https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/the-changing-market-for-food-delivery

Jang, W. - J. (2020). A study on current status and prospects of global food-tech industry. *Journal of the Korea Convergence Society, 11*(4), 247–254. https://doi.org/10.15207/JKCS.2020.11.4.247

Korreck, S. (2019). *The Indian startup ecosystem: Drivers, challenges and pillars of support* (ORF Occasional Paper No. 210). Observer Research Foundation. https://www.orfonline.org/research/the-indian-startup-ecosystem-drivers-challenges-and-pillars-of-support-55387/

Kurode, T., Kurode, A. V., & Moitra, K. (2016). *A study of critical challenges in startup management*. https://dx.doi.org/10.2139/ssrn.3348534

Kurup, A. J., & Jain, P. (2018). Effect of e-loyalty cues on repurchase behavioral intentions among online shoppers. *Indian Journal of Marketing, 48*(11), 7–22. https://doi.org/10.17010/ijom/2018/v48/i11/137982

Li, C., Mirosa, M., & Bremer, P. (2020). Review of online food delivery platforms and their impacts on sustainability. *Sustainability, 12*(14),5528–5545. https://doi.org/10.3390/su12145528

Maimaiti, M., Zhao, X., Jia, M., Ru, Y., & Zhu, S. (2018). How we eat determines what we become: Opportunities and challenges brought by food delivery industry in a changing world in China. *European Journal of Clinical Nutrition, 72*(9), 1282–1286. https://doi.org/10.1038/s41430-018-0191-1

Meenakshi, N., & Sinha, A. (2019). Food delivery apps in India: Wherein lies the success strategy? *Strategic Direction, 35*(7), 12–15. https://doi.org/10.1108/SD-10-2018-0197

Munshi, A. (2019). Assessment of competitiveness of food-tech start-ups in India. *Indian Journal of Public Administration, 65*(1), 201–224. https://doi.org/10.1177/0019556118821268

Quynh, N. H. (2019). The moderating influence of brand image on the relationship between customer engagement and customer loyalty. *Indian Journal of Marketing, 49*(9), 42–56. https://doi.org/10.17010/ijom/2019/v49/i9/146939

Raman, P. (2018). Zomato: A shining armour in the food tech sector. *Journal of Information Technology Case and Application Research, 20*(3 – 4), 130 –150. https://doi.org/10.1080/15228053.2018.1552396

Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services, 51,* 221–230. https://doi.org/10.1016/j.jretconser.2019.05.025

Salamzadeh, A., & Kesim, H. K. (2015). Startup companies: Life cycle and challenges. In, *4th International Conference on Employment, Education and Entrepreneurship (EEE)*. Belgrade, Serbia. http://dx.doi.org/10.2139/ssrn.2628861

Saxena, A. (2019). An analysis of online food ordering applications in India: Zomato and Swiggy. *International Journal of Research in Engineering, IT and Social Sciences, 9*(April), 13–21. https://www.researchgate.net/publication/348880558_An_Analysis_of_Online_Food_Ordering_Applications_in_India_Zomato_and_Swiggy

Sharma, S., & Goyal, D. P. (2020). Entrepreneurial marketing strategies for small businesses: An exploratory study of start-up companies in India. *Indian Journal of Management, 50*(8–9), 48–65. https://doi.org/10.17010/ijom/2020/v50/i8-9/154691

Singh, M., & Kaur, D. (2020). A study of customer perception towards online food delivery with respect to age and gender. *Asian Journal of Management, 11*(3), 334–338. https://doi.org/10.5958/2321-5763.2020.00052.9

Sivathanu, B. (2017). Food marketing and its impact on adolescents' food choices. *Indian Journal of Marketing, 47*(8), 46 – 60. https://doi.org/10.17010/ijom/2017/v47/i8/117432

Sparta, J., Alsumait, S., & Joshi, A. (2019). Marketing habituation and process study of online food industry (A study case: Zomato). *Journal of the Community Development in Asia, 2*(1), 40–46. http://ejournal.aibpm.org/index.php/JCDA/article/view/341

Syamala Rao, G., & Nagaraj, K. V. (2018). A conceptual study on opportunities and challenges of online food services market in India. *International Journal of Business, Management and Allied Sciences, 5*(S2), 48–50. http://ejournal.aibpm.org/index.php/JCDA/article/view/341

Tittle, D., Matta, V., Beeler, L., & Babin, J. (2020). Online food delivery: How do service failures impact behavioral loyalty? *AMCIS 2020 Proceedings, 14*. https://aisel.aisnet.org/amcis2020/strategic_uses_it/strategic_uses_it/14/

Verma, P. (2020). The effect of presentation, product availability and ease upon transaction reliability for online food delivery aggregator applications – moderated mediated model. *Journal of Foodservice Business Research, 23*(4), 285 – 304. https://doi.org/10.1080/15378020.2020.1761586

Yeo, V. C., Goh, S. - K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer Services, 35,* 150–162. https://doi.org/10.1016/j.jretconser.2016.12.013

About the Authors

Angad Munshi is an Entrepreneur and a Research Scholar at IIFT, New Delhi. He has 10 years of work experience and has worked with some of the top startups in India, like Zomato and Ola.

Ashim Raj Singla is the HOD of IT and Knowledge Management Department at the Indian Institute of Foreign Trade (IIFT) Delhi. With over 20 years of experience in the industry and teaching, he has published widely, besides handling several research projects.