A CRITICAL ANALYSIS ON E-COMMERCE APPS OF MEAT PRODUCTS IN BENGALURU URBAN DISTRICT

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CERTIFICATE

This is to certify that the project report entitled **"A critical analysis on e-commerce apps of meat products in Bengaluru urban district"** submitted in partial fulfilment of the requirements for the degree of **MASTER OF BUSINESS ADMINISTRATION** in **AGRIBUSINESS MANAGEMENT** to the University of Agricultural Sciences, Bangalore, is a record of *bona fide* research work done by **Mr. RAMMURTHY, K.,** I.D No. **MBAM 0025,** during the period of his study in this University under my guidance and supervision, and the thesis has not previously formed the basis for the award of any other degree, diploma, associateship, fellowship other or other similar titles.

Bengaluru
March, 2023

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Affectionately dedicated
to my beloved Family,
Guide, Friends and
Well Wishers

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Perception of Consumers Towards e-Commerce Apps of Meat Products

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Introduction

Meat is animal flesh that is eaten as food, it is nutritious and meets the nutritional security of consumers

The Meat delivery services are designed to bring top-quality meats, from chicken to lamb and other forms of meats, to consumers door, eliminating all the hassle that comes with retail store visit. Further to a company that specializes in meat deliveries, they know they're being offered the best selection possible (Alagoz, *et al* ., 2018)

Online meat delivery services are available throughout the country, in Bengaluru, Delhi, Mumbai, etc... The online ordering is done through e-Commerce websites or mobile apps .

The most prominent apps delivering animal products includes Licious, Fresh to home, Tender cuts, zap fresh

COVID-19 pandemic greatly accelerated the growth of online meat delivery, and in the first few months of the pandemics online meat delivery increased by 150% . In addition, first-time online meat delivery accounted for 41% of online meat shoppers. The epidemic of COVID-19 has hastened the uptake of online meat ordering. Even then no attempt was made to assess the perception of consumers to improve the system further (FAO,2020)

Objective

To study the perception of consumers towards e-Commerce apps of meat products

Methodology

Fig.1: Map showing the study area

Study area: The study was carried out in Bengaluru Urban district of Karnataka

Sampling technique :

Purposive sampling is used since Bengaluru urban is having highest number of meat product consumers depending on e-Commerce apps .

A Total of 60 consumers was to be selected based on the different criteria of e-Commerce apps for meat products consumers .

Source of data:

Primary data was collected from consumers using pre structured interview schedule

Analytical tools and techniques: The data collected were analyzed using tabular presentation, descriptive statistics, mean, ranking and represented using charts .

Results

Table 1: Perception of consumers towards e-Commerce products (n=60)

Sl. No.	Statements	Mean Perception score	Ranking
1	e-commerce apps of meat products help to management of time .	4.11	I
2	Availability of e-service in regional languages helps wide range of consumers	3.9	II
3	Meat products through e-commerce apps fulfils all food standards and grade	3.85	III
4	There are lot of options in meat products through e -commerce	3.6	IV
5	Meat from e-commerce apps have higher quality and hygiene .	3.43	V
6	Customers have a lot of choices in selection of type of flesh through e-commerce apps	3.38	VI
7	Meat purchased through e-commerce improves health and nutrition	2.65	VII
8	e-commerce apps of meat products are having the potential to improve user experience further	2.5	VIII
9	price of meat products is expensive in e-commerce apps	2.16	IX
10	Meat products of e-commerce apps need to improve their promotions through front line media to reach other people	2.13	X
11	Meat is not delivered on expected time if ordered through apps	1.85	XI
12	e-commerce apps of meat products do not cover remote areas	1.56	XII

Table 2: Overall Perception Level of Consumers About E-commerce Apps of Meat Products

Sl. No	category	Criteria	Number	percentage
1.	LOW	Mean-(0.5*SD)	12	20%
2.	MEDIUM	Mean± (0.5*SD)	22	37%
3.	HIGH	Mean+(0.5*SD)	26	43%

Discussion

The results revealed that among the 12 statements regarding perception of consumers towards e-Commerce apps for meat products . The statement e-Commerce apps of meat products help in management of time was ranked first with the mean score of 4.11 .Consumers also perceived that availability of service in regional language through app and fulfilling all food standards and grades is very important for a e-Commerce app as it was ranked second and third with scores 3.9 and 3.85 respectively. The statement e-Commerce apps for meat products do not cover remote areas was perceived least by consumers and was ranked last. Overall , more than three fourth of consumers possessed 'low' to 'medium' perception towards e-Commerce apps of meat products

It is evident from fig 2. that 43, 37, 20 percent of consumers possess high, medium and low perception respectively towards e-Commerce apps of meat products

Graph And Photographs

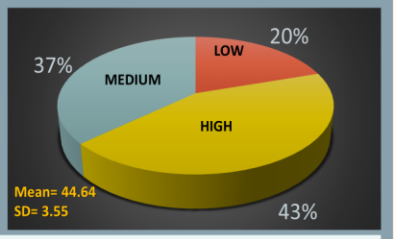

Fig. 2: Overall Perception Level of Consumers About E-commerce Apps of Meat Products (n=60)

Plate 1: Researcher collecting data from online meat consumer

Summary

The e-Commerce apps for Meat industry are the small enterprise and companies engaged in modern industrializion for packing, preservation , marketing and service of meat and its products .

The study tries to understand the perception of consumers towards e-Commerce apps for meat products through different statements

The results indicated that 43 percent of consumers have high perception , 37 percent consumers have medium perception and 20 percent consumers have low perception towards towards e-Commerce apps of meat products and since only one third of consumers have better perception towards e- Commerce apps there is still lot of scope to improve and satisfy consumers by managing delivery time and maintaining proper grades , standards and improving services.

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ALAGOZ, SERHAT MURAT, AND HALUK HEKIMOGLU, 2012"A study on tam: analysis of customer attitudes in online meat ordering system." *Procedia-Social and Behavioral Sciences* 62 : 1138-1143

ADVISORY COMMITTEE

A CRITICAL ANALYSIS ON E-COMMERCE APPS OF MEAT PRODUCTS IN BENGALURU URBAN DISTRICT

RAMMURTHY.K

ABSTRACT

The present study was carried out in Bengaluru urban district of Karnataka state to analyze the consumer behavior, perception and preference of meat purchasers through e-commerce apps. Descriptive analysis and Garret's ranking were used to analyze the meat consumption behavior of 60 consumers in six selected areas of Bengaluru urban district. Most of the consumers were women working in private sector and belonged to nuclear families with average income of 4 to 8 lakhs per year. As majority of consumers got into online ordering of meat from past 6 months due to covid said that Licious was the most preferred compared to other apps. With regard to overall perception level of consumers 37 per cent of them were belonging to high perception level about e-commerce apps of meat products, whereas 43 and 20 per cent of the consumers were falling under the medium and low category of perception level respectively. Accordingly, e-purchasers, 'High price of the product' was first with a score (63.4) and least rank was given to 'Lesser Area coverage or location' with the score (39.5). The consumers expectation towards e-purchasing was also analyzed and the results showed that 'Faster processing and delivery' was ranked first with a score of (70.13) followed by 'Simplicity of app and ease of ordering' with (63.81) score and least rank to 'More Products and varieties in it.' with the score (30.35). In this backdrop the study could be helpful to business managers for reorienting e-commerce business of meat and other related products.

March, 2023

Institute of Agri-Business Management
University of Agricultural Sciences,
GKVK, Bangalore

(K.P. Raghuprasad)
Major Advisor

ಬೆಂಗಳೂರು ನಗರ ಜಿಲ್ಲೆಯ ಮಾಂಸ ಉತ್ಪನ್ನಗಳ ಇ–ವಾಣಿಜ್ಯ ಅಪ್ಲಿಕೇಶನ್‌ಗಳ ಮೇಲೆ ನಿರ್ಣಾಯಕ ವಿಶ್ಲೇಷಣೆ

ರಾಮ್‌ಮೂರ್ತಿ ಕೆ

ಸಾರಾಂಶ

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವನ್ನು ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಬೆಂಗಳೂರು ನಗರ ಜಿಲ್ಲೆಯಲ್ಲಿ ಇ– ವಾಣಿಜ್ಯ ಅಪ್ಲಿಕೇಶನ್‌ಗಳ ಮೂಲಕ ಮಾಂಸ ಖರೀದಿದಾರರು ಗ್ರಾಹಕರ ನಡವಳಿಕೆ, ಜಾಗೃತಿ ಮತ್ತು ಆದ್ಯತೆಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಲು ಕೈಗೊಳ್ಳಲಾಗಿತ್ತು. ಬೆಂಗಳೂರು ನಗರ ಜಿಲ್ಲೆಯ ಆಯ್ದ ಆರು ಪ್ರದೇಶಗಳಲ್ಲಿನ 60 ಗ್ರಾಹಕರ ಮಾಹಿತಿ ಕಲೆಹಾಕಿ ವಿಶ್ಲೇಷಿಸಲು ವಿವರಣಾತ್ಮಕ ಮತ್ತು ಗ್ಯಾರೆಟ್ ಶ್ರೇಯಂಕವನ್ನು ಬಳಸಲಾಗಿದೆ. ಅಧ್ಯಾಯನದ ಫಲಿತಾಂಶಗಳನ್ವಯ ಹೆಚ್ಚಿನ ಗ್ರಾಹಕರು ಖಾಸಗಿ ವಲಯದಲ್ಲಿ ಕೆಲಸ ಮಾಡುವ ಮಹಿಳೆಯರು ಮತ್ತು ವರ್ಷಕ್ಕೆ ಸರಾಸರಿ 4 ರಿಂದ 8 ಲಕ್ಷ ಆದಾಯ ಹೊಂದಿರುವ ವಿಭಕ್ತ ಕುಟುಂಬಗಳಿಗೆ ಸೇರಿದವರಾಗಿರುತ್ತಾರೆ. ಬಹುಪಾಲು ಗ್ರಾಹಕರು ವಾರಾಂತ್ಯದಲ್ಲಿ ಆರ್ಡರ್ ಮಾಡಲು ಆದ್ಯತೆ ನೀಡಿದ್ದಾಗಿ ಫಲಿತಾಂಶಗಳಿಂದ ತಿಳಿದು ಬಂದಿದೆ. ಕೋವಿಡ್‌ನಿಂದಾಗಿ ಹೆಚ್ಚಿನ ಗ್ರಾಹಕರು ಕಳೆದ ಆರು ತಿಂಗಳು ಅಥವಾ ವರ್ಷದಿಂದ ಆನ್‌ಲೈನ್‌ನಲ್ಲಿ ಮಾಂಸವನ್ನು ಆರ್ಡರ್ ಮಾಡಲು ಹೆಚ್ಚಾಗಿ ತೊಡಗಿದ್ದಾರೆ ಮತ್ತು ಇತರೆ ಆನ್‌ಲೈನ್ ಅಪ್ಲಿಕೇಶನ್‌ಗಳಿಗೆ ಹೋಲಿಸಿದರೆ ಲಿಸಿಯಸ್‌ಗೆ ಹೆಚ್ಚು ಆದ್ಯತೆ ಕಂಡು ಬಂದಿದೆ. ಗ್ರಾಹಕರ ಒಟ್ಟಾರೆ ಗ್ರಹಿಕೆ ಮಟ್ಟಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಇವರಲ್ಲಿ 37 ಪ್ರತಿಶತದಷ್ಟು ಜನರು ಮಾಂಸದ ಉತ್ಪನ್ನಗಳ ಇ– ವಾಣಿಜ್ಯ ಅಪ್ಲೀಕೇಶನ್‌ಗಳ ಬಗ್ಗೆ ಹೆಚ್ಚಿನ ಜಾಗೃತಿ ಹೊಂದಿದ್ದಾರೆ. ಆದಾಗ್ಯು 43 ಮತ್ತು 20 ಪ್ರತಿಶತ ಗ್ರಾಹಕರು ಕ್ರಮವಾಗಿ ಮಧ್ಯಮ ಮತ್ತು ಕಡಿಮೆ ಮಟ್ಟದ ಅರಿವನ್ನು ಹೊಂದಿದ್ದಾರೆ. ಮಾಂಸದ ಇ–ಖರೀದಿಯ ಕಡೆಗೆ ಗ್ರಾಹಕರ ಪ್ರಮುಖ ನಿರ್ಬಂಧಗಳನ್ನು ಗ್ಯಾರೆಟ್ ರ‍್ಯಾಂಕಿಂಗ್ ವಿಧಾನದ ಮೂಲಕ ವಿಶ್ಲೇಷಿಸಲಾಗಿದೆ. ಇದರನ್ವಯ ಇ–ಖರೀದಿದಾರರು **"ಉತ್ಪನ್ನದ ಬೆಲೆ ಹೆಚ್ಚಿದೆ"** ಎನ್ನುವ ಅಂಶ (63.4) ಮೊದಲ ಸ್ಥಾನದಲ್ಲಿದೆ ಮತು ಕನಿಷ್ಠ ಶ್ರೇಣಿಯಾಗಿ **"ಕಡಿಮೆ ಪ್ರದೇಶಕ್ಕೆ ಸೀಮಿತವಾಗಿದೆ"** (39.5) ಅಂಕಗಳು ಹೊಂದಿದೆ. ಇ–ಖರೀದಿಯತ್ತ ಗ್ರಾಹಕರ ನಿರೀಕ್ಷೆಗಳನ್ನು ಸಹ ವಿಶ್ಲೇಷಿಸಲಾಗಿದ್ದು ಇದರನ್ವಯ **"ಶೀಘ್ರ ಪ್ರಕ್ರಿಯೆ ಮತ್ತು ವಿತರಣೆ"** (70.13) ಸ್ಕೋರ್ ನೊಂದಿಗೆ ಮೊದಲ ಸ್ಥಾನದಲ್ಲಿದೆ ಎಂದು ಕಂಡುಬಂದಿದೆ, ನಂತರ **"ಅಪ್ಲಿಕೇಶನ್‌ನ ಸರಳತೆ ಮತ್ತು ಸುಲಭ ಆರ್ಡರ್ ಸೌಲಭ್ಯ"** (63.81) ಮತ್ತು ಕನಿಷ್ಠ ಸ್ಕೋರ್ ನೊಂದಿಗೆ **"ಇದರಲ್ಲಿ ವೈವಿದ್ಯಮಯ ಮಾಂಸದ ಉತ್ಪನ್ನಗಳು ಲಭ್ಯ"** (30.35) ಅಂತಿಮವಾಗಿದೆ. ಈ ಹಿನ್ನಲೆಯಲ್ಲಿ ಮಾಂಸ ಮತ್ತು ಇತರ ಸಂಬಂಧಿತ ಉತ್ಪನ್ನಗಳ ಇ– ವಾಣಿಜ್ಯ ವ್ಯವಹಾರವನ್ನು ನವೀಕರಿಸಲು ವ್ಯಾಪಾರ ವ್ಯವಸ್ಥಾಪಕರಿಗೆ ಅಧ್ಯಾಯನದ ವರದಿ ಸಹಕಾರಿಯಾಗಿದೆ.

ಮಾರ್ಚ್, 2023

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(ಕೆ.ಪಿ. ರಘುಪ್ರಸಾದ್)
ಪ್ರಮುಖ ಸಲಹೆಗಾರರು

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INTRODUCTION

I. INTRODUCTION

e-commerce, often known as electronic commerce, is the act of electronically purchasing or reselling goods via online stores/internet.

Online purchasing, sometimes known as e-shopping, is a type of electronic commerce that enables consumers to make direct purchases from sellers using a computer browser and the internet. In 1979, Michael Aldrich created the first online store. With the increasing e-literacy, the prospect of online marketing is increasing in India.

Consumer preference towards online shopping seem to be increasing due to varied reasons such as, one can click to buy high quality goods, one can purchase goods from home by taking advantage of finance deals, description and price of the products are listed next to each one and final delivery of goods at doorsteps in a hygienic packaging. Products are divided into categories such fruits and vegetables, groceries and staples, bread, dairy and eggs, household, beverages, personal care, branded goods, confectionary and meat. Having access to these under one platform might be incredibly convenient for consumers. One can shop products by adding them to their shopping cart while buying online.

Young people are increasingly preferring online purchasing over conventional purchasing nowadays, although traditional purchasing still holds a higher significance in modern society. They are both essential to human life. Both traditional and internet purchasing are having advantages and disadvantages based on how they differ from one another. When making purchases in daily life, one should aim to avoid the weaknesses and make greater use of the strengths.

Unfortunately, making purchases online is risky. Consumers worry about credit card and debit card fraud, security issues, the inferior quality of delivered goods compared to brick-and-mortar stores, the perishability of food items purchased online, and a host of other issues that could lead them to avoid making purchases online. On the other hand, due of the benefits linked with it, e-commerce is expanding quickly. For instance, in a large city like Bangalore, residents can order goods and services online, pay a fair price, and have them delivered to their doorstep.

1. Meat

Meat is an animal's flesh that is utilized as a primary food source and has the proper amounts of protein, fat, and water. These are the different forms of meat products consumed such as chicken, mutton, and a variety of fish, crabs, lobsters, squids, and other shellfish are all part of the meat business. Poultry makes up the majority of the meat production, accounting for 49.64 per cent**,** followed by buffalo (18.8 5%), sheep (7.9 4%), pig (5.22 %), and cow (4.61 %). Due to the country's rapid economic growth, rising per capita consumption, and increasing nutritional content of meat products, there is a great increase in the demand for meat. India ranks second in the world for the least amount of meat consumed per capita with 4.4 kilograms per person *(www.statista.com)***.**

India is known for its diverse population and unique cultures and traditions. The vast majority of Indians have different eating habits depending on their geography, socio-economic status, religion, culture, and other factors. Due to the nutritional shift, the progress of lifestyle, and the rising purchasing power of people in India, the pattern of food intake has drastically changed (Mehta *et al*., 2015).

In the human diet meat serves as a significant source of animal protein. When it comes to protein content, foods of animal origin are at the top of the food chain and meat takes the top spot among them. One of the most popular and vital animal-derived food products is meat. It provides energy-giving carbohydrates, vitamins, fatty acids, and micronutrients together with high-quality protein, making it a source of balanced diet for the majority of people (Guleria *et al.*, 2015).

Meat has become an integral component of human diet. In addition to the supply of long chain 3 omega fatty acids, meat consumption is supposed to supply conjugated linolenic acid that provides multifaceted nutrient for human health.

A) Global overview of meat industry

Meat is now one of the staple foods that can be found in almost all restaurants and many kitchens around the world. In the past, many cultures thought of meat as a luxury that could only be enjoyed on certain occasions or particular days of the week. In 2021, the market value of the meat business was 897.5 billion US dollars, and by 2027, it was

anticipated to exceed 1.3 trillion. With a total revenue of over 28 billion US dollars, the United States had the most revenue from meat products and sausages in 2021, almost twice as much as Germany, the second-largest meat market in the world. The final three countries with the highest revenue from processed meats are Brazil, France, and Russia. *(www.statista.com).*

In the years between 2019 and 2021, North America had the largest per capita meat consumption, at about 98.5 kilos. Comparatively, during that time the average per capita consumption worldwide was about 34.1 kilos. The two most prevalent types of meat consumed worldwide in 2021 were poultry and pork. However, it is anticipated that by 2022, consumption of poultry will vastly outpace that of pork around the world *(www.statista.com).*

B) Indian overview of meat industry

The largest population of livestock is found in India. Around 5.3 million MT of total meat and 75 billion eggs are produced in India each year. India is the world's top producer of goat and buffalo meat, respectively. Currently, just six per cent of poultry is processed, compared to 21 per cent of meat (*www.indiastat.com).*

Consumers in India face several difficulties when selecting meat for their diet since the market is unorganized, lack of cold storage infrastructure, no government-certified labs to standardize the quality of meat and issues with cleanliness and handling of the meat (Siddhant, 2019). The expectations of meat consumers regarding developments in the meat and meat products industry are a largely unexplored subject.

India has a significant potential to support a thriving meat sector due to its abundance of animals. In addition, numerous actions have been performed in the same direction to advance the sector. The rumored future of India is the structured broiler industry, where animals would be raised particularly for meat purposes. In India, eating habits vary greatly depending on race, region, and culture. Three of the four people in the country are non-vegetarians, which means that meat intake meets the nation's 35 per cent protein need. According to the 2019 basic Animal Husbandry data, India produced 8.11 million tons of meat overall, an increase of 6 per cent from the previous year. With a production of 4.06 million tons, poultry meat accounts for 50 per cent of the nation's total meat output.

National health statistics show that 70 per cent of Indian women and 80 per cent of Indian men are non-vegetarians. National Family Health Survey found that 42.8 per cent of women and 48.9 per cent of men consume a non-vegetarian diet weekly (Anonymous, 2016). Most of the non-vegetarian population is found in the south and northeast part of India.

2. Impact of Covid

Nearly every industry in the globe has experienced significant upheaval as a result of the COVID-19 epidemic. Hence one of them is the modification of the mechanism for buying livestock products such as meat. Most consumers typically purchase their chicken meat directly from conventional markets. However, the COVID-19 pandemic's restricted access has compelled businesses to switch to an online approach. A change in customer behavior toward the purchase of food and beverages is indicated by the improvement of transactions through online applications. Consumers are urged to adjust as a result of the conversion of the sales system from offline to online platforms. Online meal ordering has been impacted by a number of variables during the COVID-19 pandemic.

3. Online purchasing of meat

The delivery of fresh meat with connections to direct farms is a new trend offered by e -commerce companies. The main drivers of growth for India's online meat industry were the country's rising demand for fresh meat and the traditional meat market's poor quality. The Indian doorstep meat market will become more prevalent because to the rising demand for protein among consumers, desire for fresh meat over frozen meat, and unhygienic conventional meat. Further boosting the Indian online meat industry would be the technological involvement and enhanced supply-chain management's impact on the online marketing portfolio.

The India online meat market is constrained by the growing capital-intensive market for cold chain technologies to close the supply-demand gap and ethical business practices. A report from the National Food Processing Policy stated that the construction of cold storage will coincide with the extension of the excise charge on meat and poultry products. In support for the forecast period of 2019 to 2026, the India Online Meat Market has been divided based on Product type, category, and city profile. The market is divided

Plate 1: Different e-commerce apps of meat products

into segments for chicken, fish, mutton, and others based on product type. The market is divided into two categories: fresh and frozen, based on the type of category. Tier 1, Tier 2, and Tier 3 markets are divided based on the sort of city profile.

Various notable companies are start-ups evolved in this area like the Fresh meat, Big Basket. Grofers, Zappfresh, Licious, Jalongi, Easy Meat, Tender Cuts. Major leading companies focus on meeting adequate value chain operation with digitalization targets as a key factor in building the online meat market. These businesses placed a greater emphasis on providing fresh meat to consumers than on processed meats. Various additional online food delivery services, including Swiggy, Zomato, Food Panda, Uber Eats, food delivery services like Faasos, Deliveroo, Dunzo, Grub hub, Seamless, Domino's, etc. concentrated on getting processed goods, especially processed meats from restaurants to consumer's table.

4. Current scenario of online meat market

The popularity of smartphones and rapid urbanization had expedited the expansion of the online meat delivery industry. The fresh meat market is extremely fragmented; it is currently worth about 1,80,000 crores in India, with butcher shops making up 90 per cent of the unorganized sector. The non-vegetarian food market in the nation is projected to be worth 3500 crores. There are numerous businesses offering online meat delivery at the moment. Most of these businesses are focused in major metropolises like Bengaluru, Delhi NCR, Mumbai, Hyderabad, Pune, etc., some of them also offer their services in rural areas. It has been shown that the top five Indian cities account for more than 80 per cent of the orders placed through online.

e-purchasing of Meat is a common practice of the internet savvy consumers in Bengaluru.

The study has been taken up in Bengaluru urban district, that comprises of vast areas. Due to the district's distinct population and its diversified cultural, regional, religious, and economic backgrounds, it is possible to determine the various elements of people's meat consumption habits. There is no such attempt to do research like this on consumption of meat in the district. The current study is an effort in this area that closes a gap in earlier research on the district. Business managers could use the information from

this study to refocus their online meat sales and other relevant items to target the working class.

The specific objectives of the study were:

1. To document the socio-economic profile of consumers using e-commerce apps for meat products.
2. To analyze the consumer behavior, perception and preferences regarding e-commerce apps of meat products.
3. To analyze constraints and expectations of consumers abouts e-commerce apps of meat products.

Hypothesis of the study

To address the objective outlined in the study, the following hypotheses were formulated:

1. Consumers have favourable perception about e-commerce apps.
2. Fresh to home is most preferred app by the consumers.
3. Majority of animal products are hygienic through apps than retail markets.

Limitations of the study

The current study is restricted to the state of Karnataka's Bengaluru urban region. The study's main flaw is the fact that the sample respondents' primary data was only gathered from a small portion of the district. Therefore, it would be challenging to make exact generalizations about the study's implications. The study is limited to a few different types of meat for convenience. The results of the study could not therefore be applicable to other meats in general. Within these constraints, it is easiest to understand the results, interpretations, and conclusions reached in this study.

REVIEW OF LITERATURE

II. REVIEW OF LITERATURE

In this chapter an attempt is made to review the work done by other researchers related to the topic of investigation. The studies regarding consumer preference, awareness and perception on e-purchasing have been reviewed and presented under the following headings.

2.1 Socio-economic profile of consumers

2.2 Consumer behavior, preference and perception of e-commerce apps.

2.3 Constraints and Expectations in ordering through e-commerce apps

2.1 Socio economic profile of consumers

Sayulu and Reddy (1998) in their study on socio-economic influence of rural consumer behavior – An empirical study indicated the frequency of purchase of commodities by rural consumers was highly influenced by the type and nature of the products. Products like groceries (40.35%) and others which included vegetables, milk etc. (48.25 %) purchased on daily basis and 33.33 per cent and 42.98 per cent of them purchased these products on weekly basis. Cash purchase was highest in case of products like groceries (44.74 %) followed by credit purchase with 38.60 per cent and 21.06 per cent respectively. Price of the goods was considered to be the most important factor by more than 88.00 per cent of the respondents followed by easy availability (66.66 %) and neighbors (54 %).

Lohse *et al. (*2000) investigated various predictors to assess whether an individual will purchase online. The authors concluded that demographic variables such as income, education and age, have a modest impact on the decision of whether to buy online, whereas the most important determinant of online shopping was previous behavior, such as earlier online purchases.

Keen *et al.* (2002) found that demographic factors like age, gender, education and income had a significant effect on the attitude of the consumer towards online shopping and it was revealed that internet users, who are educated, are more likely to feel less uncomfortable to go for online shopping.

Haque *et al*. (2006) assessed effect of two factors namely gender and income in Malaysia and mentioned that these two factors had significant relationship with overall attitudes towards online shopping. The results also indicated that weekly internet use, having experience in e-shopping, and willingness of shopping online in the future had significant relationship with overall attitude towards online shopping. Moreover, results proved that there was significant difference between human senses in online decision-making process and consumers who experienced shopping a product or they were satisfied previously, which had stronger confidence to do online shopping.

Gowda (2009) analyzed the consumers' preference for retail formats in Bengaluru city. He reported that majority (27.50 %) of the consumers belonged to the income group of Rs. 30,000-40,000 followed by Rs. 20,000 - Rs. 30,000 (23.33 %), Rs. 40,000 - Rs. 50,000 (16.67 %), Rs. 10,000 - Rs. 20,000 (15.83 %), Rs. 50,000 and above (13.33 %) and upto Rs. 10,000 (3.33 %). He also reported that majority (68.33%) of the sample respondents were graduates followed by post graduates (25 %), PUC level (4.17 %) and SSLC level (2.50 %).

Rastogi (2010) conducted a study on Indian online consumers and their buying behavior. The study attempted to analyze the features related to the buying behavior of online shoppers. Consumer buying behavior in respect of online shopping was studied using different socio-economic variables. The outcomes of the study suggested that assessment of consumer buying behavior can contribute to a better understanding of consumer buying behavior in respect of online shopping.

Anand (2011) explored that faster urbanization backed by sedentary lifestyles, rising dual incomes, growing affluence, and independence of young people in modern societies have been driving a gradual change in the food basket in India. Globalization has also influenced the production and processing of food as well as its sales, preparations and consumption. Consumers around the world now find in their supermarkets the same food produced by the same corporates.

Padmavathi (2011) in her study analyzed the general characteristics of sample consumers of mango products in Bengaluru city. She reported that majority (36 %) of the consumers belonged to the income group of Rs. 6,000 - Rs. 15,000 followed by Rs. 25,000

and above (33 %) and Rs. 15,001 - Rs. 25,000 (31 %). She also reported that the families of majority (56 %) of the consumers consisted of four to five members followed by families comprising of more than five members (26 %) and those comprising up to three members (18 %).

Ranjitha (2011) analyzed the general characteristics of consumers of jaggery in Mandya district of Karnataka. She reported that majority (40 %) of the consumers had education up to PUC followed by graduation (33.33 %) and by those (30 %) who had education up to SSLC.

Ravibhushana (2011) analyzed the socio-economic profile of consumers of value-added products of potato in Bengaluru city. He reported that majority (72 %) of the consumers belonged to the age group of 21 to 30 years followed by 31 to 40 years, more than 41 years and upto 20 years accounting for 20 per cent, six per cent and two per cent respectively. He also reported that the families of majority (38 %) of the sample consumers were small (less than 3 members) followed by medium families (3- 5 members) and large families (more than 5 members) accounting for 32 per cent and 30 per cent respectively.

Ahamad and Zafar (2012) examined the perception of different types of online buyers towards online shopping website variables. The population of this study consists of online shoppers in Hyderabad. Respondents were selected from different genders, age groups and occupations having internet shopping experience. A pre-structured questionnaire was used with a five-point likert rating scale to measure perception of four types of online buyers towards these factors. Snowball sampling was used to collect data from sampled respondents. Statistical techniques such as mean, standard deviation and annova-test were used in this study.

Bharath (2012) analyzed the consumer's preference for store formats in Bengaluru city. He reported that majority (36.67 %) of the consumers belonged to the age group of 31 to 40 years followed by 20 to 30 years (25.83 %), 41 to 50 years (24.17 %) and above 50 years (13.33 %). He also reported that majority (44.17 %) of the respondents were housewives, followed by professionals (35.88 %), academicians (8.33 %), businessmen (5 %), students (5 %) and respondents employed in BPOs (1.67 %).

2.2 Purchasing behavior, preference and perception of consumers through e-commerce apps

Swaminathan *et al.* (1999) assessed whether consumers were motivated by convenience or the social interaction associated with shopping. The respondents were asked whether they preferred dealing with people during shopping or affected by convenience of the shopping mode. The study showed that consumers who are motivated by convenience are more likely to purchase online. Those who value social interactions are less interested in the internet use for shopping.

Kamalaveni and Nirmala (2000) in their study on consumers behavior in instant food products indicated that there is complete agreement between ranking given by the housewives and working women regarding the reasons promoting them to buy Instant Food Products. Age, occupation, education, family size and annual income had a positive influence on the per capita expenditure towards the Instant Food Products.

Phau and Poon (2000) in their studies titled "Factors influencing the types of products and services purchased over the internet" presented the findings of their empirical investigation on internet shopping in Singapore. They compared buying behavior of potential internet buyers and non-internet buyers and found that the classification of different types of products and services would significantly influence the consumer choice between a retail store and internet shopping mall. The types of products and services that were suitable for selling through the internet were also identified. According to the authors, products and services that had a low outlay, were frequently purchased, had intangible value proposition and relatively high on differentiation were among mostly purchased items via the internet.

Hugar *et al*. (2001) carried out a study on dynamics of consumer behavior in vegetable marketing in Dharwad city. Low-income groups purchased lesser quantity (3.25 kg/week) of vegetables as compared to medium (5.40 kg/week) and high-income groups (4.66 kg/week). Majority of low-income group preferred to purchase vegetables from producers because of reasonable price. High- and medium-income families preferred stall vendors for the purchase of vegetables because of better quality and correct weighment.

Cavard and Moreau (2003) undertook a survey among 2000 French consumers in 2002 to study their behavior regarding the purchase of fruit and vegetables. The study revealed that with respect to places of purchase, supermarkets come first, followed by markets. In terms of modes of purchase, the self-service with assisted weighing was the preferred option. Consumer expectations concern better control of labeling and quality on the selling place, with an indication of consumed-by date. The main consumers, the old aged people, appear, however, to be less concerned with this additional information.

Keller and Kotler (2005) defined perception is the process by which an individual selects, organizes and interprets information inputs to create a meaningful picture of the world. Perception depends not only on the physical stimuli, but also on the stimuli's reaction to the surrounding field and on conditions within the individual. The key point is that perceptions can vary widely among individuals exposed to the same reality.

Robbins (2005) defined perception as the process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment and stated that attitudes, motives, interests, experience and expectations influenced the perception of individuals.

Reddy (2005) described in his study that perception as how we see the world around us. For the present study the psychological process whereby consumers selected, organized and interpreted sensory stimulations about fruits and vegetables section in MORE retail outlet are regarded as consumer perception.

Hassanein and Milena (2007) investigated the impact of socially rich text and picture design elements of various levels on the perception of online social presence and its subsequent effect on antecedents of attitudes towards websites. They had shown higher levels of perceived social presence to positively impact the perceived usefulness, trust and enjoyment of shopping websites, leading to more favorable consumer attitudes.

Raghavendra *et al*. (2009) examined the preference for and consumption pattern of meat in Dharwad district. The study reveals that the most important factor considered by urban households while purchasing meat was the nutritive value followed by taste, freshness, tenderness, source, price, fat content and ease of availability. In rural areas the

factors in descending order of importance were taste, freshness, nutritive value, tenderness, source, price, fat content and ease of availability.

Hernández *et al.* (2010) in their study aimed at analyzing moderating effect of e purchasing experience. They analyzed the perceptions of potential e-consumers and experienced e-consumers. They found that consumer behavior changes with purchase experience.

Haq (2012) studied the perception of Indian consumers towards online shopping as consumers are playing an important role in online shopping. The increasing use of internet by the younger generation in India provides an emerging prospect for online retailers. If online retailers know the factors affecting Indian consumers' buying behaviour, and the associations between these factors and type of online buyers, then they can further develop their marketing strategies to convert potential consumers into active ones. In this study four key dimensions of online shopping as perceived by consumers in India were identified and the different demographic factors were also studied which are the primary basis of market segmentation for retailers. It was discovered that overall website quality, commitment factor, customer service and security are the four key factors which influence consumers' perceptions of online shopping. The study revealed that the perception of online shoppers is independent of their age and gender but not independent of their education & gender and income & gender. Finally, recommendations presented in this research may help foster growth of Indian online retailing in future.

Devi *et al.* (2014) studied an outline of meat consumption in the Indian population - A pilot review. The study reveals that majority of meats consumed in India are fish, bovine, mutton, goat, pig, and poultry. In Indian context, culture, traditions, customs, and taboos influence meat consumption to a great extent. However, studies show that urbanization has been causing a rise in demand for meat products. India is the world's second largest exporter of beef. In India, 95 per cent of goat meat produced is consumed locally. Meat consumption, in particular, is determined by the religions where pork is forbidden to Muslims and beef is prohibited to Hindus. The preference and consumption of chicken meat can be considered as a universal phenomenon and chicken meat is greatly accepted by consumers in India as compared to the other meat consumption.

Khursrawy (2014) studied consumer behavior for dry fruits In Bangalore city. A total of 90 respondents belonging to different age and income groups were selected for study, The study has revealed that 64 per cent of the consumers were aware of dry fruits brands. Among the consumers' preference, the highest was for Dates, followed by Almonds and Cashews. The consumers on an average consumed 818 grams of Dates per month, followed by Almond (529 grams). The frequency of consumption of dry fruits was highest in the case of Dates (20 days per month). More than 58 per cent of the consumers preferred branded dry fruits and the remaining 42 per cent preferred unbranded dry fruits.

Harshitha (2017) conducted a study on consumer preference for processed organic food products in Bengaluru city. The results indicated that various products and product range of processed food products were marketed in Bengaluru city. The study revealed that brands like 24 Mantra, Terra Green, Timbuktu Organic, LP, Phalad pure and Sure, Safe Harvest, pristine fields of Gold, Turn Organic and Gramya darma, were the various rice brands. Along with that some of the brands like G10, Organic Tattva, Pro Nature, Organic Arya, Dhanya, Phalad pure and Sure and Sanjeevani Organic were identified for other organic food products like wheat, millets, dal, Bengal gram, green gram, and urad dal.

Nitin (2017) analyzed the consumers' preference for marine and inland fish in Bengaluru city. A sample comprising of 102 consumers and 20 retailers were drawn for the study. The study indicated that majority (80 %) of the fish consumers belonged to the age group of 26-50 years. The families of majority (91 %) of the respondents were nuclear in nature. With respect to food habit, majority (96 %) of the respondents were non-vegetarians by birth. With regards to the species-wise preference of consumption of fish by consumers, Majority (71.60 %) of the consumers preferred marine fish for consumption, followed by those (15.70 %) who preferred inland fish while the rest (12.70 %) were indifferent to the category of fish. With regard to the preference for fish species among consumers, it was found that majority (63.73 %) of them preferred rohu followed by pomfret (49.02 %), catla (41.18 %), seer (16.67 %), mackerel (12.75 %) and sardine (7.84 %). The remaining (9.80 %) consumers were not aware about the fish species they consumed.

Vyas and Bissa (2017) studied key factors that influence online buying behavior of consumers. They found 7 major factors that influence consumers to purchase online in Bikaner city of Rajasthan. Factors that influence were saving time, buying at any time of day (24/7), broad availability of products, easy comparison of products and vendors, best price, home delivery and ability to review of product by other consumers. Among the factors; price, comparison of product and home delivery were those who ranked top by consumers.

Kiran *et al.* (2018) studied consumption pattern, consumer attitude and consumer perception on meat quality and safety in Southern India. The study indicates that close to 50 percent respondents purchased meat directly from butcher shop, while only 13.1 per cent opted frozen meat. Majority of respondents (71.5 %) used color as indication of meat quality. Gravy type product was most preferred type in home, followed by biryani type and dry type meat products. The willingness to purchase frozen meat (16.9 %) and awareness of processed meat (33.1 %) indicate huge opportunity for meat industry in future. The study gives an idea on the future strategies need to be adopted by meat scientists to understand felt needs of consumers and ways to tackle food safety issues in India.

Waghmare *et al.* (2021) conducted an online survey of consumers of Maharashtra to understand non-vegetarian consumer behavior, preferences, hygienic considerations and their expected changes in meat selling business. Under these 194 (172 Male and 21 Female) respondents from all regions of Maharashtra state were surveyed. The study revealed that majority of consumers (90.21 %) preferred hot, freshly slaughtered chicken meat (77.32 %) which include all body parts of the carcass (56.19%) and them (70.62 %) usually preferred to eat non-vegetarian food once or twice in a week. About 68.59% consumers preferred skinless chicken carcass slaughtered by any ritual method (53.76 %). The study indicates that most of the consumers (70.62 %) usually buy meat from the meat shop near to their residence and nearly 42.78 per cent consumers showed concern about cleanliness and hygienic condition of the meat selling shop where from they buy non-veg products. Most of the consumers (82.38 %) showed their willingness to purchase home delivery of minimal handled hygienic meat and for this they (86.17 %) are ready to pay a slightly higher price.

2.3 Constraints and Expectations in ordering through e-commerce apps

Bolton and Drew (1991) proposed a model of how consumers with prior experience and expectations assessed service levels, overall service quality and service value. The model described how consumers expectations and perceptions of current performance and disconfirmation experiences affected their satisfaction or dissatisfaction with a service, which in turn affected their assessment of service quality and value.

Johnson *et al.* (1995) developed and tested alternative models of market-level expectations, perceived product performance and customer satisfaction. Market performance expectations are argued to be largely rational in nature yet adaptive to changing market conditions. Customer satisfaction is a cumulative construct that is affected by market conditions. Customer satisfaction is a cumulative 17 construct that is affected by market expectations and performance perceptions in any given period and is affected by past satisfaction from period to period. The author gives here an empirical study that supports adaptive market expectations and stable market satisfaction using data from the Swedish customer satisfaction barometer.

Keller and Kotler (2005) opined that consumer expectation were usually experience, word of mouth and advertising.

Jonna (2007) opined that constraints like security and privacy issues had drawn much attention in the e-commerce research area and e-vendors had adjusted their online shopping systems to convince consumers that vendors and systems were trust worthy. The study focused on how consumers choose their purchasing channel when the environment was relatively secured.

Ofir and Simonson (2007) studied the impact of stating consumers expectations before purchase on post purchase perceptions of the shopping experience and the firm. They said exceeding customer expectations is key to customer satisfaction, delight, and loyalty. According to them it is critical to find out customer expectations in advance because a failure to meet or exceed these expectations could lead to dissatisfaction and deflection.

Swardt (2008) conducted research to study disadvantage of online purchase from the customer point of view in South Africa, he illustrated two main disadvantages of online purchase as; not being able to touch and feel products and the absence of a salesperson.

Rana (2011) conducted a study on the Indian potato processing industry: Global comparison and business prospects. In this study, the results were revealed that the marketing of potato processing products has facing many constraints like competition from traditional foods, costly cold chain and higher transportation costs etc.

Sedaghat (2011) examined the constraints faced by farmers and traders in production and marketing of Iran's Pistachio. Results indicated that; Inadequate irrigation, Unsuitable domestic market structure accompanied with low received prices and price fluctuations and Lack of appropriate chemical fertilizers were the major problems from the farmers point of view, while Aflatoxin contamination standards, changing government policies toward export and Irregular supply of produce to the market during the year were the sole hindrances from the traders/exports point of view.

Sanjay *et al.* (2015) studied an overview of Indian meat marketing: challenges and scope. Most meats are sold in the domestic market without proper sanitary inspection and labelling. The situation is further associated by perseverance of domestic consumers to buy freshly cut meat from the wet market, rather than processed or frozen. Meat export market is substantiated and augmenting at acceptable pace by following sanitary and phytosanitary mandatory measures. There are many reasons for the stagnant growth of the meat industry, including lack of implementation of scientific knowledge, inadequate attention of entrepreneurs, negative approach of public towards meat, socio-political considerations and improper retailing.

Siddhant (2020) studied constraints and challenges consumer face in selecting quality meat. He identified four main challenges faced by consumers in selecting quality meat: (1) Indian meat markets are unorganized market largely operated in traditional ways, (2) Slaughtering, storage and garbage disposal does not comply with the strict and compulsory standards of hygiene, (3) Faulty Storage, Temperature, Packing and Transport Crucial factors to maintain the quality of meat, (4) Use of Harmful Substances Antibiotics, hormones and fillers**.**

METHODOLOGY

III. METHODOLOGY

The present study was carried out to analyze socio-economic profile and consumers purchasing behavior towards meat online through the e-commerce apps, their preference and perception towards it. The current chapter also provides a comprehensive picture to analyze, constraints and expectations of online purchase of meat products sold through online e-commerce apps.

This chapter presents the general characteristics of the study area, the methods adopted in selecting the sample and the concepts and analytical techniques employed for the study.

3.1 Selection and description of study area

3.2 Sampling procedure

3.3 Collection of data

3.4 Concepts, analytical tools and techniques employed

3.1 Selection of study area

Bengaluru, the capital city of Karnataka was selected purposively for the study, as it is one of the fastest growing metropolitan cities and is highly cosmopolitan in nature with people of different religions, castes, occupations, cultures, languages and food habits. Bengaluru serves as the cultural, administrative, industrial and the commercial center of Karnataka. It is the information technology (IT) and biotechnology (BT) hub of India, with industrial estates and numerous financial and educational institutions of immense potential for online purchases. The two leading e-commerce apps of meat (*i.e.,* Licious and Fresh to home) initiated their business activities from Bangalore city for the first time.

3.1.1 Description of study area

Bengaluru is located in the Deccan Plateau in south-eastern Karnataka. The city of Bengaluru is situated in the Bangalore Urban district. Bengaluru roughly has a population of 13,425,970 of which male and female were 7,401,299 and 6,024,671, respectively. The sex ratio of Bengaluru city is 914 females per 1000 males. Child sex ratio of girls is 940 per 1000 boys. Average literacy rate of Bengaluru city is 87.67 per cent in which male

and female literacy was 91.01 and 84.01 per cent, respectively *(www.worldpopulationreview.com).*

Over the years, Bengaluru has evolved into a manufacturing hub for public sector with heavy industries particularly aerospace, telecommunications, machine tools, heavy equipment, space and defense. The establishment and success of business software service firms in Bangalore after the liberalization of India's economy has contributed in great extent to the growth of India's information technology industry. Bengaluru is referred to as the Silicon Valley of India and accounts for 60 per cent of India's software exports. It is home to prestigious colleges and research institutions and this is the most advanced district in Karnataka. Bengaluru city is governed by a Municipal Corporation which comes under *Bruhat Bengaluru Mahanagara Palike.*

3.1.2 Demographic characteristics.

With an estimated population of 13.6 million in 2022, Bengaluru is the third most populous city in India and the 18th most populous city in the World. Bengaluru was the fastest-growing Indian metropolis after New Delhi between 2011 and 2021; with a growth rate of 38 per cent during the decade.

The cosmopolitan nature of the city has resulted in the migration of people from other states to Bengaluru, which has in recent years given rise to tensions between immigrants and locals. The Scheduled Castes and Tribes account for 14.3 per cent of the city's population. Various languages are spoken and understood, namely, Kannada, English, Tamil, Hindi and Telugu. According to the 2001 Census of India, 79.4 per cent of Bangalore's population is Hindu, roughly the same as the national average. Muslims comprise 13.4 per cent of the population, which again is roughly the same as the national average while Christians and Jains account for 5.8 per cent and 1.1 per cent of the population, respectively; double that of their national averages.

The Anglo-Indians also form a substantial group within the city. Women make up 47 per cent of Bangalore's population. Roughly 10 per cent of Bangalore's population lives in slums, a relatively low proportion when compared to other cities in the developing World such as Mumbai (50 %) and Nairobi (60 %) Bengaluru is also known as the Garden City

of India because of its climate, greenery and the presence of many public parks. *(www.newworldencyclopedia.org).*

3.1.3 Geographical characteristics and climate

Bengaluru is situated in the south-east part of Karnataka at an average elevation of 920 meters (3018 feet). It is positioned at 12.97° N 77.56° E longitude and covers an area of 2190 km². Bengaluru district borders with Kolar district in the northeast, Tumkur district in the northwest, Mandya district in the southwest and Chamarajanagar district in the south.

Bengaluru city experiences tropical savanna weather with separate wet and dry seasons, because of its high elevation, Bengaluru city regularly enjoys mostly moderate climate during the year. In the summer occasional heat waves make the climate uncomfortable. The coolest month of the year is December with an average low temperature of 15.4 °C and the hottest month of the year is April with an average high temperature of 36 °C.

The maximum temperature forever recorded in Bengaluru city was 38.9 °C or (102 °F). The lowest forever record was 7.8 °C or (46 °F). In the winter temperatures rarely go below 12 °C or (54 °F) and during summer season temperatures occasionally exceed 37 °C or (99 °F). Bengaluru city obtains rainfall mutually from the north-east and the south-west monsoons and the rainiest months of the year are August, September and October. Heat in the summer season is with many thunderstorms, which rarely causes electricity outages and local flooding. The average rain fall is 859 mm in Bangalore city.

3.2 Sampling procedure

The study is based on primary and secondary data. The primary data regarding the socio- economic characteristics of the consumers and the consumer's perception towards e-commerce apps was collected using a pre-tested structured interview schedule. The simple random sampling method was adopted to select the respondents. Respondents were selected randomly irrespective of characteristics. A total of 60 consumers were interviewed, 10 respondents from each area.

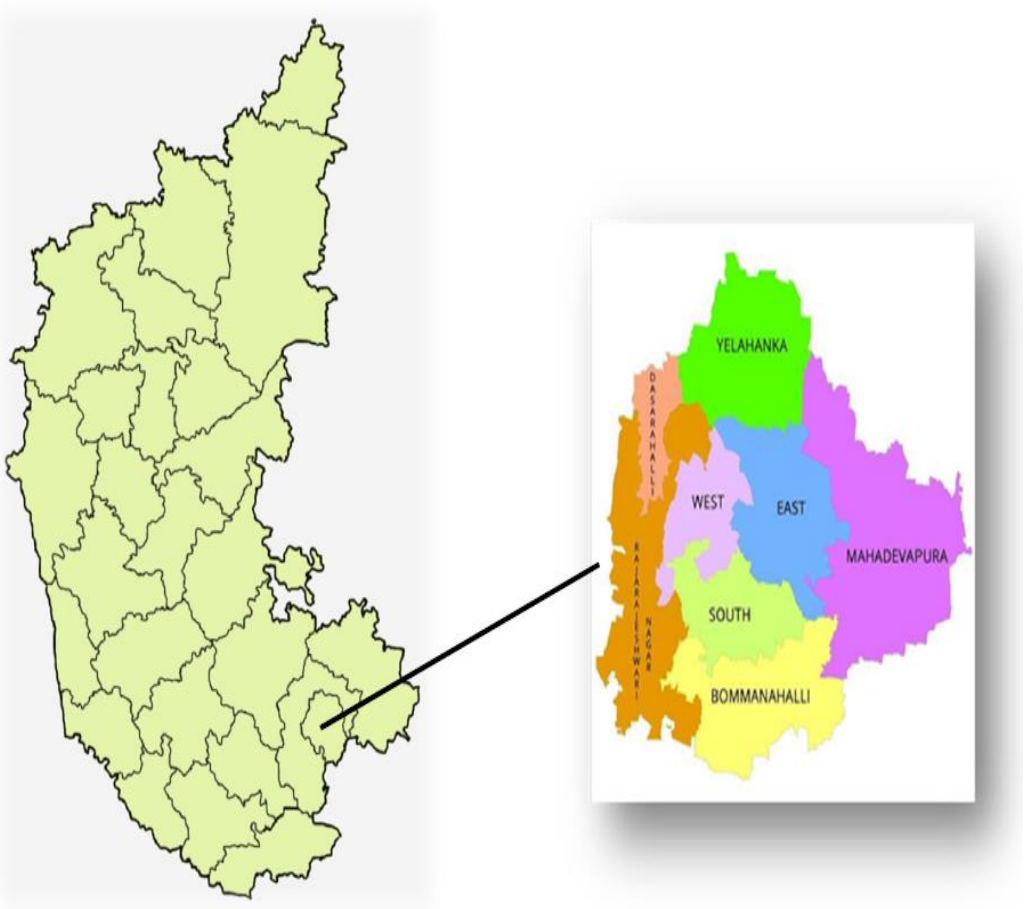

Fig. 1: Map depicting the Study Area (Bengaluru Metropolitan)

The consumer respondents were selected from different localities of Bengaluru Metropolitan namely Sahakarnagar, Judicial Layout, Yelahanka, Mahadevapura, Sanjay Nagar and Jayanagar to have a fair demonstration of different socio-economic strata and get a diversity in the sample mainly based on region, per capita income, profession and social class. The composition and distribution of the consumers selected for the study is presented in Table 1.

Table 1: Composition and distribution of consumers selected in Bengaluru city

Sl. No.	Name of the locality	No. of consumers
1.	Sahakarnagar	10
2.	Judicial Layout	10
3.	Yelahanka	10
4.	Mahadevapura	10
5.	Sanjay Nagar	10
6.	Jayanagar	10
	Total	60

3.3 Collection of data

Primary data as well as secondary data were used in the present study.

Primary data

The pre-structured schedule used for primary data collection was divided into 3 categories,

The first category was related to socio-economic characteristics of consumers such as name, gender, age, education, occupation, number of family members earning income, monthly income, food habit and family size. Data were collected from various age groups, income groups and gender groups.

The second category was related to price comparison by consumers before making online purchase, frequency of online purchase, company of purchase, minutes spent while placing order, payment mode and the type of meat product purchased online by consumers, and it includes perception where 10 statements were determined for each and consumers were asked to express their agreement regarding the statements using five-point-Likert scale, where 1 represented strongly disagree while 5 represented strongly agree.

Likert scale was founded in 1932 by Rensis Likert as a technique for the Measurement of attitudes, which introduced a method for measuring attitudes and his eventual namesake. Likert scale is a rating scale also used to measure opinions and behaviors. It consists of a statement or a question, followed by a series of five or seven answer statements. Respondents choose the option that best corresponds with how they feel about the statement or question

Third category however, confined to expectations of online purchasers of meat products and constraints of online purchase. Accordingly, 10 statements were determined for each of the third category and consumers were asked to express their agreement regarding the statements on the basis of Ranking from 1 being the highest and 10 being the lowest.

Secondary data

The secondary data on location, demography and other details about the study area were collected from sources like District Statistical Office and FAO (2021).

3.3.1 Period of study

The data pertaining to year 2021-22 was obtained through the survey carried out in the months of January and February 2022.

3.4 Analytical tools and techniques

To fulfill the specific objectives of the study, based on the variables included for the study and the nature and extent of data, the following analytical tools and techniques were used.

3.4.1 Descriptive statistics
3.4.2 Garrett's ranking

3.4.1 Descriptive statistics

Descriptive statistics were used to describe the basic features of data gathered from various sources. They provide simple summaries about the sample and measures total and percentage which was used in the study. The data was analyzed by working out simple averages. Percentages were calculated for variables indicating socio-economic

characteristics or of the consumers like age, gender, education, occupation, monthly household family income, family type and consumption habits. The tools provided simple summaries about the sample and helped in arriving at meaningful conclusions. Tabular analysis was also used to study the socio-economic characters and types of meat products sold through online in Bangalore city etc.

3.4.1.1 Measures of central tendency

Measures of central tendency such as mean and percentages were used to examine the distribution of income, education, family size, frequency of purchase, and distance from the place of purchase.

3.4.1.2 Mean

It is the sum of the observed values of a set divided by the number of observations in the set is called average or mean. The respondents were grouped based on the mean and Standard deviation.

3.4.1.3 Standard deviation

In perception where 10 statements were given and consumers were asked to express their agreement regarding the statements ranging from 1 to 5 in five-point-Likert scale, where 1 represented strongly disagree while 5 represented strongly agree.

The positive square root of the variance is called standard deviation. It explains the average amount of variation on either side of the mean. The mean and half standard deviation were used to classify the respondents into three following categories.

Table 2: Formula used to calculate overall perception level of respondents

Category	**Criteria**
Low	< (Mean – ½ SD)
Medium	(Mean $\pm$ ½ SD)
High	> (Mean + ½ SD)

3.4.2 Garrett's Ranking Technique

In this study, the Garrett's ranking technique was used to compute the important reasons for choosing e-purchasing by consumers. Consumers were asked to rank the reasons based on their importance which help to know the preference of consumers towards e-purchasing. The order of the merit given by the respondents was converted into per cent position using the formula given below. Accordingly, the per cent position of each rank was converted to scores by referring to tables given by Garrett and Woodworth (1969).

In the first stage, ranking given by consumers for each attribute was analyzed. e.g.: Rank given to different attributes were analyzed through the rank given to these attributes by each respondent.

In the second stage, the assigned ranks by the individual respondents were counted into per cent position value by using the formula.

Per cent Position = $100 * (R_{ij} - 0.50)/ N_j$

Where, R_{ij} = Rank given for i^{th} item by j^{th} individual

N_j = Number of items ranked by j^{th} individual

In the third stage, for each per cent position scores were obtained with reference to the Garret's tables and each per cent position value was converted into scores by referring to Garrett's table.

In the fourth stage, summation of these scores for each factor was worked out for the number of respondents who ranked for each factor. In the fifth stage, mean scores were calculated by dividing the total scores by the number of respondents.

In the last stage overall ranking was obtained by assigning ranks such as 1,2,3…etc. in the descending order of the mean score.

The mean score for all the factors were ranked, following the decision criteria that higher the value, the more important is the order of preference by respondents.

RESULTS AND DISCUSSION

IV. RESULTS AND DISCUSSION

In consistence with the objectives of the study, the data collected from sample respondents were analyzed. The results of the analysis are presented under the following headings. The results obtained from analysis of the data are presented under the following headings.

4.1 General information and Socio-economic profile of the e-purchasing consumers of meat in Bengaluru city

4.2 e-purchasing behavior of consumers of meat

4.3 Preference of consumers towards e-purchasing of meat

4.4 Perception of consumers towards e-purchasing of meat

4.5 Constraints in e-purchasing of meat in Bengaluru city

4.6 Expectations in e-purchasing of meat in Bengaluru city

4.1 General information of e-purchasing consumers in Bengaluru city.

The general information about respondent e-purchasers on socio-economic characteristics like age, education, gender, family size, occupation, family income, occupational status and marital status was analyzed using percentages and results pertaining to these variables are presented as below under different sub headings.

4.1.1 Socio-economic profile of meat consumers in Bengaluru urban district

The study comprised of 60 meat consumers in the Bengaluru Urban district. The demographic characters examined in the Table 3 incorporate socio-economic aspects such as age, gender, literacy levels, occupation, type of family, size of the family, monthly family income, monthly expenditure on food and monthly expenditure on meat of the family. The demographic characteristics of households are essential when analyzing the primary data because such factors influence the consumer preference for meat through e-commerce in Bengaluru urban district. The socio-economic characteristics of respondent consumers is presented in Table 3 and explained under the following headings.

4.1.2 Age of respondents

It can be observed that majority (45 %) of the meat consumers belonged to the age group of 25 to 45 years. It is quite obvious that meat consumption is high among adults and middle-aged people because they prefer to consume more meat to remain active in later life and due to time constraints of working professionals meat is ordered more by them. The remaining consumers belonged to age group of 18 to 25 years are 30 per cent as many are students staying in residentials and due to trend pattern of youth in online ordering, followed by age group of above 45 years (25 %) due to less physical strength and activity.

4.1.3 Gender of respondents

With respect to gender, majority (65 %) of the meat consumers were found to be female and the rest were male (35 %). Women order more meat compared to men due to less frequency of them going out and unhygienic atmosphere in retail meat store.

4.1.4 Literacy levels of the respondents

Education plays a key role in enhancing an individual knowledge on Technology. Education is one of the major determinants of respondents in accessing to Online market. The literacy levels of the respondents reveal that 71.67 per cent of the consumers were graduates and 3.33 per cent respondents had studied up to PUC, 1.66 per cent of the respondents were studied high school. There were respondents who studied postgraduate i.e., about 16.66 per cent followed by 6.66 per cent completed Ph.D. and above. From the Table 3 we can say that majority of the consumers were graduate which means that consumers in the study area were educated.

4.1.5 Family size of the respondents

The majority (71.67 %) of the respondents' families were nuclear in form, consisting of husband, wife and children. The remaining 23.34 per cent consisted with one or two extra members of families and 5 per cent of the respondents live in joint families. The nuclear family is the most common family structure in the modern world because families want to better their standard of living by having fewer children. This demonstrated that the respondents in the research area live in a modern culture.

4.1.6 Occupational status of the respondents

It was found that majority (55 %) of the consumers were private employees, who were the major meat consumers through online amid all age groups, followed by students (15 %). The respondents who were housewives were 13.30 per cent and by government employee 13.30 per cent equally and self-employed /business owners were 3.33 per cent.

4.1.7 Annual income of the family

It could be observed from the Table 3 that annual family income of the majority respondents was ranging between Rs. 4 to 8 lakh (68.34 %) because most of them were living in urban area with private jobs and having small to medium sized families, followed by the respondent's income up to Rs.4 lakh (25 %). The respondents with annual family income in the range of above Rs.8 lakh were few (6.66 %).

4.1.8 Monthly expenditure on food

Table 3 shows the monthly expenditure of food. The majority of families spent between Rs. 5000 and Rs 10000 (68.34 %) on food because family size of majority respondents is medium and expenditure on perishables was low. In case of nuclear families with 4 people or less monthly expenditure on food up to Rs.5000 (25 %) and expenditure on food Above Rs.10000 was (6.66 %) per month.

4.1.9 Monthly expenditure on non-veg

From table 3 it could be confirmed that the majority (51 %) of consumers spend around Rs. 2000 to Rs. 5000 on meat and meat products monthly, followed by up to Rs. 2000 (41.67 %) and above Rs. 6000 was seen among 6.66 per cent of consumers.

Table 3: Socio-economic profile of e-purchasers towards meat in Bengaluru city

(n=60)

Sl. No.	Particular	Number	Percentage
1.	**Age group**		
a)	Young age (18-25 years)	18	30.00
b)	Middle age (25-45 years)	27	45.00
c)	Old age (45 and above years)	15	25.00
2.	**Gender**		
a)	Male	21	35.00
b)	Female	39	65.00
3.	**Education level**		
a)	High school	01	1.66
b)	PUC	02	3.33
c)	Graduation	43	71.67
d)	Post- Graduation	10	16.67
e)	Doctorate	04	6.67
4.	**Family size**		
a)	Small size (Up to 4 members)	43	71.67
b)	Medium size (4-6 members)	14	23.33
c)	Large size (>6 members)	03	05.00
5.	**Occupation**		

a)	Govt. job	08	13.30
b)	Private job	33	55.00
c)	Business	02	3.34
d)	Housewife	08	13.30
e)	Student	09	15.00
6.	**Annual income (in Rupees)**		
a)	Up to Rs. 4 lakhs	15	25.00
b)	Rs. 4 to 8 lakhs	41	68.34
c)	Above Rs. 8 lakhs	04	6.66
7	**Amount spent on food/month (in Rupees)**		
a)	Up to Rs.5000	15	25.00
b)	Rs.5000 to 10000	41	68.34
c)	Above Rs.10000	4	6.66
8.	**Amount spent on non-veg/month (in Rupees)**		
a)	Up to Rs.2000	25	41.67
b)	Rs.2000 to 5000	31	51.66
c)	Above Rs .5000	04	6.66

4.2 e- Purchasing behavior of consumers of meat

4.2.1 Preferred time of ordering meat

Table 4 depicts the optimum time to order meat. Nevertheless, some consumers consume meat every day. The type and part of meat depends according to their personal beliefs, family customs, culture, etc.

The majority of consumers (58.33%) preferred eating meat in the morning because cooking in the morning is laborious and they wanted to finish so they could relax in the afternoon followed by eating meat in the evening (31.67%) because meat is typically consumed when there is free time because it takes time to prepare for consumers. Around 10 per cent of the consumers preferred to cook in the afternoon.

Table 4: Preferred time of ordering meat (n=60)

Sl. No.	Time of ordering meat	Number	Percentage
a)	Morning hours (6 am to 12pm)	35	58.33
b)	Afternoon hours (12pm to 5pm)	06	10.00
c)	Evening hours (5 pm to 10pm)	19	31.67

4.2.2 Frequency of ordering meat online

The frequency of meat consumption varies from consumer to consumer and meat to meat. As shown in Table 5 regarding the frequency of meat consumption, it was found that majority of the consumers (63.34 %) ate once or twice per week because of the taste and dietary habit followed by three to four times per week and very few (3%) had more than four times a week.

The findings of the present study are similar to the study conducted by Raghavendra (2009), who in his survey on meat consumption pattern and its preference in Dharwad district reported that majority (60 %) of the consumers eat chicken meat once in a week and majority (52 %) of them eat mutton meat once in fortnight at home.

Table 5: Frequency of ordering meat online **(n=60)**

Sl. No.	Frequency	Number	Percentage
a)	1-2 times / week	38	63.34
b)	3-4 times / week	20	33.33
c)	more than 4 times / week	02	3.33

4.2.3 Time taken in recent online orderings

According to the findings mentioned in Table 6, the majority of consumers spend 10-20 minutes (78.33 %) on each order, indicating that despite the app's suggestions of other items, consumers already know what they should order.

A few consumers took 5-10 minutes (18.34 %) 10-20 minutes (3.33 %) followed by 20 minutes (3.33 %) and this would be in the case of new consumers who explored the app and its features and products. This suggests that apps used to order meat through e-commerce apps are more straightforward, clear and user friendly and don't take much time of consumers app screen time and hence is efficient in saving the time for consumers.

Table 6: Time taken in recent online orderings

(n=60)

Sl. No.	Time spent	Number	Percentage
a)	5-10 mins	11	18.34
b)	10-20 mins	47	78.33
c)	More than 20 mins	02	3.33

4.2.4 Total amount spent on recent order

Income is one of the key factors that influences consumer behavior and affects spending pattern on meat. According to Table 7, the majority of consumers (70.00 %) paid less than Rs. 1000 on their most recent order, which is owing to the fact that most consumers came from nuclear households, and as a result of lower consumption, there is also lower spending.

While 28.34 per cent of consumers spent between Rs. 1000 and Rs. 3000 and Just (1%) of people spent more than Rs. 3000. This could suggest that in spite of the higher income, the consumption of meat may increase up to after certain level but will remains constant after some point.

Table 7: Total amount spent on recent order (n=60)

Sl. No.	Amount spent	Number	Percentage
a)	Less than Rs.1000	42	70.00
b)	Rs.1,000–Rs.3000	17	28.34
c)	Rs.3,000 and above	01	1.66

4.2.5 Preferred day of ordering meat online

As depicted in Table 8, most of consumers (68.34 %) chose to order meat on weekends, as many consumers work in private enterprises, and since cooking meat typically takes longer than usual, they preferred to place weekend orders so they get leisure time to cook while 21 per cent preferred to order during the week and this could be in case of evening hours as due to certain beliefs that consumers might not consume meat on weekends.

Few (10%) of the respondents ordered on both the weekends and the weekdays. Since India had many festivals and if one of those festivals fell on the weekend, people would typically order meat the next day.

Table 8: Most preferred day for online ordering of meat (n=60)

Sl. No.	Days	Number	Percentage
a)	Weekend	41	68.34
b)	Weekdays	13	21.66
c)	Both	06	10.00

4.2.6 Mode of payment for online ordering

Digital payment methods are often easy to make, more convenient and provide consumers the flexibility to make payments from anywhere and at any time. The Government of India has been taking several measures to promote and encourage digital payments in the country. It is important to choose a payment method that is suitable for the business and that's the main reason an e-commerce apps provide more than one payment method. By enabling different payment methods, apps can enhance the opportunities of conversion.

Results for the mode of payment are shown in table 9, with the majority of consumers (85 %) make payment via online banking, followed by credit/debit cards (35 %) and cash on delivery (25 %).

Table 9: Mode of payment for online ordering (n=60)

Sl. No.	Mode of payment	Number*	Percentage
a)	Online banking	51	85.00
b)	Credit / Debit card	21	35.00
c)	Cash on delivery	15	25.00

***Multiple responses**

4.3 Preference of consumers towards e-purchasing of meat

4.3.1 Most preferred app by consumers

The need for meat ordering apps is rising as a result of the pandemic. Users prefer to purchase meat through a raw meat delivery app for a variety of reasons, but convenience and simplicity rank among the top three. It is a lot easier without going to the native market or looking for one of the few remaining native butchers. You only need to pick up your phone and use the fresh meat online app to order the meat of your choice.

As per Table 10, among the e-purchasers who purchased through apps, licious (56.66 %) turned out to be most preferred app by consumers followed by Swiggy instamart (23.34 %) and tender cuts and fresh to home (10 %) each respectively. This table co-relates with hypothesis and proves that fresh to home isn't the most preferred app among the consumers.

Table 10: Most preferred app by consumers (n=60)

Sl. No.	Most preferred apps	Number	Percentage
a)	Licious	34	56.66
b)	Swiggy instamart	14	23.34
c)	Tender cuts	06	10.00
d)	Fresh to home	06	10.00

4.3.2 Average delivery time when ordered through online

By offering an exact time of delivery, and communicating with the customer on the progress of their shipment, a business proves its reliability and commitment to consumer satisfaction.

Table 11 shows the average delivery time for online buyers, with the majority of consumers (58.34 %) receiving their meat within an hour of ordering. Around (25 %) of consumers got their order between 20 to 40 minutes. Approximately (8%) of consumers

received the order within 20 minutes of delivery and the last 8 per cent received after an hour after placing the order through the app.

Table 11: Average delivery time when ordered through online (n=60)

Sl. No.	Average delivery time	Number	Percentage
a)	within 20 minutes	05	8.33
b)	20 to 40 minutes	15	25.00
c)	less than an hour	35	58.34
d)	More than an hour	05	8.33

4.3.3 Packaging materials preferred for meat

The preferred packaging materials for meat are shown in Table 12. The findings suggest that 71.67 per cent of consumers preferred environmentally friendly packaging or paper since most consumers, particularly those in metropolitan areas, are health conscious and because of recent government directives require that the use of plastic be minimized and the meat may arrive frozen and wrapped entirely in recyclable and compostable materials.

However, 20 per cent of the population still favored plastic packing as it is more practical and does not spoil quickly. About 8.33 per cent of respondents chose metal packaging, which is typically comes in the form of tins and cans.

Table 12: Packaging materials preferred for meat (n=60)

Sl. No.	Packaging materials preferred for meat	Number	Percentage
a)	Plastic packaging	12	20.00
b)	Paper /eco-friendly packaging	43	71.67
c)	Metal packaging	05	8.33

4.3.4 Response on how long consumers have been ordering from e-commerce apps

The frequency and amount of people ordering through apps has increased after the Covid-19 outbreak and due to the growing popularity of working from home, more people are getting meat through e-commerce apps. The results from Table 13 indicate how long consumers have been placing orders through apps.

The majority of consumers (36.67 %), have been placing orders for three to six months. About (35%) of consumers have been purchasing over the last six to twelve months and 16.66 per cent of consumers were placing orders for more than a year. Around (11.66 %) of consumers placed orders in the previous three months. Post-Covid the frequency and number of people ordering through apps has been increasing rapidly due to restriction in movements and safety of individuals, hence no contact delivery is being followed throughout the e-commerce companies.

Table 13: Response on how long consumers have been ordering from e-commerce apps (n=60)

Sl. No.	Response	Number	Percentage
a)	Less than 3 months	07	11.66
b)	3 -6 months	22	36.67
c)	6 months - 1 year	21	35.00
d)	More than 1 year	10	16.66

4.3.5 Response on discounts through e-commerce apps

Considering that women make up the majority of online purchasing, they are more likely than men to pay attention to offers and promotions. According to our findings, majority of the consumers ordering meat online are women.

Table 14 shows that most of the consumers (77.34 %) have been benefitted through discounts and only 26.66 per cent of consumers believe they have not benefited through discounts.

Table 14: Response on discounts through e-commerce apps (n=60)

Sl. No.	Response on discounts	Number	Percentage
a)	Benefited through discounts	44	73.34
b)	Not benefited through discounts	16	26.66

4.3.6 Impact of Covid-19 on online ordering of meat

India's online meat market grew by 80 per cent i.e., $2.66 billion in 2020 primarily due to Covid-19 and the resulting lockdown. The sector is expected to grow exponentially over the next few years due to expanding internet connectivity and rising consumer demand for convenience, value, safety/hygiene, ease of payment and product variety.

In reference to table 15 the impact of Covid-19 on consumers, majority of the consumers (78.33 %) responded that Covid-19 has impacted their purchasing of meat through e-commerce apps and 21.67 per cent of the consumers responded that Covid-19 hadn't impacted their purchasing of meat through online. But the numbers presented by the business of these apps showed that the buying behavior through online had almost doubled after Covid.

Table 15: Impact of COVID on online ordering of meat (n=60)

Sl. No.	Impact of COVID	Number	Percentage
a)	Covid has impact on ordering online	47	78.33
b)	Covid hasn't impacted on online ordering	13	21.67

4.3.7 Consumers preferred meat parts through e-commerce apps

Consumers preference on various meat types may differ from one another. All consumers do not prefer all type of meat parts or meat from the same animal. Parts of meat is the attribute of meat quality that positively influence the preference to most of the meat consumer and consumers were unlikely to switch to different parts even if the price were reduced.

As per table 16, Consumers in Bengaluru consume a range of meats, with leg being the most popular cut (81.67%) due to its tenderness and juiciness. Tender cuts were selected by 61.66 per cent of consumers. Chest was preferred by 46.66 per cent of consumers followed by wings (36.66 %).

Table 16: Consumers preferred meat parts through e-commerce apps (n=60)

Sl. No.	Most preferred part of the meat*	Number	Percentage
a)	Leg	49	81.67
b)	Tender cuts	37	61.66
c)	Chest	28	46.66
d)	wings	22	36.66

***Multiple responses**

4.3.8 Preferred reason to order through e-commerce apps

Time and money can be saved with e-commerce apps. Consumer preference for e-purchasing is growing for a number of reasons, including its convenience and constant availability. Consumers favor e-commerce applications because of the enhanced user experience and simple payment alternatives.

Since time is one of the biggest constraints for those living in metropolitan areas, it could be seen from table 17 that the majority of consumers (71.66 %) cited this as the main justification for choosing e-commerce apps. Offers and discounts (43.33 %) was the second main factor in people using these apps. High quality meat (33.34 %) was another factor for people using these applications to place their orders.

Table 17: Preferred reason to order through e-commerce apps (n=60)

Sl. No.	Preferred reason	Number*	Percentage
a)	Time saving	43	71.66
b)	High-quality meat	20	33.34
c)	Offers and discounts	26	43.33

***Multiple responses**

4.3.9 Response on e - Purchasing awareness

Awareness refers to the familiarity of consumers with a particular product or service**.** Social media has become an important new tool in brand awareness marketing.

Table 18 shows that the majority of consumers 73.33 per cent learned about applications through advertisements and promotions, while some percentage did so through friends (31.67%) and through personal contact (3.33 %). Newspaper (20 %) was another type of media used to promote these apps. About 5 per cent of people knew about these apps through their relatives.

Table 18: Response on e - Purchasing awareness (n=60)

Sl. No.	e - Purchasing awareness	Number*	Percentage
a)	Advertisements and promotions	44	73.33
b)	Friends	19	31.67
c)	Personal contact	02	3.33
d)	News paper	12	20.00
e)	Relatives	03	5.00

***Multiple responses**

4.3.10 Consumer preference for different types of meat

Due to societal norms, taboos, and individual preferences, consumers' tastes and preferences may vary among the many meats. As a result, not all consumers may appreciate everything. The preferences of consumers for the various varieties of meat were evaluated, and the results are displayed in table 19.

The majority of consumers (96.66 %) preferred chicken meat above other types because they liked the taste and usefulness. It goes nicely with a variety of culinary techniques and recipes. Since it is readily available and less expensive than other meats so consumers used chicken meat.

The second most popular meat was mutton. Because of its taste, perceived nutritional content, and health advantages, about 80 per cent of the respondents preferred after chicken meat. However, some people were unable to buy mutton due to its high price. 43 per cent of consumers reported eating fish, followed by 23.33 per cent of consumers who reported eating prawns.

The findings shown above are similar with those reported by Babu *et al*. (2010), Kavitha and Ajithkumar (2014), Talukder *et al*. (2020), and Waghamare *et al*. (2021), who found that the majority of consumers prefer chicken meat. In contrast to Suresh (2016), who discovered that most consumers prefer mutton meat, Tekle and Anja (2017) discovered that beef was the most desired meat.

Table 19: Consumer preference for different types of meat (n=60)

Sl. No.	Meat type	Consumers	
		Number*	Per cent
1.	Chicken	58	96.66
2.	Mutton	48	80.00
3.	Fish	26	43.33
4.	Prawns	14	23.33

***Multiple responses**

4.5 Perception of consumers towards e-purchasing of meat

4.5.1 Consumer's perception towards e-commerce apps for meat products

The results pertaining to the Consumer's perception towards e-commerce apps for meat products are categorized into 12 statements and overall perception level of consumers about e-commerce apps of meat products.

The consumer's perception on e-purchasing varies from individual to individual and the perception is limited to a certain extent with the availability of the proper connectivity and the exposure to the e-purchasing. The perception of the consumer also has similarities and difference based on their personal characteristics.

These statements expressed consisted of 6 positive and 6 negative statements equally and was given to consumers on which they gave scores to the statements ranging from 1 to 5 statements in five-point-Likert scale, where 1 represented strongly disagree while 5 strongly agree and were calculated to be ranked from 1 to 12 based on mean score given.

The criteria for development of schedule were based on critical details/factors such as time, ease of usage of apps, type/parts of meat available, hygiene and cleanliness etc. those are influencing consumers perception towards ordering through e-commerce apps.

Table 20: Perception of consumers towards e-purchasing of meat (n=60)

Sl. No.	Statements	Mean Perception score	Ranking
1	e-commerce apps of meat products help in management of time.	4.11	**I**
2	Availability of e-service in regional languages helps wide range of consumers	3.9	**II**
3	Meat products through e-commerce apps fulfils all food standards and grade	3.85	**III**
4	There are lot of options in meat products through e -commerce	3.6	**IV**
5	Meat from e-commerce apps have higher quality and hygiene.	3.43	**V**
6	Consumers have a lot of choices in selection of type of flesh through e-commerce apps	3.38	**VI**
7	Meat purchased through e-commerce improves health and nutrition	2.65	**VII**
8	e-commerce apps of meat products are having the potential to improve user experience further	2.5	**VIII**
9	price of meat products is expensive in e-commerce apps	2.16	**IX**

10	Meat products of e-commerce apps need to improve their promotions through front line media to reach other people	2.13	**X**
11	Meat is not delivered on expected time if ordered through apps	1.85	**XI**
12	e-commerce apps of meat products do not cover remote areas	1.56	**XII**

With regard to the perception of consumers towards e-commerce apps for meat products it could be seen from Table 20 that statement 'e-commerce apps of meat products help in management of time ' ranked first , followed by the statements such as 'Availability of e-service in regional languages helps wide range of consumers' (mean perception score of 3.9), 'Meat products through e-commerce apps fulfils all food standards and grade' (mean perception score of 3.85), 'There are lot of options in meat products through e - commerce' (mean perception score of 3.6), 'Meat from e-commerce apps have higher quality and hygiene' (mean perception score of 3.43), 'Consumers have lot of choices in selection of type of flesh through e-commerce apps' (mean perception score of 3.38), 'Meat purchased through e-commerce improves health and nutrition' (mean perception score of 2.65), 'e-commerce apps of meat products are having the potential to improve user experience further' (mean perception score of 2.5) 'price of meat products is expensive in e-commerce apps' (mean perception score of 2.16), 'Meat products of e-commerce apps need to improve their promotions through front line media to reach other people' (mean perception score of 2.13), 'Meat is not delivered on expected time if ordered through apps' (mean perception score of 1.85). And 'Meat is not delivered on expected time if ordered through apps' (mean perception score of 1.56).

Most of the consumers expressed during the interview that, consumers tend to buy meat online when there is an appealing thing such as a promotional campaign, discount and engaging advertising on the website. Consumers were more attracted to engaging

pictures on website or platforms. In addition, recent research stressed that promotion might also attract price-sensitive consumers, causing them to choose the channel which provides them with the best value for money.

Most consumers would likely purchase meat through online channels due to limited access to the market and government regulations to reduce activity in the public area and personal reasons.

4.5.2 Overall Perception Level of Consumers about e-commerce Apps of Meat Products

The e-commerce apps for meat industry are small enterprise and companies engaged in modern industries for packing, preservation, marketing and service of meat and its products. The study tries to understand the perception of consumers towards e-commerce apps for meat products through different statements.

Overall, more than half of consumers possessed 'low' to 'medium' perception towards e-commerce apps of meat products. The results in table 21 indicated that 43 per cent of consumers had high perception, 37 per cent consumers had medium perception and 20 per cent consumers had low perception towards towards e-commerce apps of meat products. As majority (70%) of consumers have high to medium perception we can say that Overall perception level of consumers about e-commerce apps of meat products is favorable as stated in hypothesis and the statements "Meat products through e-commerce apps fulfils all food standards and grade" and "Meat from e-commerce apps have higher quality and hygiene" are perceived higher. As the statements related to hygiene and cleanliness are perceived higher it proves the hypothesis that meat is more hygienic through e-commerce apps than through retail stores. But there is still lot of scope to improve and satisfy consumers by managing delivery time and maintaining proper grades, standards and improving services.

Table 21: Overall perception level of consumers about e-commerce apps of meat products **(n=60)**

Sl. No.	Category	Criteria	Number	Percentage
1.	LOW	Mean- (0.5*SD)	12	20.00
2.	MEDIUM	Mean± (0.5*SD)	22	37.00
3.	HIGH	Mean+(0.5*SD)	26	43.00
			Mean	44.64
			Standard deviation	3.55

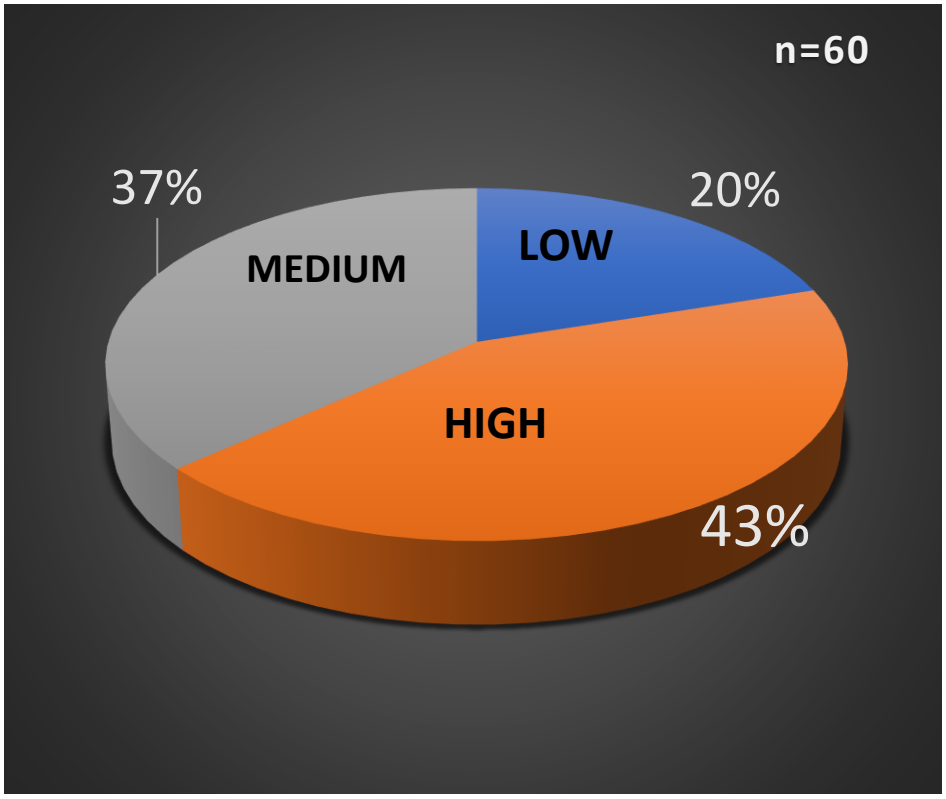

Fig. 2: Overall Perception Level of Consumers About e-commerce Apps of Meat Products

4.6. Constraints in e-purchasing of meat in Bengaluru city

There is a remarkable increase in the level of awareness about the way meat is produced, stored, transported, preserved, cooked, and consumed. Each stage is immensely vital and cannot be ignored at any cost. Buying meat through internet is a daily activity and requires knowledge and information. It is necessary that consumers need to be aware of the risks and the ways to avoid those risks while having the best quality meat. Consumers are facing lots of challenges while selecting meat for their consumption, hence the study was conducted to derive the possible constraints faced by consumers in purchase and consumption of meat as shown in table 22.

The study was analyzed using Garrett's Ranking Technique. Based on the mean Garrett's score, high price of the product was ranked first with a score of 63.4 followed by the factors, viz., More delivery time and other delivery issues (Garrett's score of 62.00), oor customer Service post purchase (Garrett's score of 60.5), Less Discount/ Offers / Benefits (Garrett's score of 53.9), Less options in product selection (Garrett's score of 51.5), Mismatch of orders (Garrett's score of 48.2), Poor Product Quality (Garrett's score of 44.9), Religious belief and customs (Garrett's score of 41.5), App User interface and data security (Garrett's score of 39.6) and Lesser Area coverage or location (Garrett's score of 39.5).

The results revealed that high price of the product was the major constraint for the households as the companies invest a lot in advertising marketing and delivery of meat. Delivery time and other delivery issues plays the most important part in purchasing through internet as meat needs to be cooked post-delivery which takes much more time and people can be impatient. The good quality meat can go rancid if it is not stored, transported and handled hygienically with strict measures of temperature control. There is also a greater risk of the meat quality as it is cold stored and fear of preservatives. Consumers have the fear of source of meat as it isn't mentioned during the delivery.

Less Discount/ Offers / Benefits due to high price of meat was also major constraint faced by households since per capita income of households and meat price were high compared to retail / butcher shops. One of the most popular constraints faced by consumers was non-availability of desired portion of meat as some consumers do not eat whole carcass

of animal they eat only particular parts like leg, breast, liver, wings etc., and some prefer meat with no skin and cholesterol. Consumers who purchase meat through internet found it difficult due to personal reasons, religious belief and customs. According to Garrett's score, App User interface data security and Lesser Area coverage or location were ranked seventh and eighth which means they are the least faced constraints by consumers.

Table 22: Constraints faced by consumers in purchase and consumption of meat

(n=60)

Sl. No.	Statements (constraints)	MEAN SCORE	Rank
1	Price of the product is high	63.4	**I**
2	More delivery time and other delivery issues	62	**II**
3	Poor customer Service post purchase	60.5	**III**
4	Less Discount/ Offers / Benefits	53.9	**IV**
5	Less options in product selection	51.5	**V**
6	Mismatch of orders	48.2	**VI**
7	Poor Product Quality	44.9	**VII**
8	Religious belief and customs.	41.5	**VIII**
9	App User interface and data security	39.6	**IX**
10	Lesser Area coverage or location	39.5	**X**

4.7 Expectations in e-purchasing of meat in Bengaluru city

The Covid-19 pandemic helped accelerate online purchases of meat products as consumers took to branded packaged items and companies improved their supplies and access to the market. While some consumers are concerned about the prospect of reducing the health risks environmental harms implications associated with conventional meat production and others have concerns about the product taste practice safety and naturalness.

Like any other food, the ultimate success of meat through e-commerce depends on consumer expectations and acceptance.

All the listed statements with respect to purchase and consumption of meat attract the consumer towards their company. This helps to increase the loyal consumers for e-commerce app

From the Table 23 it could be inferred that majority of the respondents rated expectations based on highly important for the statements such as Faster processing and delivery (Garrett's score of 70.13), Simplicity of app and ease of ordering (Garrett's score of 65.81 Discounts offers and coupons and price (Garrett's score of 60.78), Lesser Price fluctuation (Garrett's score of 55.16), Quality maintenance of the products (Garrett's score of 51.33) and Timely availability of produce (Garrett's score of 49.26).

Tracking delivery status and speed (Garrett's score of 48.01), Standardization (Garrett's score of 41.61) Appearance and approach of delivery executives second (Garrett's score of 39.95), Better packaging and presentation. (Garrett's score of 30.35),

Based on the mean Garrett's score, The results revealed that Faster processing and delivery was the major expectation for the households as the major role of an e-commerce company would be to ensure faster delivery and as it's a perishable product it's the major expectation among consumers. Simplicity of app and ease of ordering, Discounts offers and coupons and price play the most important part in purchasing through internet as people have tendency to switch over companies if there's a problem in ease of use and no proper discounts and people can be impatient. The other expectations would be Quality maintenance of the products**,** Timely availability of produce, Appearance and approach of delivery executives, standardization, better packaging and presentation. as they were ranked last and least expected by consumers.

Table 23: Expectations faced by consumers in purchase and consumption of meat (n=60)

Sl. No.	Statements (Expectations)	MEAN SCORE	Rank
1	Faster processing and delivery	70.13	**ss**
2	Simplicity of app and ease of ordering	63.81	**II**
3	Discounts offers and coupons and price	60.78	**III**
4	Lesser Price fluctuation	55.16	**IV**
5	Quality maintenance of the products	51.33	**V**
6	Timely availability of produce	49.26	**VI**
7	Tracking delivery status and speed	48.01	**VII**
8	standardization	41.61	**VIII**
9	Appearance and approach of delivery executives second	39.95	**IX**
10	Better packaging and presentation.	30.35	**X**

Plate 2: Researcher collecting data from online meat consumer.

SUMMARY

V. SUMMARY

The changing urban lifestyle of the average Indian is hectic day by day, which leads to develop quick meat and food home delivery models. The ever-in timer of doorstep delivery foods is increasing in over-crowded metro cities and longer travel times, increasing working women population are drivers for the convenient, ready-to-eat. and cheaper options of having meat delivered at their door step. Meat and meat products are favorites of almost all Indians, so the availability of these products at the doorstep will make consumers happier. The majority of them will prefer to eat with less efforts. So, doorstep delivery of fresh meat and processed meat is a viable venture in India. But it has to tackle different constraints to become efficient, and new technologies should be invented to reduce the extra cost of preservation technologies. There’s need to conduct researches in this area to address the problems faced by the producer and consumers. Even though this industry is at its budding stage, there is a huge opportunity in the sense of labor as well as economics.

India is known for having a diverse population and unique cultures and traditions. The vast majority of Indians have different eating habits depending on their geography, socioeconomic status, religion, culture, and other factors. The typical Indian's eating habits have changed significantly during the past 50 years. Income, food costs, personal tastes and views, more widespread media use, exposure to other cuisines, and consumers' adventurous palates have all influenced dietary trends. Through eating fast food and junk food, people have drifted away from a healthy diet and are eating their way into chronic lifestyle diseases.

Nowadays, most of the population prefer e-purchasing instead of traditional purchasing. Nevertheless, traditional purchasing is still of greater importance in contemporary society. Both of them are indispensable to human's life. According to the differences between traditional purchasing and online purchasing both of them have their own strengths and weaknesses. One should make better use of the strengths and try to avoid the weakness when purchasing in our daily life.

In order to explore new opportunities in online market it is better to know the existing consumer behavior towards e-commerce apps in Bengaluru. Keeping this in view, the current study was conceptualized with following objectives.

The specific objectives of the study were:

1. To document the socio-economic profile of consumers using e-commerce apps for meat products
2. To analyze the consumer behavior, perception and preferences regarding e-commerce apps of meat products.
3. To analyze constraints and expectations of consumers abouts e-commerce apps of meat products.

5.1 Methodology

The present study was carried out to analyze socio-economic profile and consumers purchasing behavior towards online meat marketing through the e-commerce apps, their preference and perception towards it. The current chapter provides a comprehensive picture on constraints and expectations of online purchase of meat products sold through online e-commerce apps.

The present study conducted in Bengaluru city, since it is the information technology (IT) and biotechnology (BT) hub of India, with industrial estates, financial and educational institutions. Hence it has immense potential to capture this opportunity for online purchases. There are two leading e-commerce apps of meat (i.e., Licious and Fresh to home) initiated their business activities from Bangalore city for the first time.

This chapter presents the general characteristics of the study area, the methods adopted in selecting the sample and the concepts and analytical techniques employed for the study.

The study is based on primary data of 60 sample of online meat products, the data regarding consumption pattern of online meat products, the data was collected from consumers using a pre-tested schedule by personal interview method. The purposive random sampling method was used to select the respondents. Respondents were selected purposively of meat-eating characteristic. The data is purposively collected from different areas of Bengaluru urban district namely Sahakarnagar, Judicial Layout, Yelahanka, Mahadevapura, Sanjay Nagar and Jayanagar had fair representation of different socioeconomic strata. A total of 60 consumers were interviewed, 10 respondents from each area. The data collected for the study was analyzed using descriptive statistics and Garrett's ranking technique.

5.2 Major findings of the study

- ❖ Majority (57 %) of meat consumers belonged to the age group of 25 to 45 years.
- ❖ Majority (70 %) of the respondents were females.
- ❖ Majority (71.67 %) of the consumers were graduates.
- ❖ Majority (24 %) of the respondents were working in private sector.
- ❖ The majority (71 %) of the respondents having nuclear families.
- ❖ Majority (68 %) of respondent's family annual income was between Rs.4 to 8 lakhs.
- ❖ Majority (69 %) of families' monthly food expenditure is between Rs. 5,000 and Rs. 10,000.
- ❖ Majority (51 %) of meat consumers spend approximately Rs. 2000 to 5000 on meat and meat products monthly.
- ❖ With respect to time of ordering meat, majority of the consumers order in Morning hours (6 am to 12pm).
- ❖ Regarding the frequency of ordering meat online, it was found that most consumers (63 %) order 1-2 times / week.
- ❖ Most of the consumers took (78 %) 10-20 mins to order meat through online.
- ❖ Majority (70 %) of the consumers spent less than Rs. 1000 on their recent order.
- ❖ Consumers mostly (68 %) preferred to order on weekends.
- ❖ With respect to mode of payment for online ordering majority preferred online banking payment method.
- ❖ Licious was the most preferred app (56.66 %) by consumers in comparison to other apps.
- ❖ Average delivery time fir the order through online was (58 %) were less than an hour.
- ❖ Most of the consumers (71 %) preferred Paper /eco-friendly Packaging materials.
- ❖ Many consumers (35 %) have been ordering meat from last 6 months to 1 year.
- ❖ Majority of the consumers (73 %) have expressed that they have benefited from discounts.
- ❖ 78 per cent of the consumers revealed that Covid has impacted on their ordering through online.
- ❖ Among other various parts of meat, leg meat (81 %) was the most preferred meat by majority of consumers.

- ❖ Majority (73 %) of respondents got awareness on e-commerce apps through Advertisements and promotions.
- ❖ Among other various meats, chicken was the most consumed meat by majority (96 %) of consumers.
- ❖ The statement "e-commerce apps of meat products help in management of time" was highly perceived by consumers and got the highest mean perception score of 4.11.
- ❖ The statement "e-commerce apps of meat products do not cover remote areas" was least perceived by consumers and got the lowest mean perception score of 1.56.
- ❖ High price of the product was the major constraint faced by the consumers which ranked first with a mean Garret's score of 63.4.
- ❖ Lesser Area coverage or distant location was the least major constraint faced by the consumers which ranked last with a mean Garret's score of 39.5
- ❖ Faster processing and delivery had the highest expectation among the consumers which ranked first with a mean Garret's score of 70.13.
- ❖ Better packaging and presentation had the lowest expectation among the consumers which ranked last with a mean Garret's score of 30.35

5.3 The study Implications / policy recommendations.

1. Delayed delivery of meat was one of the main issues experienced by online consumers. Since meat cannot be consumed raw and must be cooked and prepared hence delivery time have a significant impact. As a result, it is recommended that delivery processes be made better and faster to match those of other e-commerce apps.

2.The meat-related e-commerce apps can add the traceability for the source of meat i.e., where the meat comes from and how it is processed so that it can get confidence of consumers and develop user friendly apps with attractive photos and videos to reach more number and diversified clients to trust the apps more and make larger purchases.

3.The meat-related e-commerce app must be involved in clean meat production in the same line of N.E.C.C. Government can offer GST exemptions to farmers in order to help them get better prices and ensure quality assurance**.**

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