HIGHER SCHOOL OF MANAGEMENT AND DIGITAL ECONOMY

HSMDE

Dissertation Submitted in Partial Fulfillment of the Requirements for a Master's Degree

Specialty: E-Business

THEME:

THE CONTIBUTION OF MULTI-ATTRIBUTE APPROACH IN SETTING UP A DASHBOARD.

CASE STUDY: PRESTO

Submitted by

Miss RAIS Zaineb.

Supervised by

Mrs. AMALOU Waffa.

Assistant Professor « B »

Classe of

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Dedications

”My aim is to make you proud of me my lovely parents”

I dedicate my dissertation work:

- *To my father* ***Bachir RAIS****, the driving force behind my journey, this work is a testament to your steadfast encouragement and the very reason I selected this school.*
- *To my mother* ***Nassira RAIS****, my guiding light and my everything, who constantly reminds me, ”You can achieve anything you desire.”*
- *To my two sisters,* ***Dr. Meriem RAIS*** *and* ***Dr. Khadija RAIS****, who have not only been my unwavering support but have also been my guiding light through every obstacle I encountered in life.*
- *To my beloved younger brother,* ***Abd Elbassir RAIS****, my pride and joy.*
- *To my Favorite aunt,* ***Yamouna****, whose presence has filled my life with love.*
- *To my lovely aunt* ***Saliha****, uncle* ***Mohamed Cherif****, and my best cousins* ***Yousra****,* ***Rachid****, and* ***Azzouz****, who have been unwavering companions on my journey.*
- *To my dear friends,* ***Chaima and Wissem****, I want to express my heartfelt gratitude for your unwavering support and encouragement. Your presence in my life has been a consistent source of motivation, and I am truly grateful for that.*
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"That man can have nothing but what he strives for, That (the fruit of) his striving will soon come in sight." (Surah An-Najm, 39-40)

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Abstract

Due to the COVID-19 pandemic, the global online food delivery market has seen significant growth.The market for food delivery services is expanding quickly and offering a variety of opportunities for food delivery platforms. The market has consequently become very competitive within the nation.

This study examines the development of a comprehensive dashboard for food delivery services using a multi-attribute approach. The purpose of the study was to improve the performance of dashboards by considering key performance indicators (KPIs). We used qualitative and quantitative methods to identify key attributes critical to the dashboard, including delivery service, food quality, loyalty, and customer experience. Research methods include descriptive and analytical methods. The results confirmed the importance of integrating multiple attributes into a dashboard to provide a holistic view of performance. Practical implementation included developing a custom grocery delivery dashboard, aligning KPIs with business goals. This study highlights the benefits of a multi-attribute approach by incorporating KPIs to optimize grocery delivery services, improve operational efficiency, and increase customer satisfaction.

Keywords: Food delivery, dashboard, delivery services, multi-attribute approach, key performance indicators

Résumé

En raison de la pandémie de COVID-19, le marché mondial de la livraison de nourriture en ligne a connu une croissance significative. Le marché des services de livraison de nourriture se développe rapidement et offre une variété d'opportunités pour les plateformes de livraison de nourriture. Le marché est donc devenu très compétitif à l'échelle nationale.

Cette étude examine le développement d'un tableau de bord complet pour les services de livraison de repas en utilisant une approche multi-attributs. L'objectif de l'étude était d'améliorer les performances des tableaux de bord en tenant compte des indicateurs clés de performance (KPI). Des méthodes qualitatives et quantitatives sont utilisées pour identifier les attributs clés essentiels au tableau de bord, notamment le service de livraison, la qualité des repas, la fidélité et l'expérience client. Les méthodes de recherche comprennent des approches descriptives et analytiques. Les résultats confirment l'importance d'intégrer plusieurs attributs dans un tableau de bord pour fournir une vue d'ensemble complète des performances. La mise en œuvre pratique comprenait le développement d'un tableau de bord personnalisé pour les services de livraison de repas, en alignant les KPI sur les objectifs de l'entreprise. Cette étude met en évidence les avantages d'une approche multi-attributs en intégrant les KPI pour optimiser les services de livraison de repas, améliorer l'efficacité opérationnelle et accroître la satisfaction client.

Mots-clés: Livraison de nourriture, tableau de bord, services de livraison, approche multi-attributs, indicateurs clés de performance

ملخص

بسبب جائحة فيروس كورونا المستجد، شهد سوق توصيل الطعام عبر الإنترنت العالمي نمواً ملحوظاً. يتوسع سوق خدمات توصيل الطعام بسرعة ويقدم مجموعة متنوعة من الفرص لمنصات توصيل الطعام. نتيجة لذلك، أصبح السوق تنافسياً جداً داخل البلاد.

يهدف البحث إلى تحسين أداء لوحات القيادة من خلال النظر في المؤشرات الرئيسية للأداء. يتم استخدام أساليب نوعية وكمية لتحديد السمات الرئيسية الحاسمة للوحة القيادة، بما في ذلك خدمة التوصيل، جودة الطعام، الولاء، وتجربة العملاء. تشمل طرق البحث الأساليب الوصفية والتحليلية. تؤكد النتائج أهمية دمج العديد من السمات في لوحة القيادة لتوفير رؤية شاملة للأداء. يشمل التنفيذ العملي تطوير لوحة قيادة مخصصة لخدمات توصيل الطعام، من خلال محاذاة مؤشرات الأداء الرئيسية مع أهداف الشركة. تسلط هذه الدراسة الضوء على فوائد النهج متعدد السمات من خلال دمج مؤشرات الأداء الرئيسية لتحسين خدمات توصيل الطعام، وتحسين الكفاءة التشغيلية، وزيادة رضا العملاء.

الكلمات المفتاحية: توصيل الطعام، لوحة القيادة، خدمات التوصيل، نهج متعدد السمات، مؤشرات الأداء الرئيسية.

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List of Abbreviations

AHP: Analytic Hierarchy Process.

ATD: Average Time Delivery.

BI: Power Intelligence.

CEO: Chief Executive Officer.

CER: Customer Engagement Rate.

CPA: Cost Per Acquisition.

CPI: Cost Per Install.

CRM: Customer relationship management.

DAU: Daily Active Users.

DM: Decision Maker.

DMU: Monthly Active Users.

DSR: Delivery Success Rate.

ECT: Expectation and Confirmation Theory.

ELECTRE: ÉLimination Et Choix Traduisant la REalité (”Elimination and Choice Translating Reality”).

FD/FDA: Food Delivery Application.

KPIs: Key Performance Indicators.

KSFs: Key Factors for Success.

LTV: Life Time Value.

MADM: Multi-Attribute Decision Models.

MAM: Multi-Attribute Modeling.

MCM: Multi Criteria Modeling.

OAR: Order Accuracy Rate.

OPM: Outsourced Project Management.

OTD: On-Time Delivery.

ROI: Return On Investment.

SEM: Search Engine Marketing.

SEO: Search Engine Optimisation.

SMART: Specific, Measurable, Achievable, Relevant, and Time-bound.

SMEs: Small and Medium entreprises.

TAM: Technology Acceptance Model.

TOPSIS: Technique for Order of Preference by Similarity to Ideal Solution.

TPB: Theory of Planned Behavior.

TRA: Theory of Reasoned Action.

Contents

General introduction

General Introduction

With the modern day of technology and constant activity, the industry of delivering food has encountered extraordinary expansion. This evolution has revolutionized how individuals attain and relish their preferred dishes. This convenience-driven era has made food delivery businesses a significant aspect of many individuals' daily routine. With this being said, in a domain filled with rival companies, it is imperative for providers to always enhance and adjust their course of action, aimed at satisfying consumer requirements continuously.

To optimize their performance, food delivery services require a well-designed dashboard, which acts as a centralized platform for analyzing real-time insights and key performance indicators. This allows businesses to monitor their performance and make informed decisions, streamlining their operations and resource allocation to provide exceptional customer experiences. Overall, a dashboard is an essential tool for enhancing the effectiveness of food delivery services.

The goal of this study is to determine what role a multi-attribute approach has in creating a dashboard designed especially for "food delivery services." It is possible to increase the efficacy of the dashboard and optimize many parts of the food delivery service by utilizing a multi-attribute approach, which takes into account several parameters and dimensions.

In the present corporate environment, the question of using a multi-attribute approach in the building of a dashboard for food delivery services has great relevance. In order to stay ahead of the competition in the food delivery sector, service providers must constantly improve their processes. Companies may efficiently prioritize and handle important issues that affect consumer retention and company performance by utilizing a multi-attribute approach. The purpose of this study is to offer perceptions and suggestions that can be helpful in promoting the development and success of food delivery services.

The choice of this topic was not made arbitrarily, but rather aims to better understand how to establish key performance indicators for the company, specifically the development of a proposed dashboard for a brand, which in turn determines the company's performance. We found it interesting to apply a multi-attribute approach to a market that is both competitive and booming, namely the food delivery service market.

The aim of this research is to explore and analyze how the multi-attribute approach can be effectively utilized in the development of a dashboard for food delivery services. By examining the key attributes that need to be considered, investigating the facilitation of real-time monitoring, analysis, and decision-making, and uncovering the potential benefits.

The main research problematic can be summarized as follows:

"How can a multi-attribute approach be utilized in the development of a dashboard for Presto food delivery services to enhance its effectiveness?"

To address this problem comprehensively, several sub-questions will guide the research:

- What are the key attributes that need to be considered in a food delivery service dashboard?
- How can the multi-attribute approach facilitate real-time monitoring, analysis, and decision-making in the context of Presto food delivery services?
- Is the multi-attribute approach beneficial for creating a dashboard?

The elements of response to the formulated problem will be provided by verifying the following hypotheses:

Hypothesis 01: The key attributes that should be taken into account when designing a food delivery service dashboard for Presto food delivery service include Speed of Delivery Service, Quality of the food, and Delivery accuracy.

Hypothesis 02: By integrating multiple attributes into a dashboard with key performance indicators, it enables a comprehensive and simultaneous view of various criteria.

Hypothesis 03: The multi-attribute approach has benefits in setting up a dashboard.

By using these references: a book: ”Applied Marketing Research”.(Eric Vernette) and thesis: ”L’apport des modèles d’évaluation multi-attributs dans la compréhension de la décision d’achat du consommateur. Cas : Choix d’un Smart phone (Samsung, Sony et Condor), (Hachemi Kemouche Nadia).
Will provide a comprehensive understanding of the current knowledge and practices in the field and identify gaps that this research aims to address.

The research will follow a descriptive and analytical method to investigate the research problem. Both qualitative and quantitative approaches will be utilized to gather relevant data. The methodology involves interview, questionnaire, to collect and analyze data effectively.

In line with this logic, we will attempt to address these questions by subdividing our research work into four chapters:

The first chapter explores the theoretical and practical aspects of using multiple attributes for performance evaluation. It delves into the concept of multi-attribute modeling and its application in evaluating performance in a given context.

In the second chapter, we shift our focus to the design and implementation of a dashboard. This chapter discusses the key metrics, visualizations, and functionalities that should be included in an effective dashboard for monitoring performance.

The third chapter outlines the research methodology and approach employed in this study. It describes the data collection methods, analysis techniques, and the rationale behind the chosen research approach.

In the fourth and final chapter, we showcase the practical application of the research by developing and implementing a brand-specific dashboard. This chapter demonstrates how the principles of multi-attribute approach and the insights gained from previous chapters are utilized to create a dashboard tailored to the specific brand.

Chapter 01: Multi-Attributes Modeling

Introduction

Today, given the intensity of Internet and e-commerce transactions, the customer's behavior is too wide and hard to control, and his purchasing decision depends on several criteria that are the result of several previous experiences.

There are difficulties in analyzing different attributes of consumer preferences versus alternatives that prevent service providers from adequately understanding consumer choices.

In this chapter, we will provide a comprehensive overview of the preferences of consumers when purchasing a desired product or service also influences and factors that contribute to decide. We divide this chapter into three parts. In the first section, we focus on the habits of electronic consumers in relation to the services offered to them. Then in the second section, we are going to comprehend the decision-making process and its types. The final section is about multi-attribute scoring models.

Section 1 Attitude of E-consumer Toward a Service

The progressing virtualization of social and economic life brings about certain changes in consumer attitudes towards commerce, and especially towards e-commerce.

The customer's attitude can help understand the customer's perspective on why they have a specific need. Positive attitudes that can be identified and measured are used to make customers feel more comfortable with product or service.

Surely, familiarity with these attitudes makes it possible to determine the future behaviour of consumers in the market environment. Also, by knowing how to analyse the customer's perspective, it will be more efficient at making decisions and running operations.

In this section, we will discuss the meaning of the term e-consumer, then examine some factors related to e-consumer attitudes as well as consumer attitude theories.

1.1 Definition of E-Consumer

The term e-consumer refers to someone who purchases goods or services online. Often referred to as online shoppers, e-consumers use digital channels for researching products and services, comparing prices, and making informed purchases.[1]

According to Philip Kotler Today's consumers are becoming more savvy. Mostly, they actively seek information about brands. They also make more informed purchasing decisions. However, despite their high level of curiosity and knowledge, they do not control what they want to buy.[2]

Companies develop e-commerce platforms that allow consumers to browse and purchase products and services online. These platforms often offer a range of features, such as user reviews, product recommendations and personalized marketing, to improve the customer experience and encourage businesses owner.

[1] VIPIN (J), BINDOO (M) and SATYENDRA (A), *An Overview of Electronic Commerce (e-Commerce)*, Journal of Contemporary Issues in Business and Government, India, 2021, P.666.

[2] KOTLER (P) and others, *Marketing 4.0: Moving from Traditional to Digital* Wiley, New Jersey, 2017, P.36.

1.2 Definition of Attitude:

We provided definition of attitude as *"a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor"*[1]

In social psychology, attitude is a construct derived from the problem of predicting a person's behaviour in situations where choices are based on simple preferences, such as buying goods or voting. A person's attitude is generally referred to in these studies as a predisposition to either positively or negatively respond to an object.[2]

1.3 Consumer Attitude Theories

In order to analyze consumer behavior on the Internet more systematically, many authors have examined various studies examining online purchasing behavior. Analysis shows that most of the research is based on very specific theories, such as: The Theory of Reasoned Action, Theory of Planned Behavior, Theory of Expectations and Confirmation.

1.3.1 The Theory of Reasoned Action

The Theory of Reasoned Action (TRA) is a social psychological theory that explains how people make decisions about their behavior based on their attitudes, beliefs, and subjective norms. [3]

According to this theory, people's behavior is mainly influenced by two factors: their attitudes toward behavior and their subjective norms. Attitudes are an individual's positive or negative feelings about behavior, while subjective norms are perceived social pressures or expectations of behavior from others.TRA proposes that the combination of attitudes and subjective norms (Figure 1.1) [4] can predict a person's intention to engage in a certain behavior and thus their actual behavior.

[1]EAGLY (A), (H), and CHAIKEN (S), *The Advantages of an Inclusive Definition of Attitude.*, Social Cognition, Berkeley, 2007, P.582–602.

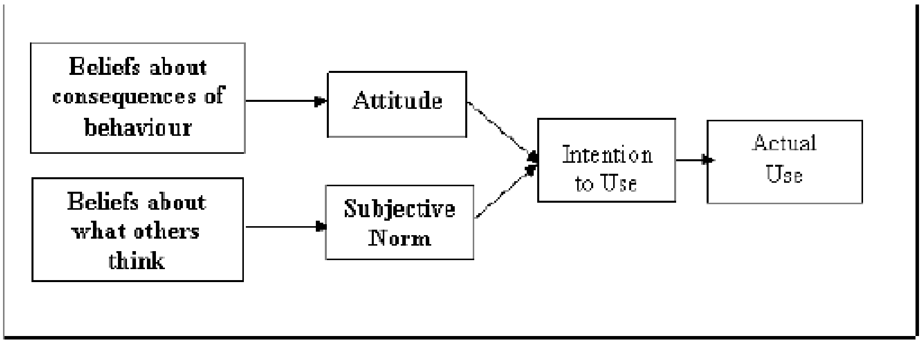
[2]DI-MARTINO (P), and ZAN (R),*Me and maths: towards a definition of attitude grounded on students' narratives.* Journal of Mathematics Teacher Education, Mexico, 2009, P.27–48.

[3]AJZEN (I), and FISHBEIN (M), *Belief, Attitude, Attention and Behavior: An Introduction to Theory and Research*, Addison Wesley Publishing Company, 1975, P.30.

[4]AL-SILWADI (A), (H), *Determinants of Consumer Behavior and Prospective Purchase Decisions in E-Commerce Environment: Evidence from Palestine*, Journal of Economic, Administrative and Legal Sciences, 2022, P.145-163

Effendi mentioned that the TRA can be used to see various consumer behaviors over the products or services. With regard to intention, it is the cognitive representation of a person's readiness to perform a given behavior, and the best predictor of behavior is intention. [1]

Figure 1.1: The Theory of Reasoned Action.



Source: AL-SILWADI (A) (H), Op.Cit.

1.3.2 The Theory of Planned Behavior

After TRA, Ajzen extended the theory and proposed a component to TPB, namely, that perceived control is needed to perform a behavior[2]

The Theory of Planned Behavior (TPB) expands on the Theory of Reasoned Action (TRA) by including an additional factor that affects behavior: perceived behavioral control.

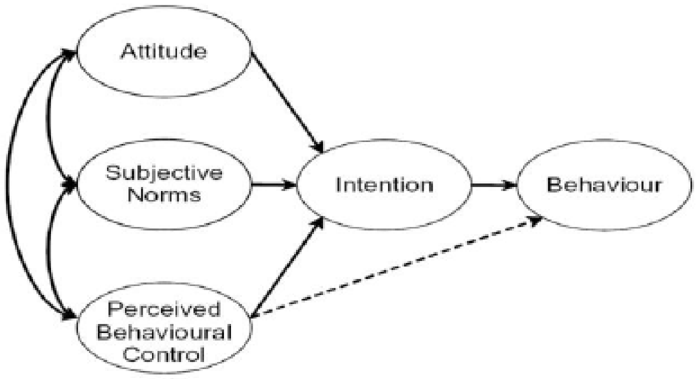
A person's intention to perform a behavior is influenced by their attitude towards the behavior, subjective norms, and perceived behavioral control. Perceived behavioral control refers to the individual's perception of their ability to perform the behavior, taking into account both internal and external factors that may facilitate or hinder their behavior. The TPB suggests that perceived behavioral control can directly affect behavior, independent of intentions (Figure 1.2)[3]

[1] EFFENDI (I), *Analysis of consumer behavior of organic food in North Sumatra Province, Indonesia*, Journal of Business and Management, Indonesia, 2015, P.44-58.

[2] AJZEN (I), and FISHBEIN (M), Op.Cit, P.11.

[3] AL-SILWADI (A) (H), Op.Cit.

Figure 1.2: The Theory of Planned Behavior.



Source: AL-SILWADI (A) (H), Op.Cit.

1.3.3 The Theory of Expectations and Confirmation

The Expectation Confirmation Theory (ECT) is an approach to fully understanding and explaining the consumption process that has been extensively applied to the marketing domain to assess customer satisfaction and post-purchase behavior. A customer's initial expectation of a particular service or product occurs before the actual purchase, which is equivalent to the extent of the customer's expectations about the target and the extent of their belief in the service provider. As a result of continuous consumption, perceptions of the service's overall performance develop gradually. In order to determine whether the customer's expectations have been met, customers assess its perceived performance against their prior expectations. Customer satisfaction with the service is determined by comparing pre-purchase expectations with post-purchase evaluations and identifying discrepancies.[1]

1.3.4 The Technology Acceptance Model

The Technology Acceptance Model (TAM) was designed by Davis (1989)[2] to specifically apply to computer-related behavior with purpose of predicting the acceptance of system and behavior of users when using the system. by incorporating findings accumulated over more than a decade into information systems. It can be used to model computational acceptance. the work of Davis aimed to develop and validate new scales for two specific variables: perceived

[1]FU (X), ZHANG (J), and CHAN (F) (T) (S), *Determinants of loyalty to public transit: A model integrating Satisfaction-Loyalty Theory and Expectation-Confirmation Theory*, Transportation Research Part A: Policy and Practice, 2018, P.476–490.

[2]DAVIS (F) (D), *Perceived usefulness, Perceived Ease of Use, and user acceptance of information technology,* MIS Quarterly, 1989, P.319-340.

utility and perceived ease of use. these two variables were tested as fundamental determinants of user acceptance.[1]

Davis asks what makes an individual accept or reject an information technology. For him, among the several variables that can influence the use of the systems, two are particularly important. First, people tend to use or not use an application insomuch as they believe that the application will help them to better perform their activities. He referred to this first variable as perceived utility. However, even if a potential user believes that a given application is useful, he may simultaneously believe that the system is too difficult to use, and thus, the benefits are outweighed by the effort required to use it.[2]

1.4 Factors that Influence Online Consumer Behavior

Here, the aim is to present other factors besides the attitude that were previously mentioned:

1.4.1 Perceptions:

Perception is the process of selecting, organizing, and interpreting sensations into a meaningful whole. Traditionally, stimuli and responses to them were studied and measured by examining the five senses. As we learn more about the natural world, we are becoming more skeptical that perception is based solely on sights, sounds, smells, tastes, and touches. Although our senses play an important role in our perception of events, our interpretation of those sensations may cause us to make wrong assumptions. Due to the subjective nature of perception, it is easily distorted.[3]

Businesses can succeed or fail based on consumer perceptions. If a certain restaurant has a reputation as the best pizza place in town, the general perception among residents might be that the restaurant is the place to go for good pizza. Consequently, the pizza shop's profitability could be strongly influenced by this sentiment. In contrast, negative perceptions of a company could seriously affect revenues.[4]

[1] BARRET (M) and others, *The e-consumer in light of the perceived value theory: A study on the acceptance of mobile commerce.* Universidade do Vale do Rio dos Sinos, Brazil, 2018, P.238-253.

[2] Idem.

[3] HANNA (N) and WOZNIAK (R), *Consumer Behavior: An Applied Approach*, 4th Edition, Property of Kendall Hunt Publishing, 2013, P.75.

[4] THIRUVENKATRAJ (T) (R) and VETRIVEL (S), *A STUDY ON CUSTOMER PERCEPTION*, International Journal for Research Trends and Innovation, India, 2017, P.1-5.

1.4.2 Motivations:

An important factor in the consumer decision-making process is motivation. Motivating consumers begins with understanding their expectations, needs, and wants. An individual purchases an article as a result of certain mental and economic forces creating desires or wants, for which he understands that the articles offered for sale will satisfy them. Marketers need to identify the motives that drive consumers to buy products so they can provide them with a complete article that meets their needs. Before a need becomes a motive, it must be stimulated or aroused.[1]

1.4.3 Preference:

It refers to the option with the greatest anticipated value among several options. A definition like this doesn't tap into 'wishes' or 'dreams' but for all practical purposes is adequate. While preference and acceptance can mean the same thing in some circumstances, it's important to recognize the distinction between them. Preference indicates a choice between neutral or more valued options, whereas acceptance indicates a willingness to accept the status quo or some less desirable option.[2]

1.4.4 Online trust:

Establishing a relationship in an online world is still done through two parties, truster and trustee. In the case of online environment, the truster is usually the consumer who entered and is browsing an E-commerce website, while the trustee is the E-commerce website itself. There are times, the technology (mainly the Internet) itself is an object of trust. [3]

Whether the consumer is making a purchase on the website or simply looking around. This can bring positive results for the online business. When making purchases online, buyers are always uncomfortable and uncertain. On every e-commerce platform, there's the possibility of losing money or losing privacy. Even without making a purchase, the platform will collect and use data for not intended purposes without any consent from the user. Just like the offline trust that is associated with individual differences and situational factors, online trust is inherently a

[1] Unknown author, *Motivation and personality aspects of consumer behavior*, School of Business, Bangladesh, P.293.

[2] FIFE (S) (C), KELAY (T) and VLOERBERGH (I), *Measuring customer preferences for drinking water services*, TECHNEAU, 2007, P.5.

[3] OSHCHEPKOVA (A), *E-Commerce in Nicaragua: Consumer Behavior towards Online Shopping of Electronic Devices*, Univerzita Tomáše Bati ve Zlíně, Czech Republic, 2017, P.25.

subjective matter.[1]

1.4.5 Price:

Compared to traditional commerce, e-commerce websites often offer lower prices, which is one of the reasons consumers prefer to do online transactions. Brata and al (2017), explained that price is one of important factors that appeal customers to purchase a particular product, the better prices, the more the purchase decisions.[2] Harahap (2018) stated apositive relationship between price and customers' purchase decision. Price is a condition that affects the quantity of goods purchased by consumers.[3]

1.4.6 Service or Product information:

Consumers' purchasing decisions can be significantly influenced by detailed information, reviews, and ratings available on e-commerce platforms.

1.4.7 Quality

American Society for Quality gives definition of quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs[4] Some studies conducted in other countries concluded that quality influences on customers'purchase decision, positively[5]

1.4.8 Delivery:

Online consumers expect fast and reliable delivery of their purchases, and the quality of the delivery experience can affect their overall satisfaction with e-commerce. Consumers are often sensitive to shipping costs, and high shipping costs can put them off making purchases. They

[1] GRABNER-KRAEETER (S), *The role of consumers trust in online-shopping*, Journal of Business Ethics, 2002, P.39.

[2] BRATA (B) (H), HUSANI (S) and ALI (H), *The Influence of Quality Products, Price, Promotion, and Location to Product Purchase Decision on Nitchi At PT*, Saudi Journal of Business and Management Studies, Jakarta, 2017, P.357-374.

[3] HARAHAP (N) (Z), *The Influence of Product Quality, Price and Promotion on Purchasing Decisions of Sedaap Brand Instant Noodles*, University of North Sumatra. Indonesia, 2018, P.43.

[4] KOTLER (P) and KELLER (K),*Marketing management*, Upper Saddle River, N.J.: Prentice Hall , 15th Edition , 2015, P.82.

[5] TRZNGGANA (M) and FAHREZZY (A), *The Effect of Product Quality and Price on Asus Laptop Consumer Purchase Decisions*, STIE INABA E-Journal, 2018, P.10.

expect their purchases to be delivered on time and in good condition.

By offering multiple delivery options, fast delivery times, affordable shipping costs, reliable delivery, and easy returns and exchanges, retailers can create a positive delivery experience that increases customer satisfaction and loyalty.

1.4.9 Web quality and design:

Business-to-consumer platforms offer electronic interactivity to consumers, so a well-executed one must be qualified with three factors: the time it takes to load pages, ease to navigate,must be aesthetically pleasing and use of multimedia to visually enhance the attractiveness. [1]

In this section, we explored the e-consumer and identified attitude as a significant factor in their behavior. Additionally, we uncovered other factors that influence the decision-making process. We will delve into these decision making in more detail in the upcoming section

Section 2 Decision Making

Decision making is the process of selecting the most suitable option from a set of available alternatives. Having a clear understanding of the pros and cons of each option can help in making better decisions. Decision making is a critical skill for problem solving, goal setting, and overall success.

When there are many options to choose from, it can be difficult to make a decision. A wise decision can be made based on the information available after carefully considering the available options and weighing their advantages and disadvantages.

In this section we are going to define the decision making process, we will get to know the steps of decision making process. At the end, we will see some models of decision making.

[1] RANGANATHAN (C) and GANAPATHY (S), *Key dimensions of business-to-consumer web sites*, Information Management 2002, P.465-475.

2.1 Definition of Decision Making

According to Simon*"Decision-making is the process of selecting one alternative from among several alternative solutions based on a given set of criteria and rules."* [1]

Based on Hammond, Keeney and Raiffa "Decision-making is the process of identifying and choosing alternatives based on the values, preferences, and beliefs of the *decision-maker.*"[2]

Decision-making refers to selecting one course of action among several alternatives. To perform well at work, managers need to make critical decisions. There may be a variety of factors that influence the decision-making skills of managers.

An individual makes a decision based on a set of criteria or values. decision-making process involves assessing options, weighing pros and cons, and selecting the best path to achieve a specific objective. In order to make informed and effective decisions, analytical skills, problem-solving skills, and critical thinking skills are needed.

2.2 The Consumer Decision Making Process

It is vital to know the consumer buying decision process. The consumer buying decision process are the decision-making processes begin by the consumer to buy the goods or services in exchange of money in the market before, during and after the purchase of goods or services.[3] In order to effectively sell its products or services, the marketer needs to understand consumer behavior and buying decision process. The figure (1.3) shows consumer decision making process step-by-step.

2.2.1 Need Recognition

It is the first stage of consumer decision process. It is also known as "Problem recognition". It starts with the basic need like air, water, food and shelter. It may also start with a step ahead of

[1]HERBERT (A).(S), Administrative behavior: A study of decision-making processes in administrative organization. Macmillan, 1947, P.2.

[2]HAMMOND (J) (S), KEENEY (R) (L) and RAIFFA (H), *Smart choices: A practical guide to making better decisions* Harvard Business Press, Oxford, UK, 1999, P.19

[3]SHEIKH (Q), *The Consumer Decision Process. Lumen Boundless Marketing*, International Journal of Scientific Research and Engineering Development, 2019, P.130-143

basic need. In the need recognition, the companies can find out the need of the consumer and creates marketing strategies.[1]

2.2.2 Information Search

The second step occurs when consumers come to the market to buy goods or services, consumers will remember their thoughts and opinions about the products. If the previous experience was positive or good and the consumer is satisfied, he will buy the product. But if the past experience was negative or bad, consumer will start searching for information about the product.

Kotler stated that *"Consumer can obtain information from any several sources. These include personal sources (family, friends, neighbours, acquaintances), commercial sources (advertising, sales people, dealer and manufacturer, web and mobile sites, packaging, displays), public sources (mass media, consumer rating organization, social media, online searchers and peer reviews) and experimental sources (examining and using the product)"*[2]

2.2.3 Evaluation of Alternatives

Evaluation of alternatives is the third stage of the consumer buying decision making process. Having collected information about a product or brand, the consumer ranks the product or brand, and then evaluates it.[3]

2.2.4 Purchase Decision

Buying a product takes place at the fourth stage of the consumer decision-making process. The consumer has collected information from several sources, evaluated it, and decided where and what to buy. In order to make a purchase decision, consumers evaluate brands or products and choose those with the highest ratings. It is also worthwhile to consider the environment in which the brand or product is located.

[1]KOTLER (P) KELLER (K) and (L) (K) *Marketing Management*, Pearson Education, 15Th Edition, 2016, P.155-156.

[2]KOTLER (P), *Principles of Marketing*, Pearson Education, 17Th European Edition, 2017, P.156.

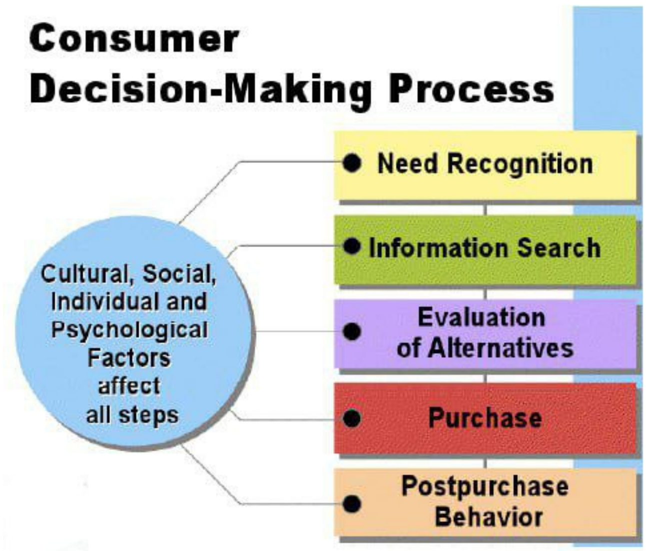
[3]SHEIKH (Q), Op.Cit.

2.2.5 Post-Purchase Decision

The post-purchase decision is the fifth and last stage of the consumer buying decision making process. After a customer buys a product, the company's work doesn't stop, companies should know the consumer's behavior or view of products. After using the product, the customer might be satisfied or dissatisfied. If the consumer is satisfied, the chances of retention are higher, and a satisfied consumer can also influence other people to buy the product. Customer loyalty to the product can be increased to the greatest extent possible. When the customer becomes attracted to the product, the chances of the consumer retaining it increase. If the consumer keeps buying the product, sales of the product will grow. If sales of the product increase, the company's overall goal of generating profit will be achieved.[1]

An issue arises when consumers are dissatisfied with a company's products. A consumer can be dissatisfied for many reasons. It is possible for a consumer to be dissatisfied: if the company promises something but does not deliver the product, then the consumer can be dissatisfied. The dissatisfaction increases when a car company promises free services but then denies them.

Figure 1.3: consumer decision-making process



Source: Dulce Alonso's Marketing Portfolio.
https://dalonsosite.wordpress.com/consumer-buying-decision-process/ (03/22/2023 at 4h17 PM).

[1] SHEIKH (Q), Op.Cit.

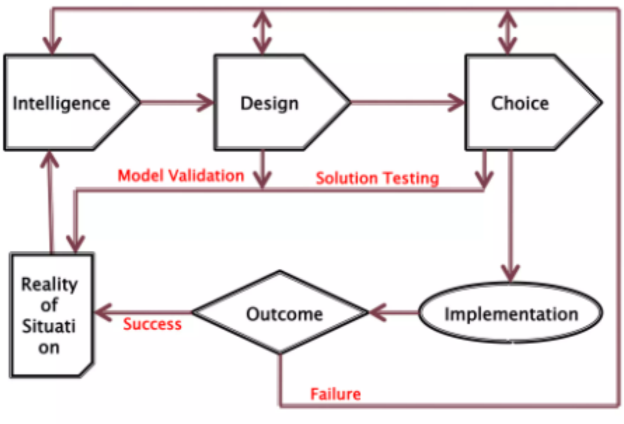
2.3 Decision Making Models

There are various decision-making models that are used to understand how consumers make decisions. Some of the most common ones are:

2.3.1 Simon model

This model conceptualises the decision-making process in three stages of activities: intelligence activity, design activity, and choice activity. Simon argues that decision making is a cognitive process that can be separated into simple, sequential steps.[1]

Figure 1.4: Simon's Model



Source: https://www.slideshare.net/Karakoti20/simons-model (03/22/2023 at 4h47 PM).

a. Intelligence Activity: During this stage, people identify problems in the organization and upper management analyzes the organizational environment to find solutions.

b. Design Activity: A company's upper management searches for suitable strategies to solve problems. To determine the best course of action, they further analyze the merits and demerits.

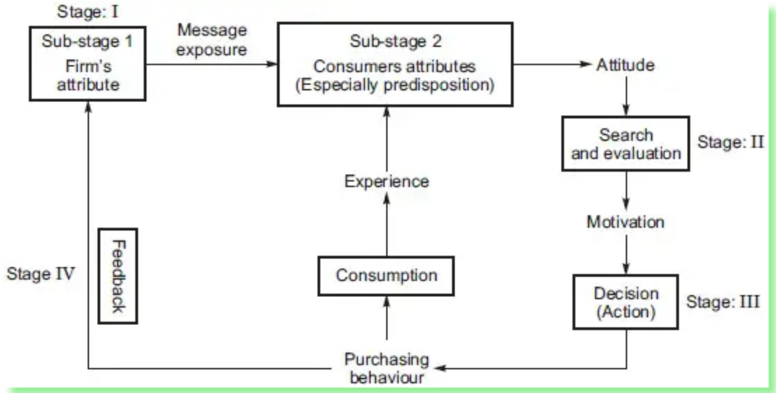
c. Choice Activity: As soon as the list of alternatives has been made, the choice activity begins. All alternatives are critically examined and evaluated to determine the best course of action. A quantitative analysis skill and creative judgment are required at this stage.

[1]STANKEVICH (A), *Explaining the Consumer Decision-Making Process*? Journal of International Business Research and Marketing, Netherlands, 2017, P.7-14.

2.3.2 Nicosia model

This model concentrates on the buying decision for a new product.It uses a flow of events through different stages that are identified as fields.[1]

Figure 1.5: Nicosia's model



Source:https://www.geektonight.com/consumer-behaviour-models/(03/23/2023 at 6h37 PM).

a. Firm's Attributes and Consumer's Attributes: The first stage is divided into two sub-stages: firm's attributes and the consumer's attributes. An advertising message from the firm reaches the consumer's attributes. Depending on the way the message is received by the consumer, a certain attribute may develop, and this becomes the input for stage two.

b. Search and Evaluation: In Stage II, the advertiser searches for and evaluates alternative products. It becomes the input for field three if this process leads to a motivation to purchase.

c. Decision: Motivating the consumer will be achieved by convincing the consumer to purchase the firm's products from a specific retailer. Field three consists of the act of purchase.

d. Feedback: Field four consists of the use of the purchased item. This involves feedback of both the firm and the consumer after purchasing the product.

[1] STANKEVICH (A), Op.Cit.

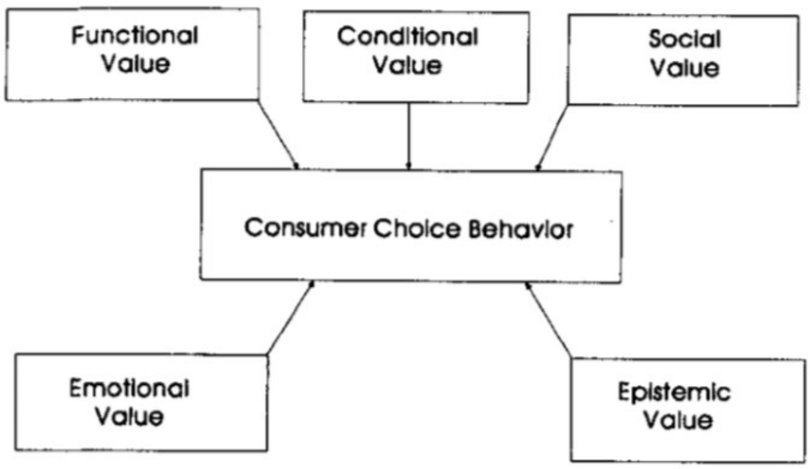
2.3.3 Theory of buyer behaviour

The theory explains the buyer behaviour of individuals over a period. More specifically – the brand choice behaviour of the buyer. The authors identify the elements of consumer decision process (a set of motives; several alternative courses of action, and decision mediators by which the motives are matched with the alternatives), observed the changes that occur in them over time as a result of their repetitive nature and showed how a combination of decision elements affects search processes and the incorporation of information from the buyer's commercial and social environment. This model suggests three levels of consumer decision-making: extensive problem solving limited problem solving, and habitual response behaviour. [1]

2.3.4 Sheth, Newman and Gross model

This model presents five consumption values influencing consumer choice behaviour: functional, social, conditional, emotional, and epistemic values. Any or all of the five consumption values may influence the decision.[2] Represented in this figure:

Figure 1.6: Sheth, Newman and Gross model



Source: https://www.jagsheth.com/consumer-behavior/ why-we-buy-what-we-buy-a-theory-of-consumption-values/ (03/23/2023 at 8h12PM).

Functional Value: The perceived utility is acquired from an alternative's capacity for functional, utilitarian, or physical performance. An alternative acquires functional value through the

[1]STANKEVICH (A), Op.Cit.
[2]Idem.

possession of salient functional, utilitarian, or physical attributes.

Social Value: An alternative acquires social value through association with positively or negatively stereotyped demographic, socioeconomic, and cultural-ethnic groups.

Emotional Value: An alternative acquires emotional value when associated with specific feelings or when precipitating or perpetuating those feelings.

Epistemic Value: The perceived utility acquired from an alternative's capacity to arouse curiosity, provide novelty, and satisfy a desire for knowledge. An alternative acquires epistemic value by questionnaire items referring to curiosity, novelty, and knowledge.

Conditional Value: An alternative acquires conditional value in the presence of antecedent physical or social contingencies that enhance its functional or social value.

2.3.5 Smith and Rupp's model

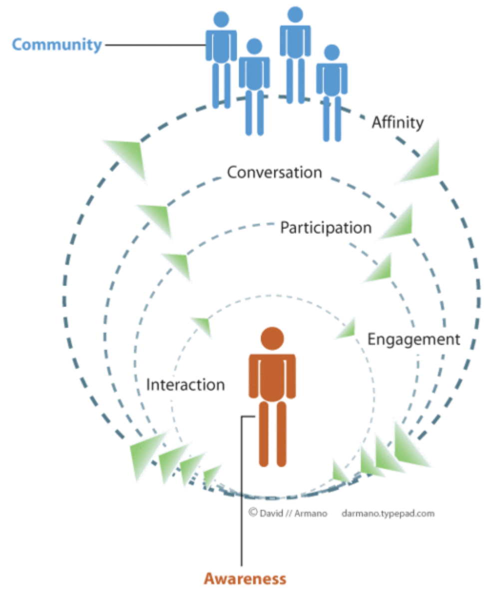
This model is an Internetbased model that takes into account external influences of website marketing, the sociocultural environment, and psychological issues on online consumer tasks which is followed by to a purchase and post-purchase behaviour.[1]

2.3.6 The Marketing Spiral Model

According to this model, Consumer behaviour is like a spiral that begins with an interaction as opposed to communication. The spiral amplifies as the consumers increases. engagement.[2]

[1]STANKEVICH (A), Op.Cit.
[2]Idem.

Figure 1.7: The Marketing Spiral Model



Source: https://darmano.typepad.com/logic$_{e}motion/(03/24/2023at1h05PM).$

2.3.7 McKinsey's dynamic model of the consumer decision journey

This model is more circular than sequential and has four primary phases[1] such as in Figure (1.8) below

A. **Initial consideration:**Consumers become aware of a need or desire for a product or service.

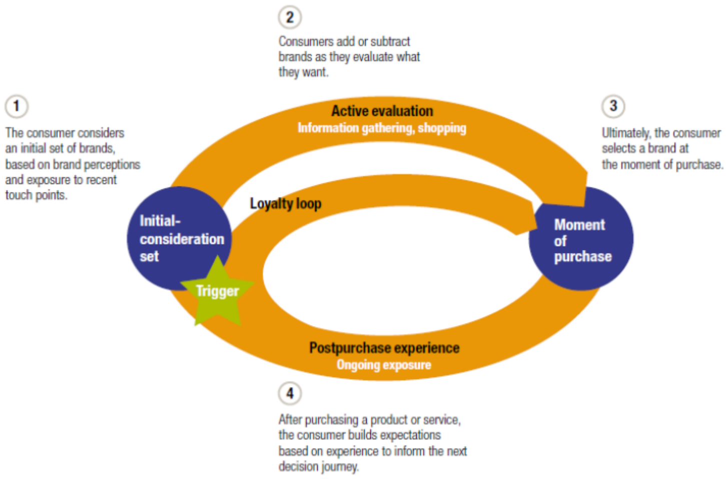
B. **Active evaluation:** Consumers evaluate different options based on many criteria such as price, quality and functionality.

C. **Purchase:**Consumers choose, buy and experience a product or service.

D. **Loyalty:**Based on their experience, consumers can become regular customers and develop brand loyalty.

[1]STANKEVICH (A), Op.Cit.

Figure 1.8: the consumer decision making model



Source: HALLIL AMALOU (W), L'entreprise algérienne et le comportement d'achat du consommateur connecté ≪Cas d'une offre 3G≫, revue des sciences commerciales n°24, HEC Alger, 2017) number

In this section, we examined the concept of decision making and its underlying process. Furthermore, we discussed some commonly used models within this context. In the following section, we will delve deeper into the evaluation of multi-attribute modeling.

Section 3 Multi-Attributes Evolution Models

To make optimal choices, it is crucial to evaluate alternatives by taking multiple criteria into account during the selection process of a certain brand, the models of multi attribute allows us how to do that. In this section, we are going to see the most common terms used in multi-attributes modeling literature. After that, we will be discussing the objective and the steps of multi-attributes decision making models, and finally, we will discover the different models and their advantages.

3.1 Multi-attribute Models Terminology

In the following, we highlight terminology in the context of multi-attribute modeling.

3.1.1 Alternatives

Group of objects, products, actions, choices or strategies. For instance, a list of cars being considered for purchase or a list of sites for a new building.[1]

3.1.2 Objectives

A collection of attributes selected by the decision maker for use as a goal. The objective of buying a car, for example, includes factors such as price, maximum velocity, and comfort.[2]
The objectives are reflections of the desires of the decision maker (DM) and they indicate the direction in which the DM wants the organization to operate in: MADM problems, as a result, involve the design of alternatives that optimize or ”best satisfy” the objectives of the DM.

3.1.3 Weights:

The weights used in multiple criterion decision making have a very large impact on the decision making results and therefore the rank of alternatives. Many weighting methods are available (e.g. the AHP method). The role of decision makers is often weighed the same in all group decision making methods (including voting methods).[3]

3.1.4 Attributes:

Eagly and Chaiken, 1993 define attributes as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor”.[4]

An attribute is a characteristic specific to a brand (or product) that allows consumers to differentiate and compare different brands (or products) present in a market.[5]

Based on their characteristics, attributes can be classified into different types:

[1]RIBEIRO (R) (A), *Fuzzy multiple attribute decision making: A review and new preference elicitation techniques*, Fuzzy Sets and Systems , Portugal, 1996, P.155–181.

[2]Idem.

[3]TOLOIE-ESHLAGHY (A) and NAZARI-FAROKHI (E), *Measuring the Importance and the Weight of Decision Makers in the Criteria Weighting Activities of Group Decision Making Process*, American Journal of Scientific Research, Tehran, 2011, P.6-12.

[4]LEDGERWOOD (A), EASTWICK (P) (W) and SMITH (L) (K), *Toward an Integrative Framework for Studying Human Evaluation: Attitudes Toward Objects and Attributes*, Personality and Social Psychology Review, 2018, P.2-21.

[5]VERNETTE (E), FILSER (M) and GIANNELLONI (J), ≪ *Etudes marketing appliquées* ≫ , Dunod, Paris, 2008 P.78

A. **Intrinsic Attributes:**An object or entity can never change these attributes because they are inherent. Melting point, boiling point, density and odor are all considered intrinsic properties. [1]

B. **Extrinsic Attributes:**An aspect of a product, such as its name or brand image, that is related to the product but not physically involved with it. Changing them requires a marketing decision.[2]

C. **Functional Attributes:**The qualities of a product that make it suitable for use. There are a number of essential attributes that consumers recognize to differentiate products, as well as risks associated with the products.[3]

3.2 The Multi-Attributes Modeling (MAM)

An MAM focuses on structuring and solving problems involving multiple criteria in decision and planning. Such problems are intended to be supported by decision makers. In most cases, there is no one optimal solution for such problems, so it is necessary to differentiate solutions based on decision maker preferences.[4]

Multi-attribute modeling is a decision-making technique that evaluates options according to a number of criteria. Based on the relative importance of each attribute to the decision maker, it involves quantifying and ranking the different criteria.

There are three steps in utilizing any decision-making technique: [5]

- Determine the relevant criteria and alternatives,
- Attach numerical measures to the relative importance of the criteria and to the impacts of the alternatives on these criteria,
- Process the numerical values to determine a ranking of each alternative.

[1]HACHEMI KEMOUCHE (N),*L'apport des modéle d'évaluation multi-attributs dans la compréhension de la décision d'achat du consommateur*, Mémoire de magistère en Marketing, Ecole des Hautes Etudes Commerciales, Alger, 2015, P. 121.

[2]Idem.

[3]EARLE (M), EARLE (R) and ANDERSON (A), *FOOD PRODUCT DEVELOPMENT*, Woodhead Publishing Limited, 1999, P.43.

[4]MAJUMDER (M), *Impact of Urbanization on Water Shortage in Face of Climatic Aberrations*, National Institute of Technology, Agartala, 2015, P.35.

[5]Idem.

Before studying the different multi-attribute decision models (MCDM), let's know the objective of multi-criteria models and figure out the Steps of MCDM

3.2.1 The Objective of Multi-criteria Models (MCM)

"Multi-criteria decision models (MCDM) aim to assist decision makers in complex and uncertain situations by providing a structured approach for analyzing and evaluating alternatives based on multiple criteria. The objective of these models is to support decision makers in identifying the most appropriate solution that satisfies their objectives and constraints, while taking into account the inherent trade-offs between different criteria."[1]

The models are designed to help decision makers weigh different criteria and identify the most suitable solution that meets their objectives and constraints, and to provide them with a systematic and transparent way of doing that.

3.2.2 Steps of MCDM

Here we will show the eight steps for MCDM which are presented in figure 1.9[2] :

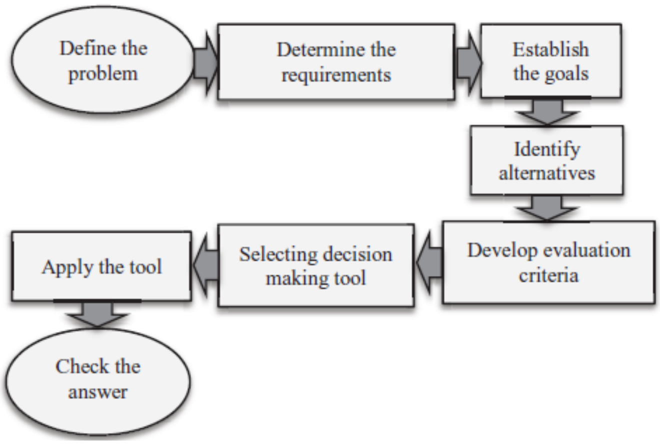
A comparison between different types of problems and their pros and cons is the first step to selecting the best method. In the second step, the requirements of a decision should be defined based on experts' judgments or any other technical restraints.

For the third step, goals must be clarified and the most relevant part is that goals must be considered positively. The forth step is defining alternatives. The next step is defining and assessing criteria. While defined criteria have these specifications, distinguishing among the alternatives and selecting the most suitable one can be performed more easily with more accuracy assigned to the intended goals. After that selecting the multi criteria decision making model and applying it.

[1]SAATY (T) (L), *How to make a decision: the analytic hierarchy process*, European Journal of Operational Research, (1990), P.9-26.

[2]SABAEI (D), ERKOYUNCU (J) and ROY (R), *A Review of Multi-criteria Decision Making Methods for Enhanced Maintenance Delivery*, Procedia CIRP, 2015, P.30–35.

Figure 1.9: Steps of MCDM



Source: SABAEI (D), ERKOYUNCU (J) and ROY (R), Op.Cit.

3.2.3 The Different Multi-criteria Models:

There are several types of (MCM) that have been developed or improved by different authors over the years. These methods differ mainly in their complexity, the weighting methods of criteria, and the way preferences are represented.

A. **The Analytic Hierarchy Process (AHP)**

One of the most popular analytical techniques for complex decision making problems is the analytic hierarchy process (AHP). Saaty (1980, 2000) developed AHP, which decomposes a decision-making problem into a system of hierarchies of objectives, attributes (or criteria), and alternatives. An AHP hierarchy can have as many levels as needed to fully characterize a particular decision situation. A number of functional characteristics make AHP a useful methodology. These include the ability to handle decision situations involving subjective judgements, multiple decision makers, and the ability to provide measures of consistency of preference. Designed to reflect the way people actually think, AHP continues to be the most highly regarded and widely used decision-making method. AHP can efficiently deal with tangible i.e., objective as well as non-tangible i.e., subjective attributes, especially where the subjective judgements of different individuals constitute an important part of the decision process.[1]

[1]RAO (R) (V), *Decision Making in the Manufacturing Environment*, Doctoral Thesis, National Institute of Technology, India, 2007, P.29.

There are six phases in this method and they are as follows:

- **Define the problem and determine the kind of knowledge sought:** We select a problem from all those considered to be important or complex enough to analyze. An analysis of this choice may be necessary since it may itself be a complex problem.
- **Structure the decision hierarchy:** This structure is built "from the top with the goal of the decision, then the objectives from a broad perspective, through the intermediate levels (criteria) to the lowest level (which is usually a set of the alternatives)."[1]
- **Construct matrices to calculate a set of pairwise comparison:** Each element in an upper level is used to compare the elements in the level immediately below with respect to it."

  This means that one matrix must be built for each criterion in the upper level. The comparison is made through a scale to show "how many times more important or dominant one element is over another element with respect to the criterion or property with respect to which they are compared" [2]
- **Calculate the relative weight of the elements to each level.**
- **Check and balance of decision:** It is necessary to perform this phase in order to determine if the results of applying AHP are in line with expectations, and if there are any flaws found, to review the previous steps.
- **Decision documentation:** Recording all the reasons for the decision is imperative. A record of the process can serve as a basis for justification to third parties or for future reflections.

B. **ELECTRE**

ÉLimination Et Choix Traduisant la REalité (”Elimination and Choice Translating Reality"). This method uses partial aggregation of preferences and contains information about criterion interactions and information within a criterion. ELECTRE is the most common Multi Attribution Utility Theory (MAUT) method. A major advantage of using the ELECTRE method is that it can handle qualitative and quantitative data with high

[1]RUSSO (R), DE (F) (S) (M) and CAMANHO (R), (2015), *Criteria in AHP: A Systematic Review of Literature*, Procedia Computer Science, P.1123–1132.

[2]Idem.

uncertainty when the decision maker cannot be rational in some aspects of his or her decision making process. A major advantage of ELECTRE is its insensitivity to changes in data, which makes it more stable and reliable than other methods. [1]

C. **TOPSIS**

The Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method was developed by Hwang and Yoon (1981). This technique is based on the idea that the selected option must have the minimum Euclidean distance from the ideal solution and the maximum distance from the negative ideal solution. The ideal solution is a theoretical solution in which all attribute values correspond to the highest attribute values in the database, which includes the satisfactory solutions. The negative ideal solution is a theoretical solution in which all attribute values correspond to the lowest attribute values in the database. Therefore, TOPSIS provides a solution that is not only the nearest to the theoretically most optimal but also the farthest from the theoretically poorest. [2]

The steps of TOPSIS method are presented as follows:

- The decision matrix is created.
- The weight of the criteria is computed using various techniques, such as AHP, based on the human approach or entropy that depends on mathematical operations
- The normalised decision matrix is computed.
- The weighted normalised fuzzy decision matrix is computed.
- The closeness coefficient for each alternative is computed.
- The alternatives are ranked as follows: The alternative with the highest closeness coefficient represents the optimal alternative.

3.2.4 Advantages and Limitations of Multi-Attribute Modeling

In this part, we will outline the benefits offered by MAM as well as its inherent limitations.

A. **Advantages of Multi-Attribute Modeling:**

[1] SABAEI (D), ERKOYUNCU (J) and ROY (R), Op.Cit.
[2] RAO (R) (V), Op.Cit, P.32.)

Consumer attitudes towards products, brands, and firms can be understood and assessed using multi-attribute modeling. It shows how consumers value elements of differentiation, reflecting the multiple dimensions through which they make inferences and judgments.

- An advantage of multi-attribute modeling is that it allows for a more structured and comprehensive decision-making process. The ability to make objective and informed decisions can be enhanced by considering multiple factors and assigning weights to them.
- When it comes to a decision making problem, multi-attribute modeling methods provide flexibility in terms of criteria and attributes to be considered.[1]
- Methods for modeling multiple attributes offer a clear and methodical approach to decision-making, enabling simple interpretation and explanation of outcomes. They are capable of managing intricate decision-making problems that encompass numerous criteria or attributes
- Multi-attribute modeling methods can incorporate stakeholder preferences into the decision-making process, which can improve the acceptance and implementation of the final decision.[2]
- Such an approach allows the company to segment buyers according to the choice of processes they implement. In addition, the company can improve the performance of their products based on buyers' evaluation of the most decisive attributes for the different competing brands. [3]

Thus, different actions can be taken on the basis of the results obtained by the multi-attribute models in order to improve the firm's position on the market:[4]

- Modify the product, incorporating new features valued by the market.
- Change the current brand image. This involves changing the beliefs that consumers have about the brand's attributes.
- Modify the image of competitors, for example by facilitating unfavorable comparisons to competitors through the promotion of a criterion on which one is better.
- Change the weights assigned to the attributes, highlighting the attributes on which the brand is currently well placed.

B. **Limitations of Multi-Attribute Modeling:** However, multi-attribute modeling also has

[1]FIGUEIRA (J), GRECO (S) and EHRGOTT (M), *Multiple criteria decision analysis: state of the art surveys*, Springer Science and Business Media, Boston, 2005, P.188.

[2]ROY (B), *Multicriteria methodology for decision aiding*, Springer Science Business Media, Berlin, 1996, P.8.

[3]HACHEMI KEMOUCHE (N), Op.Cit, P.121.

[4]KOTLER (P) KELLER (K) and (L) (K), Op.Cit, P.226

some limitations. Choosing weights for each criterion can be challenging, since individuals may have different opinions about their importance. Additionally, multi-attribute modeling may take a long time, and it may not always produce precise or conclusive results.

- Consumers may not always make rational assessments of attributes, as implied in the model.[1]

- Regardless of the choice set, buyers are likely to make different trade-offs and vary their decision rules for reasons similar to the search for variety during the selection process. Techniques for modeling multiple attributes necessitate subjective assessments to be made regarding the significance and allocation of criteria or attributes, which may result in partiality and incongruities.[2]

- The usage of multi-attribute modeling approaches can be intricate and challenging to comprehend, which can limit their usability for decision-makers who lack technical expertise.

- Models based on multi-attribute data have a high dependency on the quality of the input data. Poor quality data may lead to inaccurate predictions and unreliable results.

As a whole, multi-attribute models can be useful when trying to understand consumer behavior, but they have certain limitations that need to be taken into account when interpreting the results and making decisions.

[1]https://courses.lumenlearning.com/wm-retailmanagement/chapter/multiattribute-model/ (03/24/2023 at 1h24 AM).

[2]KEENEY (R) (L) and RAIFFA (H),*Decisions with multiple objectives: preferences and value tradeoffs*, John Wiley and Sons, 1976, P.53-75.

Conclusion

MAM methods are regarded as the main decision-making methods, that considers more than one criterion in the decision-making process, this entry discusses consumer behavior and the factors that influence their purchase decisions.

Consumer attitudes towards products, brands, and firms can be understood through multi-attribute modeling. By evaluating multiple attributes and dimensions, we can identify strengths and weaknesses in products and brands. Despite limitations, such as the difficulty of determining attribute weights and the assumption of rational decision-making by consumers. Multi-attribute modeling does have some advantages, such as determining attribute weights and assuming rational consumer decision-making. And it is a valuable tool for marketers and businesses seeking to understand their customers and improve their products.

Based on this, we have the ability to create a dashboard using the steps of these methods or the general steps of any method. Therefore, in the next chapter, we will familiarize ourselves with the dashboard and everything related to it.

Chapter II: Dashboard

Introduction

To monitor their performance and make data-driven decisions, businesses use dashboards. Dashboards allow users to quickly and easily measure how they are progressing towards their goals by visualizing key performance indicators (KPIs) and metrics.

The goal of performance measurement is to collect and analyze data to determine the effectiveness of organizations, projects, or individuals in achieving their objectives. As well as helping businesses and projects identify areas that require improvement, it also helps them make informed decisions about the future.

Businesses rely heavily on Key Performance Indicators to measure and monitor their success. They are specific metrics that allow them to keep track of their progress towards achieving their goals. Whether it's financial performance, customer satisfaction, or employee productivity, KPIs can be used to evaluate a wide variety of topics.

In this chapter, we will explore what a dashboard is and the benefits of using it. We will understand how to measure performance and use data to make informed decisions that drive success. This chapter is made up of three sections which are : The first section will be devoted to the architecture of the dashboard and its contents. The second section will be about marketing performance. And finally, the last section presents the main indicators of marketing performance.

Section 1 Dashboard Architecture

In this part we will focus on dashboard architecture. We will start by defining dashboards and understanding their characteristics. We will explain its types and contents. Then the benefits of using dashboards, how to develop an effective dashboard

1.1 Definition of Dashboard

Managers, executives and decision makers need the right information at the right time as it enables them to control company performance and activities. This need for information and data is considered part of business performance management. Although gathering this data is considered part of business intelligence. Once collected and processed, the data needs to be made available to help managers make decisions so they can act accordingly. Egan sees that in order to obtain a visual representation of data, dashboards are considered business intelligence and business performance management tools designed for visual representation[1]

In general, a dashboard is a visual display that communicates the key evidence of progress in the achievement of a company's strategic and operational objectives.

According to Armonstrong: *"Dashboard enables the manager to identify problem areas, investigate the circumstances and initiate action".* [2]

The working definition of a data dashboard comes from information design thought leader Stephen Few: A dashboard *"is a visual display of the most important information needed to achieve one or more objectives consolidated on a single screen so it can be monitored and understood at a glance"*[3]

Pauwels defines the dashboard *"as a small collection of the interconnected metrics (key performance indicators) and underlying base metrics (drivers) that measure the performance of the organization against the sort term and the long-term goals set by the leadership team."*[4]

[1]EGAN (G) (A) *clear path to peak performance, People Management*, 1995, P.34–37.

[2]ARMONSTRONG (M), *Handbook of Human Resources Management Practice*, Kogan Page, London, 2007, P.85.

[3]FEW (S), *Dashboard Confusion Revisited*, Visual Business Intelligence Newsletter. California, 2007, P.1-6.

[4]PAUWELS (K) and others, *Dashboards as a Service*, Journal of Service Research, 2009, P.175–189.

Another definition is the one given by Johnson and Scholes :*"A dashboard is a single screen user interface consists of a static structure, which makes information available at the right time using indicators."*[1]

Data dashboards give you an easy and quick way to monitor key performance indicators (KPIs) and other metrics. Users can quickly and efficiently track performance and identify trends and insights by analyzing charts, graphs, and tables that present data in an easily format.

1.2 Dashboard Characteristics

Data driven decisions can be made with dashboards to monitor the performance of businesses. Some of the most common characteristics of dashboards are:[2]

1.2.1 Customizable Dashboards:

Dashboards can be customized so that users can display metrics and data relevant to them. Kimberly Silva says, *"In my SaaS business, customizable dashboards add value. If I could put up desired widgets and other business elements to increase the clarity and visibility of my business function, then such a dashboard gives value overall. Most of the dashboards offer this feature but only limited space. I expect almost all the elements on the dashboard to permit the customization features to enhance displaying business goals and data precisely."*

1.2.2 Real-Time Data Processing:

Users can monitor performance in real-time and make quick decisions with dashboards that display real-time data.

1.2.3 Increased visibility:

By providing a one stop shop for relevant data, information dashboards allow better visibility into everyday operations, and at the same time can provide insights into the future based on past trends.

[1] JOHNSON (G) and SCHOLES (K), *Exploring Corporate Strategy* , Prentice Hall, Hemel Hempstead. 1993, P.132.

[2] https://databox.com/dashboard-features (03/25/2023 at 11h26 PM).

1.2.4 Ease of Use:

Dan Barrett says “I think the main feature that makes a dashboard great is simplicity. When I’m working on dashboards, I keep in mind that they’re not just for me they’re for everyone who needs to use them. I try to keep my dashboards as simple and easy to use as possible, so anyone can grab them, run with them, and make sure they’re making the most of their data.”

1.2.5 Flexible Sharing:

In most organizations, reporting is a team effort. Members should share reports among themselves. It will be easier to report when having a dashboard.

1.2.6 The Ability to Export Data as a Report:

Dashboard data may need to be viewed by people outside of the organization at times. To track the progress, it might also need to capture data at certain points.

1.2.7 Drill-Downs:

To gain a deeper understanding of trends, dashboards can enable users to drill down into specific data sets.

1.2.8 Integration:

In order to provide a more complete picture of business performance, dashboards are often integrated with other software applications, such as customer relationship management systems (CRM systems) or accounting software.

1.2.9 Progress Checking:

It may be challenging to determine the achievement of specific goals when tracking numerous metrics. Staying on track can be facilitated by employing a dashboard tool that monitors progress.

1.2.10 Device Cross-Compatibility:

The majority of dashboards can be accessed from mobile devices, enabling users to access data anywhere.

1.3 Types of Dashboard:

There are three types of performance dashboards: strategic, operational, and tactical. Depending on their needs, organizations use one or more dashboard types.[1]

1.3.1 Strategic dashboards

Dashboards of this type are used by company leaders to monitor corporate performance. Balanced Scorecards (BSCs) and Six Sigma concepts are often used to implement strategic dashboards. Metrics are updated weekly or monthly. According to Johnson and Scholes: the strategic dashboard is at the heart of the performance management system for the following reasons[2]:

• It is a powerful tool for aligning corporate structure with strategic objectives,

• It is horizontal in nature, encouraging shared and collective intelligence in organizations that often operate in silos.

1.3.2 Operational dashboards

As a tool for short-term management, dashboards allow for progress monitoring of action plans implemented by operational managers towards achieving company objectives. This enables timely corrective measures to be taken when needed. This type of dashboard empowers the operational team to support the overall strategy, confirming and fine-tuning it as necessary. Such dashboards utilize qualitative indicators to evaluate results against established reference values, with data collected through simple measurement and counting.[3]

1.3.3 Tactical dashboards

The tactical dashboards, which are intended for departmental managers, keep track of processes and emphasize analysis. Users can examine data across multiple dimensions to determine the cause of a highlighted situation with the analysis application. The tool also allows users to monitor performance and chart progress against budgets and goalsgoals. Tactical dashboards are usually updated periodically, daily or weekly.[4]

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[1] BUTTIGIEG (S) (C), PACE (A) and RATHERT (C), *Hospital performance dashboards: a literature review*, Journal of Health Organization and Management, 2017, P.385–406.

[2] JOHNSON (G) and SCHOLES (K), Op.Cit.

[3] Idem

[4] Idem.

Table 2.1: Performance Dashboards Types.

	STRATEGIC	TACTICAL	OPERATIONAL
Focus	Execute strategy	Optimize process	Control operations
Use	Management	Analysis	Monitoring
Users	Executives	Managers	Staff
Scope	Enterprise	Departmental	Operational
Metrics	Outcome KPIs	Outcome and driver KPIs	Driver KPIs
Data	Summary	Detailed/summary	Detailed
Sources	Manual, external	Manual/core systems	Core systems
Refresh Cycle	Monthly/quarterly	Daily/weekly	Intraday
"Resembles a.."	Scorecard	Portal	Dashboard

Source: ERNIE (M), and SHAHIZAN (O), *A Review on the Dashboard Characteristics for Manufacturing Organizations*, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia. P.28-34.

1.4 Dashboard Content

There are some common components among all dashboards, but each has its own characteristics. According to Huselid et al: Using a dashboard, the organization can keep track of its progress based on past results and future objectives through periodic snapshots.[1]

Effective dashboards rely on measurable and quantifiable metrics. It is crucial to use objective indicators, such as enhancing market share, rather than subjective ones, such as implementing a new marketing campaign, when selecting metrics for your dashboard.[2]
Dashboards primarily include:

1.4.1 Metrics:

In most cases, revenue data, commission data, and open orders are available. Metrics should be in a "SMART" format:

"SMART" indicators Often times, indicators are used to measure objectives, resources mobilized, outputs achieved, effects obtained, or variables within the context (economic, social, or environmental). It is important to make indicators **Specific**, **Measurable**,**Achievable**,**Responsible**

[1]HUSELID (M) (A) JACKSON (S) (E) and SCHULER (R) (S), *Technical and strategic human resource management*, Academy of Management Journal, 1997, P.171–188.
[2]https://www.achieveit.com/ (05/8/2023 at 3h42 PM).

and**Time-bound**.

Key Performance Indicators (KPIs): A measure of performance tied to a corporate goal or industry benchmark, such as on-time delivery percentages, plant utilization rates, order fill rates, etc.[1]

Performance metrics are measures that assess and analyze the performance of an organization, team, department, project, or activity. Over a given period of time, their performance is evaluated against previously established benchmarks. They are linked to strategy and performance.[2]

1.4.2 information:

However, dashboard information is divided into three layers. A dashboard can display data in different ways. It usually begins with a graphical representation, which can be "drill-down" and viewed in greater detail. three layers (or views) of information:[3]

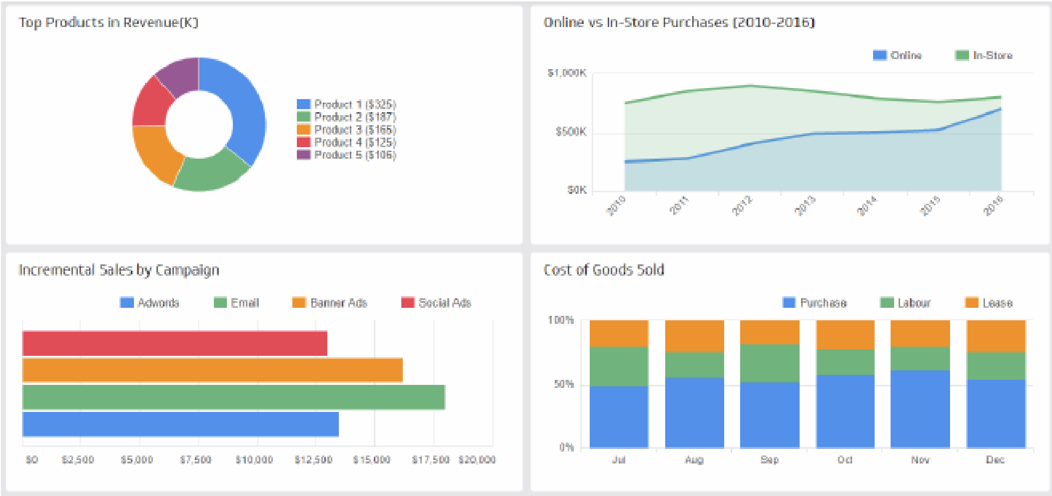
- Graphical metrics view,
- Multidimensional view,
- Detailed or operational view.

[1]BUETI (C) and CARRIERO (D), *Collection Methodology for Key Performance Indicators for Smart Sustainable Cities*, Published in Switzerland, Geneva, 2017, P.3.

[2]Ibid, P.4.

[3]https://docs.oracle.com/middleware/bi12214/biee/BIEUG/GUID. (04/01/2023 at 14h49).

Figure 2.1: Examples of information dashboard.



Source: https://www.klipfolio.com/resources/dashboard-examples/sales/product-sales (03/28/2023 at 15h30).

1.5 Dashboard Instruments

The most common instruments of dashboard are variances, ratios, and graphs.

1.5.1 Graphics:

They give more visibility on the evolution of situations and indicators. Their interest is to visualize quickly and directly the evolutions and better apprehend the changes in rhythm or tendency. They are as follows: Curves, sectors, histograms and proportional maps.

1.5.2 Variances:

Is the difference between reference data and actual data, the difference between planned and realized cost, and the difference between allocated and consumed quantity.[1]

1.5.3 Tables:

They provide detailed data and allow the user to perform additional calculations. But their ability to give an overview is inversely proportional to their density.[2]

[1] BENALOUACHE (L) et BOUDRIES (Z) , « *Tableau de bord RH comme outil de pilotage et de mesure de la performance de l'entreprise*, mémoir Master, Bejaia, 2019, P.20.

[2] Idem

1.5.4 Ratios:

These are ratios between two significant quantities of the company's structure or operation, and they are interesting insofar as they allow comparisons over time. The ratios used in the dashboard are those of operation, which concern short-term management, which concern medium and long term management.[1]

1.6 Benefits of Dashboard

Dashboards are implemented so widely because they offer countless benefits to everyone in an organization, from executives to managers to employees. Here is a condensed list of its benefits:[2]

1.6.1 Improve Performance:

Dashboards help organisations evaluate to their performance, question their own results, and implement improvements. Dashboards provide users with timeless and relevant information that allows them to closely monitor performance and evaluate interventions.

1.6.2 Increase communication between different departments:

Enhanced visibility and integration of data foster collaboration as users see information in a way never presented before. There has been an increase in communication between different departments and professions as a result of dashboards, according to many authors.An organisation's dashboard should be designed so that every department facilitates achieving its strategic goals. Moreover, dashboards encourage employees to improve their performance by working together, and they facilitate dialogue between managers and employees.

1.6.3 Raise awareness of a problem:

One of the functions of performance dashboards is to report trends, and hence any exceptions to trends will raise awareness about a problem. Wyatt[3] gives the example of an early warning sign that the organisation's admitting process has considerably slowed.

[1] BENALOUACHE (L) et BOUDRIES (Z) , Op.Cit, 2019, P.20.
[2] BUTTIGIEG (S) (C), PACE (A) and RATHERT (C), Op.Cit.
[3] WYATT (J) (K), *Delayed sleep phase syndrome: Pathophysiology and treatment options*, 2004, P.1195–1203.

1.6.4 Enable informed decision making:

Users are able to make informed decisions when they have immediate access to information. KPIs captured on the performance dashboard can provide significant information for decision making, for example changes in staffing or capital required.

1.6.5 Accelerate organisational change:

Dashboards provide organisations with the means and methods to engage financial and operational processes, to steadily refine and improve them, thus making processes more effective. The ongoing cycle of integrating, presenting and analysing KPIs on a regular basis fuels on-going transformational change of the organisation.

1.6.6 Reduce of cost and empower users:

As a result, dashboards provide the right information to the right user at the right time to optimize decisions, improve efficiency, and accelerate bottom-line performance

1.7 Dashboard Development Stages

In the following, we will present five stages of dashboard development:[1]

1.7.1 Stage I: Selecting the Key Metrics

we distinguishe two main approaches to metrics selection: general and tailored. The general approach keeps the number of metrics down to a few that can be applied to virtually all settings. It has the advantage of comparability, allowing benchmarking across business units, firms, industries, and time periods.

In contrast, the tailored approach argues that each business company has its own strategy and positioning and requires differentiated metrics to track progress towards its specific objectives. This approach invites high-level communication throughout the organization of what is significant to the business, which is seen as highly beneficial by several companies.

[1] PAUWELS (K) and others, Op.Cit.

1.7.2 Stage II: Populating the Dashboard With Data

The biggest problem for service firms is the periodicity of their data, which may be the biggest problem. Some data may be collected daily from sales reports, whereas others are collected annually, or even less frequently, such as brand equity measures, and even less frequently. Priority should be given to metrics that are more important than others.

1.7.3 Stage III: Establishing Relationships Between the Dashboard Items

Stage III involves determining the underlying relationships between the metrics. This step moves the dashboard from a simple presentation of information (what we consider a minimum requirement for a dashboard) to a deeper understanding of the business and a decision support system.

1.7.4 Stage IV: Forecasting and Scenarios

Stage IV applies the dashboard's underlying model to scenario planning and budget setting. For instance, if the firm improves forecast service demand accuracy (e.g., by using data about past sales patterns), the firm should be able to increase revenues.

1.7.5 Stage V: Connecting to Financial Consequences

Stage V connects marketing expenditure all the way through the interim marketing metrics onto sales and to the financial consequences for the firm, including the link to shareholder value and thus market capitalization, and thus aligns marketing with corporate goals and the investor's perspective.

After familiarizing ourselves with all aspects of the dashboard in this section and to assess its effectiveness and performance, we will collectively study the marketing performance in detail in the next section.

Section 2 Marketing Performance

At this stage of the process we will familiarize ourselves with marketing performance. In the first instance, we will explore performance definition and its components. We will figure out the meaning of marketing performance, the players, the types and benefits, and finally, we will see the effect of social media on marketing performance.

2.1 Definition and Components of Performance

This following aims to explore the concept of performance, encompassing its meaning and various components that contribute to it.

2.1.1 Definition of Performance

A company's performance is heavily influenced by the quality of its employees, emphasizing the importance of continuous exposure to updated knowledge and skills to maintain high-quality performance and adaptability to market changes. Moreover, an organization that maintains high performance standards effectively fulfills its stakeholders' needs.[1]

Generally, performance refers to a task, activity, or function that is accomplished as per expectations or standards. The term can be applied to the output or results achieved, as well as the process or effort involved in obtaining them.

2.1.2 Components of Performance

performance is obtained by combining management, economics, and marketing. The organizational structure and procedural components benefit from it in terms of their competitiveness, efficiency, and effectiveness.[2]

A. **Competitiveness:** One of the components of performance is competitiveness, which refers to the ability to compete effectively within the same industry or market. It can be defined as "the ability of a firm to achieve and sustain superior performance compared to its competitors in the same industry or market."[3]

   Different factors can influence competitiveness, such as innovation, technology, product quality, cost efficiency, marketing, and human resource management. It is more likely that highly competitive organizations will be able to respond to changes in the market and withstand challenges posed by their competitors.

[1]TAOUAB (O), ISSOR (Z), *Firm performance: Definition and measurement models* European Scientific Journal, 2019, P.96-106.

[2]Idem.

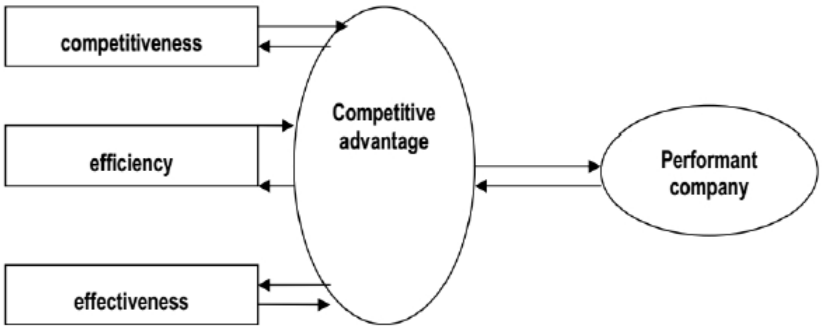
[3]PORTER(M) (E) *The competitive advantage of nations*? Harvard Business Review, 1990, P.73-93.

B. **Efficiency:** Efficiency is another component of performance. Which means the achieving maximum output while using minimal resources or input. It can be defined as ”the ability of a firm to minimize the use of resources in producing goods and services while maintaining quality and satisfying customer needs.” [1]

C. **Effectiveness:** Effectiveness refers to the degree to which an individual or organization achieves its objectives and goals. It can be defined as ”the ability of a firm to accomplish its objectives and goals and satisfy the needs of its stakeholders”[2]

Organizations must be effective in order to achieve their strategic objectives, serve their customers, and generate value for their stakeholders. As a result of improving effectiveness, organizations are better able to meet their customers’ needs, improving their competitiveness. The Figure(2.5) below represent these components[3]

Figure 2.2: Performance components



Source: https://www.klipfolio.com/resources/dashboard-examples/sales/product-sales (03/28/2023 at 15h30).

2.2 Marketing Performance

We are committed to learning the following elements in order to better understand marketing performance.

[1]LIU (X) and LU (J), *Efficiency and performance: An empirical study of Chinese commercial banks*, Emerging Markets Finance and Trade, 2016, P.26-36.

[2]DRUCKER (P) (F), *Management challenges for the 21st century*, HarperCollins Publishers, New York, 1999, P.48.

[3]Idem.

2.2.1 Definition of Marketing Performance

Marketing performance is defined as measuring business performance levels including sales turnover, number of buyers, profits and sales growth. they added five dimensions to marketing performance: marketing culture, marketing ability, marketing process, market performance and financial performance.[1]

In a different way marketing performance is a business success factor combined with strategic marketing, market, and financial condition. The marketing performance consists of sales growth, market development, and market share. Also marketing performance is measured by sales value, growth, and market share.[2]

Marketing performance is used to achieve a profit. Sales value could be money or the number of product units sold. Sales growth is measured by the increase in sales compared to a specific time. Market share shows a product's contribution to the market dominance for similar products compared to competitors. Decent marketing performance is also indicated by sales growth.[3]

The term "performance marketing" refers to digital marketing in which brands are rewarded based on their products' performance.
The goal of performance marketing is to improve performance through online marketing. As a result, advertisers only pay advertising companies or platforms when consumers take specific actions. These can include clicks, leads, bookings, downloads, or sales. An effective performance marketing strategy benefits both parties.[4]

Marketing performance refers to a company's ability to measure and analyze marketing effectiveness. Tracking marketing metrics such as customer acquisition, conversion rates, and revenue is part of the process. Companies can improve their marketing performance by analyzing their marketing performance and optimizing their strategies. As a result, sales can increase, brand awareness can improve, and customer engagement can improve.

[1]HANFAN (A) and SETIAWAN (A) (I), *Exploiting regio-centric product advantage to increase small and medium enterprises marketing performance*, University of Malta. 2018, P.3-26.

[2]HERLINA (V) and others, *The Role of Social Media Marketing in Improving Marketing Performance for SMEs During the COVID-19 Pandemic: A Literature Review*, Journal of Research, Opinion, and Consequence Management, 2022, P.43-51.

[3]Idem.

[4]BAUER (TH) et AL, *"Marketing Performance: How Marketers Drive Profitable Growth "*, Kindle Edition, United Kigdom, 2016, P.15.

2.2.2 Dimensions of Marketing Performance

As we mentioned previously in the definition of marketing performance, Gama (2011) added five dimensions to marketing performance which are the following:[1]

A. **Marketing culture:** This dimension of marketing involves the shared values, beliefs, and attitudes that drive marketing behavior within an organization. It refers to the organization's approach to marketing, which can be centered around the product, sales, market, or customer. For example, a customer-oriented marketing culture would place a high value on satisfying customers and building long-term relationships with them.

B. **Marketing ability:** This dimension evaluates the marketing team's skills and abilities and how well they can execute successful marketing campaigns.

C. **Marketing process:** This dimension looks at the ways in which an organization plans, executes, and evaluates its marketing activities. Well designed marketing processes ensure that the organization's marketing efforts align with its goals, resources are allocated wisely, and performance is monitored and assessed regularly.

D. **Market performance:** This aspect assesses an organization's competitiveness in its industry, which includes factors such as market share, customer acquisition, and customer retention. It requires an understanding of the competitive market, identifying target markets, and creating effective strategies to obtain and sustain a competitive edge.

E. **Financial performance:**This aspect concentrates on the financial results of an organization's marketing efforts, which include revenue, profit, and return on investment (ROI). Successful marketing should yield favorable financial outcomes for the organization, such as greater sales, increased profit margins, and higher ROI.

2.3 Performance Marketing Players

These performance marketing players are[2]:

[1]GAMA (A), *An expanded model of marketing performance*, Marketing Intelligence and Planning, 2011, P.643–661

[2]https://thepma.org/the-players/ (04/05/2023 at 1h12).

2.3.1 Advertisers

The aim of advertisers, also known as merchants or retailers, is to sell products and promote offers or services. As part of their marketing efforts, they set up performance marketing programs, also known as affiliate programs. The tracking of performance marketing programs can be done through affiliate networks or in-house software.

2.3.2 Networks

As intermediaries between advertisers and publishers, these companies act as third parties. Advertisers and publishers use networks to connect, track, and pay for ads. Ad networks also provide compliance, reporting, and ad payouts among publishers and advertisers. The purpose of this is to optimize transactions conducted through these relationships.

2.3.3 Publishers

The publisher, also known as an affiliate or a marketing partner, is a website owner who participates in advertiser programs and promotes advertisers through links. A publisher is paid for completing a particular action (driving traffic, sending leads, or generating sales).
Neither publishers nor advertisers are sales agents. They are independent companies that use a variety of advertising and marketing methods including search engine optimization, paid search, email marketing, social media marketing and display advertising.

2.3.4 OPMs/Agencies

Utilizing an outsourced project management (OPM) company or agency is another way advertisers can initiate, implement, and successfully run performance marketing without having to run their programs in-house. OPMs and agencies often have years of experience, and relationships that can help build a successful program. Many OPMs and agencies offer a variety of services including marketing strategy, design, publisher recruitment, compliance, and landing page optimization. Plus, they offer Search engine optimization (SEO) and Search engine marketing (SEM) expertise and more.

2.3.5 Solution Providers

Solution providers often fill in performance marketing gaps. They offer everything from web hosting to blogging and website building tools to analytics packages, compliance and legal services. These players are developing much-needed applications, services and tools that make it easier to build, run and optimize businesses.

2.4 Types and Benefits of Marketing Performance

Gaining an understanding of the various types of performance marketing is crucial for harnessing their associated benefits.

2.4.1 Types of Marketing Performance

Performance marketing is divided into four main types by modern businesses[1]:

1. **Social Media Advertising** Social media advertising includes ads on Facebook, Instagram, Twitter, LinkedIn, and more. This includes both campaigns to reach new people (referred to as prospecting) and campaigns to reach people who have visited their site but have not yet converted (referred to as retargeting). Social media advertising is not always performance based. It can also be used for brand promotion or market validation when it is not used to drive conversions.

2. **Search Engine Marketing (SEM)** Search engine marketing refers to running advertising campaigns to increase traffic from search engines like Google or Bing. These campaigns are usually structured according to the type of searches they target. For example, a company might run campaigns targeting the types of products it sells, competitor brands, and its own brand.

3. **Influencer marketing**In the past, influencer marketing wasn't considered "performance marketing." But things have changed in recent years. Influencers have become more aggressive, and the evolution of influencer management tools like Gatsby and influencer partnership platforms has allowed brands to properly track and iterate their influencer partnerships, making them truly elite.

[1] https://www.shopify.com/blog/performance-marketing (04/05/2023 at 2.04).

4. **Native Advertising / Sponsored Content** Similar to influencer marketing, but instead of paying an influencer to speak about your brand, you pay a publication to write about it. As the marketer, you have a high degree of creative control over what they publish for you. Some publications call it native advertising, others sponsored content, but the strategy is the same. Note that in most countries, publications must disclose that the content is sponsored.

2.4.2 Benefits of Marketing Performance

In order to make the most out of performance marketing, businesses should understand the benefits it can have on their business. Performance marketing offers four major benefits[1]:

1. **Budget Friendly:** A performance marketing campaign is much cheaper than a traditional display advertising campaign. In performance marketing, companies only pay when a specific action is achieved, instead of upfront. If you operate a small business on a limited budget, this is a much more cost-effective and effective strategy.

2. **Easy Performance Tracking:** The company's marketing strategy can be measured more effectively with performance marketing. It is precisely for this reason that digital performance marketing tools like Affise and Anytrack exist. Business owners won't have to guess how many leads were converted from a given initiative. When the desired results of an initiative are achieved, whether it's a potential customer signing up for the company's marketing emails, or clicking on an ad, these results are automatically tracked via the company's performance marketing tool.

3. **Transparency:** Investing in performance marketing allows business owners to determine the return on their investment. Real-time results and performance tracking are provided by marketing software platforms so businesses can monitor progress as it happens. Businesses can also use these insights to improve their campaigns and boost their bottom line by finding out which partners are doing the best in terms of clicks, subscribers, and conversions.

4. **Low Risk:** Compared to other types of marketing campaigns, performance marketing carries less risk. In the first place, you only pay for desired actions once they have been

[1] https://www.business2community.com/small-business/top-4-benefits-of-performance-marketing-for-small-businesses-02365677 (04/05/2023 at 2.47)

achieved, so you are truly getting what you pay for. Additionally, these campaigns are much more flexible. Any financial problems faced by a business can be tweaked by the owner.

2.5 The effect of Social Media Marketing on Marketing Performance

Social media offers many advantages for digital marketing. In addition to communication, information dissemination, such as product promotion, can be done quickly and cheaply, and identification of customers will be easier. These activities can be done cheaply. Marketers using social media can significantly increase sales for small and medium enterprises (SMEs).[1]

The implementation of digital marketing strategies for small businesses, utilizing the ”Do It Yourself” (DIY) model and the Technology Acceptance Model (TAM). According to this study, while small business owners must incorporate technology utilization, it is not the sole factor for achieving success in business. On the other hand, analyzing the Technology Acceptance Model of social media marketing, which involved 163 SME owners as respondents. The study used partial least squares structural equation modeling (SEM) for data analysis and found that social media marketing has a positive and significant impact on the performance of SMEs. [2]

We have now become acquainted and understood the marketing performance in this section. To measure this performance, in the next section, we will explore how to measure key performance indicators for the company's marketing performance.

Section 3 Measuring Key Performance Indicators

Managers use key performance indicators (KPIs) to determine whether their business is heading in the right direction or veering off course. In this section, we will present the definition of a key performance indicator and its importance, we will know the process of setting up KPIs, how to develop KPIs based on SMART criteria, we will define tools to measure performance and we will know the different marketing KPIs.

[1] HERLINA (V) and others, Op.Cit, P.50.
[2] Idem.

3.1 Definition and Characteristics of Key Performance Indicators

Key performance indicators serve as quantifiable markers that help organizations measure whether their objectives and goals are being met.

3.1.1 Definition of KPIs

We define KPIs (key performance indicators) as the quantitative measures that provide insight into a company's internal processes and structures. KPIs are crucial for effective planning and control, as they offer supporting information, promote transparency, and assist decision-makers in management. By providing measurable benchmarks, KPIs help organizations to evaluate their performance and progress towards their goals. KPIs improve business efficiency and effectiveness.[1]

Lord Kelvin defined KPIs as *"When you can measure what are speaking about and measure it in numbers, you know something about it, when you cannot express it in numbers , your knowledge is of meager and unsatisfactory kind; it may be the beginning of knowledge but you have scarcely , in your thoughts advanced to the stage of science."* [2]

In organizational performance, a KPI is a metric that measures the performance areas that are critical to the future success of the company. These KPIs are often not introduced to the organization, but overlooked or forgotten. It is possible that the management team didn't recognize them or didn't prioritize them previously. It is important for organizations to identify and track these critical KPIs so that they can gain valuable insight into their operations and make informed decisions that will drive growth and improvement.[3]

Key Performance Indicators (KPIs) are specific measurements businesses use to track progress. They allow businesses to understand how they are performing in critical areas and identify areas for improvement. KPIs should be linked to a strategic goal and specific outcome for the company. Tracking progress and identifying sunsitive points are crucial to KPIs.

[1] BADAWY (M) and others, *A survey on exploring key performance indicators*, Future Computing and Informatics Journal, 2016, P.47–52.

[2] Idem.

[3] DAVID (P), *"Key Performance Indicators Developing, Implementing, and Using Winning KPIs"*, ,3rd edition, John Wiley and Sons, Canada, 2015, P.7-8.

3.1.2 Characteristics of KPIs

The characteristics of KPIs are[1]

1. **Sparse:** It's best to have fewer KPIs.
2. **Drillable:** Users have the option to go further.
3. **Simple:** Users are aware of the KPI. Indicate exactly what the staff needs to do.
4. **Actionable:** Users are aware of how to influence results. have a substantial effect, such as having an impact on one or more key success factors (CSFs).
5. **Owned:** Each KPI has a proprietor. are responded to by the CEO and senior management group (as an instance, the CEO phones the appropriate personnel to find out what's going on).
6. **Referenced:** Viewers are able to see details and sources
7. **Correlated:** KPIs help to achieve targeted results. They promote proper conduct (e.g., have been evaluated to guarantee a good effect on performance, whereas ill-conceived measures can result in dysfunctional behavior).
8. **Balanced:** KPIs consist of both financial and nonfinancial metrics.
9. **Aligned:** KPIs don't undermine each other.
10. **Validated:** Employees have no way to circumvent the KPIs.
11. **Regulated:** Are often measured (e.g., continuously, daily, or weekly).
12. **Distributed:** there are policies that delegate authority to a team For instance, the CEO might ask the team leader to take the appropriate action.

3.2 The Importance of KPIs

Once we have identified the KPIs, it becomes evident that understanding their significance and relevance is essential.

[1]BADAWY (M), and others, Op.Cit.

3.2.1 The Importance of Performance Indicators

Because they offer a quantifiable means to monitor progress towards reaching strategic goals and objectives, key performance indicators (KPIs) are crucial.
KPIs are significant for a number of reasons, including:[1]

1. **KPIs to Monitor Company Health:** From financial indicators to risk factors, key performance indicators help to determine the organization's health.

2. **KPIs to Measure Progress Over Time:** In a business, a KPI measures its success. Whether it's how much money is being made or how happy customers are, businesses set KPIs and track them regularly to see if they're meeting their goals.

3. **KPIs to Make Adjustments and Stay on Track:** KPIs help businesses track their progress towards specific goals.It is possible for businesses to stay focused and reach their goals by monitoring leading indicator KPIs and adjusting their actions accordingly, allowing them to stay focused.

4. **KPIs to Solve Problems:** The right KPIs can be tracked and displayed on a dashboard, allowing businesses to see what is working and what isn't, and make adjustments.

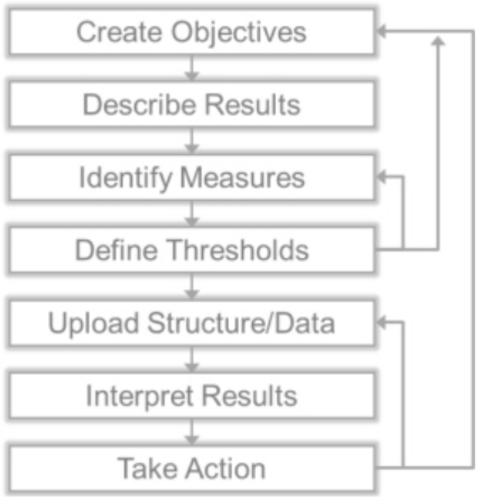
5. **KPIs to Analyze Patterns Over Time:** When businesses consistently track the same KPIs over time, patterns can be identified and applied to the business. For example, by predicting slow periods, businesses can schedule updates or training accordingly. By measuring relevant aspects, KPIs are also used to identify team members who consistently underperform or overperform, as well as uncover opportunities for promoting growth and solving problems.

3.3 Key Performance Indicator Process

It takes seven steps to measure performance successfully. The Seven Steps methodology is template driven and requires to pass through the following steps,[2] such as shown in Figure 2.6

[1] https://www.rhythmsystems.com/blog/5-reasons-why-you-need-kpis-infographic. (04/10/2023 at 5h44 PM).
[2] https://www.intrafocus.com/2012/08/seven-steps-successful-performance-measures/ (04/11/2023 at 6h02 PM).

Figure 2.3: Steps to Successful Performance Measures



Source: https://www.intrafocus.com/2012/08/seven-steps-successful-performance-measures/ (04/11/2023 at 6h02 PM).

1. **Create Objective:** As a first step in increasing sales productivity, identify the areas within the organization that need improvement. This goal can then be further divided into smaller, measurable steps, allowing for progress tracking.

2. **Describe Results:** The objective "Improve Sales Productivity" could be replaced by a more specific and measurable objective: "Decrease lead-to-sale conversion by 0.2 within the next quarter." This objective is more specific, time-bound, and measurable, making it easier to track progress and improve.

3. **Identify Measures:** The objective "Reduce lead-to-sale conversion time" should be measured using clear performance measures that can be counted. For example, performance measures may include the number of qualified leads, the number of sales associated with those leads, and the average conversion time for qualified leads. Based on the needs of the viewer/stakeholder, each objective and performance measure should have an owner and updater.

4. **Define Thresholds:** The performance measure target values should be realistic and achievable, and the visual representation threshold values should be defined. Visual representations of threshold values can include colors such as red.

5. **Upload Structure/Data:** Once the objectives and metrics structure has been loaded, next

step is create a scorecard structure by entering objectives and performance measures into QuickScore or Scoreboard, by arranging them for easy access, and setting system and user permissions.

6. **Interpret Results:** In Step 6, dashboards and reports are created based on the entered data, and training is provided. Interpretation of actual values is ongoing throughout the process.

7. **Take Action:** In Step 7, we will learn how to link failing objectives to tasks for effective action and monitoring until successful completion of objectives. Performance measures will show whether objectives are being met or not, and action must be taken if objectives are heading in the wrong direction.

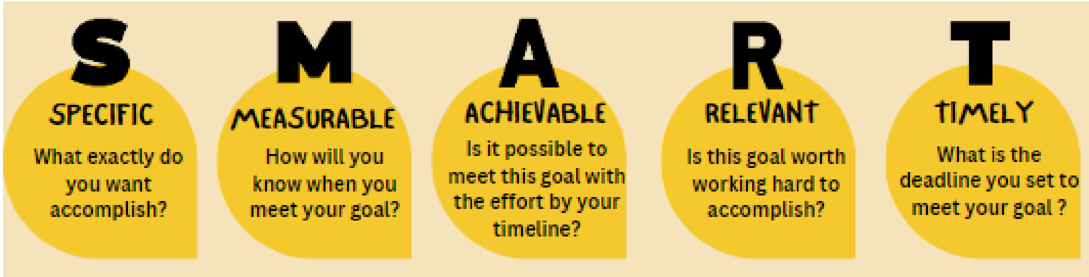
3.4 SMART KPIs

SMART stands for specific, measurable, achievable, relevant, and time-bound goals and objectives. KPIs can be developed based on SMART criteria to ensure they are aligned with organizations' overall objectives and are meaningful in assessing progress toward those objectives. By doing so, organizations can ensure their KPIs are aligned with their overall objectives and meaningful.
We explain it as follows:[1]

- **Specific:** Performance should be measured by KPIs that are most relevant to the business.
- **Measurable:** To be used as a management tool, they must be identifiable and trackable.
- **Achievable:** Measuring performance should be more costly than evaluating it.
- **Relevant:** The KPIs should be aligned with the organization's overall strategic goals.
- **Timely:** Management should be able to respond quickly to changes inside and outside the organization when measuring, analyzing, and responding to KPIs.

[1] https://www.wrike.com/project-management-guide/faq/what-is-smart-in-project-management/ (04/11/2023 at 10h45 PM).

Figure 2.4: SMART Goals.



Source: Made by Us

3.5 Tools to Measure KPIs

Below are some of the commonly used tools for measuring indicators.

3.5.1 Google Analytics

We define it as in the following:[1]
It is part of the Google Marketing Platform and is available to anyone with a Google account for free. Google Analytics provides statistics and basic analytical tools for SEO and marketing.

Google Analytics allows for the tracking of website performance and the collection of visitor insights. Using it, organizations can determine top sources of user traffic, determine the effectiveness of marketing campaigns, track goal completions (such as purchases and adding products to carts), discover patterns and trends in user engagement, and gather demographic information about their visitors. The analytics provided by Google Analytics are often used to improve marketing campaigns, drive website traffic, and better retain customers on small and medium-sized retail websites. Google Analytics collects user data through JavaScript page tags on each website page, sending it to Google's servers for customizable reporting on metrics such as user numbers, bounce rates, session durations, channel sessions, page views, and goal completions.

Google Analytics features[2]:

- Data visualization and monitoring tools, including dashboards,
- predictive Analytics, intelligence and anomaly detection,
- Custom reports for advertising, acquisition, audience behavior and conversion,

[1] https://www.techtarget.com/searchbusinessanalytics/definition/Google-Analytics (04/16/2023 at 2h44 PM).
[2] Idem.

- Integration with other products, including Google Ads, Google Data Studio, Salesforce Marketing Cloud, Google AdSense, Google Optimize 360, Google Search Ads 360, Google Display and Video 360, Google Ad Manager and Google Search Console.

3.5.2 Firebase Analytics

Can be described as:[1]

- The first thing we need to do is understand more about Firebase, which is an app building tool for businesses.
- As it's built on Google infrastructure, Firebase's mobile apps are automatically optimized for Google's platform. This allows to create apps that scale seamlessly.
- With Firebase, the app can be analyzed, databases can be created, messages can be sent, and crash reports can be generated.Having access to this information readily enables swift response in the event of any issues.
- The data and insights are all available on one platform, which is relatively flexible, easy to use, and compatible with both Android and iOS.

3.5.3 Facebook Ads Manager

Facebook Ads Manager is a tool that allows you to create and manage ad campaigns and ad sets, as well as track their performance. features of Facebook Ads Manager:[2]

- **A/B testing:** Determines the most effective ad campaigns and strategies,
- **Targeting key demographics:** It is possible to locate and target key audiences with Ads Manager,
- **Ad placement:** Choose the specific section of the Facebook page where you prefer your ads to be displayed. (Right-Hand Column, News Feed),

[1] https://www.webfx.com/martech/tech/firebase-vs-google/ (04/16/2023 at 5h34 PM).
[2] https://whatagraph.com/blog/articles/facebook-ad-analytics/ (04/16/2023 at 5h35 PM).

3.5.4 Power BI

Through a range of software services, applications, and connectors, Power BI transforms disparate data sources into cohesive, visually engaging, and interactive insights. Power BI seamlessly connects to any data source, whether it is an Excel spreadsheet, a hybrid data warehouse, or a combination of cloud-based and on-premises repositories. It allows visualization, sharing, and exploration of critical data.[1]

3.5.5 Tableau

This tool provides KPIs related to customer engagement and customer analytics. Its user interface is intuitive, and it offers two features that make Tableau a standout: real-time reporting and data blending. By connecting to our database and combining data from Excel, Google Analytics, and Salesforce, Tableau develops timely insights.[2]

3.5.6 Simple KPI

An essential tool for tracking key performance indicators is the Simple KPI, which lets you use a variety of data to test innovative marketing strategies.[3]

3.6 Marketing KPIs

Below, we present a list of frequently encountered marketing Key Performance Indicators (KPIs).

3.6.1 Content Marketing KPIs

One of the most important KPIs for content marketing:[4]

A. **Traffic:** The lifeblood of internet material is traffic. No matter how fantastic the blog entries are, if no one is visiting the website, they are useless. It serves as an indicator of the brand's strength in a sense. This traffic can be divided into many groups. The metrics should be check in Google Analytics are:
- Users are all of the distinct visitors to the page.

[1] https://learn.microsoft.com/en-us/power-bi/fundamentals/power-bi-overview (04/16/2023 at 6h24 PM).
[2] https://learn.microsoft.com/en-us/power-bi/fundamentals/power-bi-overview (04/16/2023 at 6h24 PM).
[3] https://learn.microsoft.com/en-us/power-bi/fundamentals/power-bi-overview (04/16/2023 at 6h24 PM).
[4] https://marketinginsidergroup.com/content-marketing/metrics-to-measure-content-performance/ (04/17/2023 at 8h41 PM).

- The total number of times a page on a website has been visited is known as pageviews.
- Unique pageviews: If a single person views the website more than once, we count those views as one pageview when calculating this measure.

B. **Conversions:** From simpler conversions like subscriptions or click-throughs to more complex conversions like offer registrations, companies should track the whole customer experience.
It is subjective to determine what constitutes a conversion, and it can vary according to the content's objective. There may be a goal to generate tangible sales or to build authority for the company. It might be more important to focus on engagement metrics and social shares in such cases.

C. **Engagement:** Monitoring visitor engagement is crucial for assessing the effectiveness of the content, Tracking metrics such as session duration and page views provides insights into visitor interaction, The primary objective is to retain visitors on the web site, by allowing them to explore more of the material, unless the aim is to quickly redirect them to a sales page. To gauge engagement, should be focusing on achieving high page-per-session rates, longer average session durations (considering content length), and low bounce rates for content intended to be read.

D. **Authority:** Even if authority is harder to quantify than most of the other measures, it's still crucial to work on boosting the authority over time. High authority can help to enhance the conversion rate and establish the brand while also enhancing the SEO, which will result in more search traffic.

3.6.2 Mobile Application KPIs

The top KPIs that will aid in developing effective growth plans and directing the process of accelerating mobile apps:[1]

A. **App Downloads:** For mobile app marketing, app downloads are crucial. It's the initial action and a reliable sign of acceptance. It does not, however, ensure success. For the app to succeed, it also has to have good engagement metrics.

[1] https://www.smartlook.com/blog/top-15-most-important-mobile-app-kpis-to-measure-the-performance/ (04/17/2023 at 8h38 PM).

B. **Cost Per Install:** When a consumer installs the app after seeing an advertisement for it, the cost per install tells us how much spending to bring in new users. In the system, tracking purchased installs takes priority over organic ones. CPI enables us to assess the viability and sustainability of the paid ads.

CPI = Total ad spend / total installs

C. **Retention rate:** Retention is a crucial KPI, especially for gaming apps, because it relates to customer loyalty. The percentage of users that continue using the app over time is known as the retention rate. Retention can be monitored after 1 day, 7 days, 21 days, or 30 days.

Retention = number of monthly active users/number of monthly installs

D. **Churn Rate:** The number of users that cease using or uninstall an app during a specific time period is indicated by the churn rate. The retention rate is the reverse of this. A mobile app's health is best shown by a reduced churn rate.

Churn Rate = ((Total users - Returning users) / Total users) * 100

E. **Life Time Value (LTV):** For measuring gross revenue and performance, LTV (lifetime value) is the most crucial KPI. Other metrics like downloads, click-throughs, impressions, and session times also have importance, but are not as relevant as LTV.

F. **Cost Per Acquisition (CPA):** This metric measures the cost associated with a user converting after taking a specific action, such as clicking, making a purchase, signing up, or downloading an app.

G. **Return on Investment (ROI):** ROI measures the amount of revenue generated per any given cost (or investment) on marketing or other services. ROI gives a good ides of the app's success and financial potential. When the acquisition and campaign costs are lower than the app's earnings, the ROI has a positive figure.

ROI is calculated by: (Gain from Investment – Cost of Investment) / Cost of Investment

3.6.3 Social Media KPIs

There are different social media KPIs, the most common are shown in the following:[1]

A. **Subscribers:** Users following the accounts are shown here. We recommend comparing this number of subscribers with those of companies in the industry to identify the performance of social media strategy.

B. **Reach:** In order to gain brand awareness, it is important to reach as many people as possible, but it should also make them engage with the posts.

C. **Impressions:** As a result of the post showing up in someone's feed, the impression is the total number of times they saw the post. That doesn't necessarily mean they looked at it, but it does mean they were exposed to it.

D. **Commitment:** Engaged consumers are the ones who interact with the brand on social media. the posts can get Likes, Shares, Comments, and Clicks.

3.6.4 Email Marketing KPIs

These are the most significant email marketing KPIs for evaluating how well email marketing initiatives are doing:[2]

A. **Open Rate:** By showing the percentage of audience that opens emails sent to them, it is one of the best ways to determine whether an email marketing strategy is working. There are several factors that influence open rates, such as subject lines and sender information.

B. **Click-Through-Rate:** Email marketers should keep their eyes on the click-through rate when measuring the effectiveness of their email marketing campaigns. It shows the percentage of email recipients who clicked a link inside the email.

C. **Unsubscribe Rate:** it can calculate the unsubscribe rate by calculating the percentage of the email subscribers who opted out of receiving emails.

[1] BERNNARD (M), *25 need-to-know key performance indicators* , 1st Edition, FT publishing financial Times, Great Britan, 2014, P.220-228

[2] Ibid, P.233-236

Conclusion

This chapter allowed us to define and understand dashboards and how to develop them. We discussed the role of marketing performance in driving business success, and the best practices for measuring key performance indicators. These methods can help businesses gain valuable insights into their operations and improve their bottom line by measuring and analyzing performance data.

Business dashboards provide a comprehensive view of the performance of an organization that can be leveraged for greater success, and are an integral part of any modern business strategy.

In the upcoming chapter, we will delve into the methodology of our study, focusing on extraction criteria of the preferences of consumers in selecting a food delivery service that will aid later in developing KPIs derived from qualitative and quantitative research.

Chapter III: Methodology and Research Approach

Introduction

After covering the theoretical aspects and understanding them, we now move on to comprehending the practical side and how to work with it to achieve our goal, which is creating a dashboard.

Our purpose is to utilize the focus group method to obtain a list of criteria needed for our work and determine the evaluation method to be used.

In this current chapter, we begin with a description of the food delivery service. Following that, we present information about the host organization and all of this in the first section.
In the second section, we delve into a comprehensive understanding of the research methodology, covering both quantitative and qualitative aspects.
Ultimately, in the final section, we will present the outcomes of our qualitative work, specifically the results obtained from the focus group.

Section 1 Presentation of The Company ”PRESTO”

In this section, we will present the hosting organization, starting with a description of the food delivery service. We will then provide an overview of Presto, the company behind this service, including its identity card. Next, we will discuss the ambitions that Presto aspires to, followed by an outline of the company’s organizational structure. Finally, we will explore the various services offered by Presto and its digital communication.

1.1 Description of Food Delivery Service

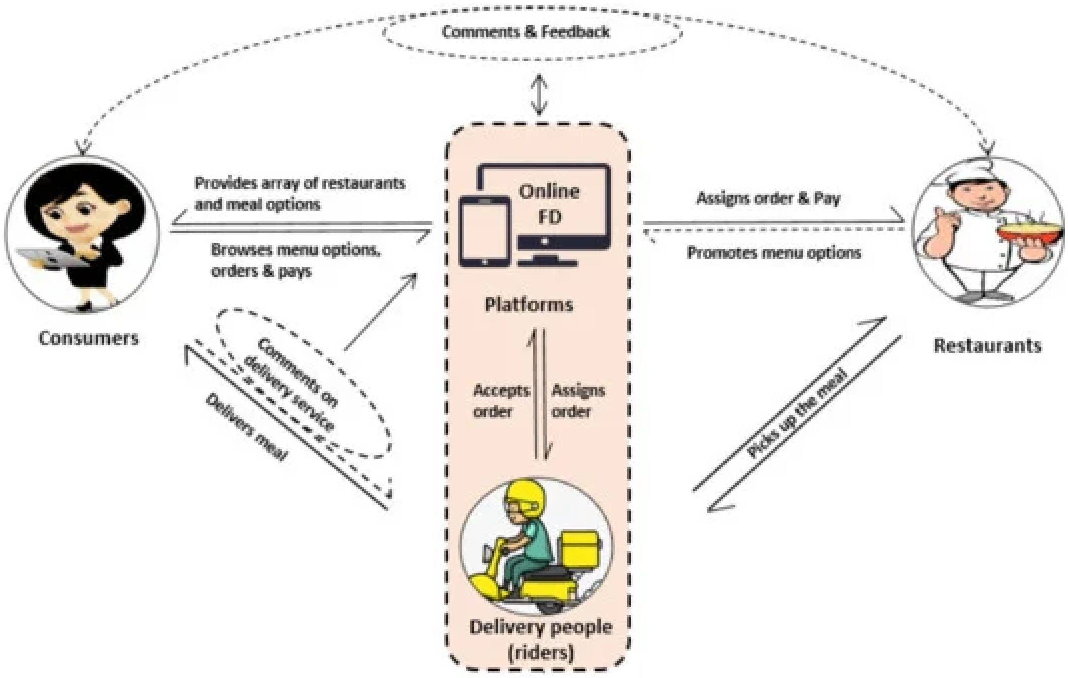
In this following we will delve into the meaning of food delivery, its global expansion, and the economic implications it carries.

1.1.1 Food Delivery (FD) Service Definition

It refers to online food (FD) delivery, a process in which ordered food is prepared and delivered to a consumer. The convenience of online food delivery has been facilitated by the development of integrated online food delivery platforms, including foreign companies such as (Uber Eats, Deliveroo, Swiggy, and Meituan) and Algerian companies such as (Yassir Express, Food-Beeper). It provides consumers with a wide range of food choices. It allows them to place orders online, relay these orders to the food producer, monitor payment, organize food delivery, and provide tracking facilities. Online food delivery platforms also serve many other functions. The Food Delivery App (FDA) is part of the broader online FD concept in that it enables customers to order and pay for food online.[1]

[1]LI (C), MIROSA (M) and BREMER (P), *Review of online food delivery platforms and their impacts on sustainability*, New Zealand, 2020, P.8.

Figure 3.1: The functions associated with online food delivery platforms.



Source: LI (C), MIROSA (M) and BREMER (P), Op.Cit, P.8.

1.1.2 Growth of Online FD Worldwide

Online food delivery is a global trend with many countries around the world having at least one major food delivery platform. Worldwide online FD is becoming increasingly well accepted and embraced by young adults. China leads the way in online food delivery, closely followed by the US, with developing markets such as India and Brazil showing rapid (superior than 9 percent compound annual growth rate (CAGR)) growth.[1]

Food delivery has grown more than threefold since 2017, surpassing 150 billion dollar globally. In the United States, the market has more than doubled during the COVID-19 pandemic, following an average growth of 8 percent over the past decade. In conjunction with changing consumer expectations, ready to eat food delivery has become a major category thanks to appealing, user friendly apps, technology enabled driver networks, and changing consumer expectations. Early in the pandemic, lockdown and physical distance requirements gave the delivery category a huge boost, giving restaurants a lifeline.[2]

As a result of the COVID-19 pandemic, the food delivery service industry has seen signifi-

[1] LI (C), MIROSA (M) and BREMER (P), Op.Cit, P.8.

[2] https://www.mckinsey.com/industries/technology-media-and telecommunications/our-insights/ordering-in-the-rapid-evolution-of-food-delivery. (4/28/2023 at 9h40PM.)

cant growth, with many people ordering food online instead of eating out. In the coming years, the industry is expected to continue to grow, with this trend expected to continue.

1.1.3 Economic Impacts of Online Food Delivery

Several types of employment have been created by the rise of the online FD industry, including chefs and administrative staff in restaurants, delivery people and programmers behind online platforms/apps. Moreover, the online FD industry has been a huge boon for support industries, such as electric bicycle manufacturers, sellers, and manufacturers of food packaging. Many thousands of people work as delivery people on large online FD platforms, such as Meituan and Eleme in China, employing around 1.17 million people.[1]

1.1.4 Food Delivery Service in Algeria

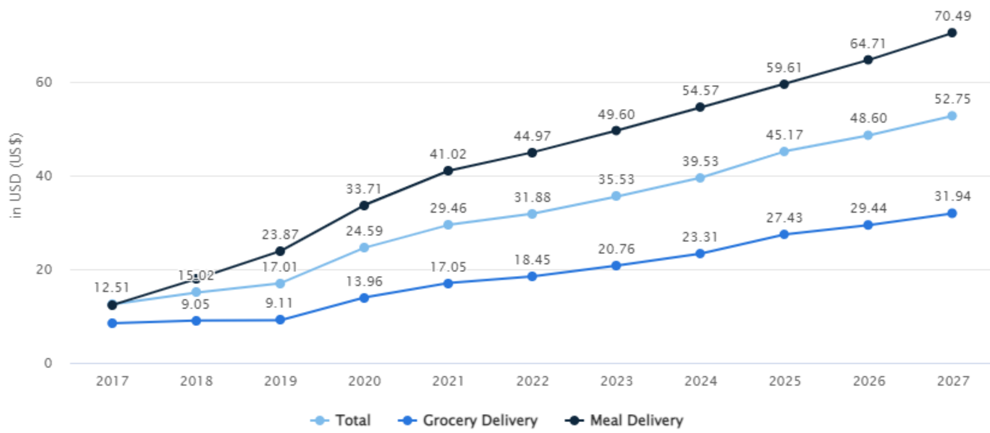
Comparatively to other regional markets like Egypt and Morocco, Algeria had relatively low adoption of e-commerce, and, therefore, food delivery services. As a result of the Covid-19 pandemic in Algeria and its subsequent lockdown measures to contain its spread, both the food delivery and grocery delivery sectors have experienced an increase in demand in Algeria over 2020. Food delivery and grocery delivery options have become more mainstream in Algeria over the years, including consumers avoiding public places, such as grocery stores and restaurants, due to fear of contracting Covid-19. [2]

There are many mobile applications that provide food a delivery service in algeria, which are: JUMIA Food, YASSIR Express, Qooxy, PRESTO and FoodBeeper.

[1]LI (C), MIROSA (M) and BREMER (P), Op.Cit, P.9.

[2]https://www.fitchsolutions.com/food-drink/algerias-e-grocery-and-food-delivery-services-witness-rapid-growth-16-12-2020. (4/29/2023 9h27 PM).

Graph 1: Average revenue per users by segment of food delivery service in Algeria.



Source: https://www.statista.com/outlook/dmo/online-food-delivery/algeriarevenue (4/29/2023 10h13 PM.)

The graph displays the projected revenue of the online food delivery market in Algeria from 2018 to 2023. It shows that revenue had increased from 10 million U.S. dollars in 2018 to 35 million U.S. dollars in 2023. This represents a significant growth of over 3 times within the 5 years period.

Moreover, the graph also provides insights into the projected number of users in the online food delivery market. Revenue is expected to show an annual growth rate (CAGR 2023-2027) of 18,19 percent, resulting in a projected market volume of 419.10m US dollar by 2027, indicating strong growth potential for businesses in the industry.

Based on the graph, it appears that the online food delivery market in Algeria is growing rapidly, presenting businesses with a lucrative investment opportunity.

1.2 Presentation of The Host Organisation Presto Services

Presto Services is an Algerian startup based in Tebessa, it provides all shopping and delivery services through the Presto application. And it specializes in food delivery services more than other services, because it was the first service provided and excelled in it. It is a 100 percent Algerian application, developed by Algerian youth. It Provides many restaurants, grocery markets and list of stores. Recently, a new service has been added, which is transportation of individuals.

1.2.1 Identity Card of Presto

- Legal Status: Startup

- Year of creation: 2021

Figure 3.2: Presto logo

Source:Source: The company's official Facebook page

- Social Headquarters: Tebessa 1200- Algeria

- Area of activity:Retail commerce of all kinds of products with home delivery

- Workforce: 7 employees

- General Manager: Kamel Eddine Khemaissia

- Web site/Application: bit.ly/3AmSgOH

- Turnover: 64,280,000 DA

- Number of partners: 81 partners

- E-mail: prestomarketdz@gmail.com

- Phone number: 0556 87 21 54

1.2.2 Presto's Ambitions

The objective is:

- to connect customers across the country with brands by offering a diverse range of services at competitive prices.
- Launch of new services, from Presto food to Presto parcels and presto VTC.
- Build a loyal customer base.
- Establish a positive brand reputation.
- Develop strategic partnerships and collaborations.
- Stay ahead of the competition by adopting new technologies and innovative solutions.

- Increase the sales (increase the orders).

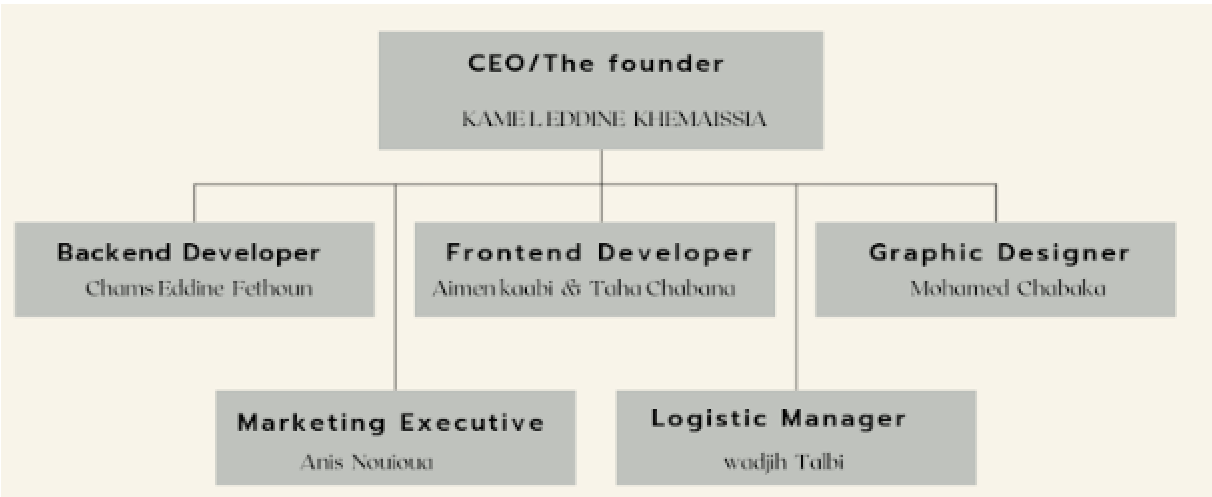
1.2.3 Key Success Factors (KSFs) of Presto

This KSFs are relevant to the objectives of the company

- Service Quality and Variety
- Competitive Pricing
- Customer Satisfaction and Loyalty
- Brand Reputation and Trust
- Market Expansion and Reach
- Strategic Partnerships and Collaborations
- Technological Innovation

1.2.4 Presto's organization chart

Figure 3.3: Presto Presto's organizational chart



Source: internal company document.

1.2.5 Services Offered by Presto

By combining the capabilities of its carefully selected partners with those of its own, Presto provides an e-commerce platform with grocery markets, restaurants, stores, and a few drivers it manages. It collects its services in one application, as shown in the Figure (3.5) below:

A. **Presto Food:** Home delivery services are companies that deliver food from restaurants or other food establishments to the homes or offices of customers. And it is the first service provided by Presto and is very active in it.

B. **Presto Parcels:** Parcel delivery services are logistics services that specialize in transporting parcels from markets to customers. It is common for businesses and individuals to use these services to send goods to customers, suppliers, or other recipients. The parcels can range in size and weight, from small envelopes to large boxes. It is a new service launched by the company

C. **Presto VTC:** Customers have the option of hiring a private vehicle with a driver, and the vehicles used can vary from sedans to SUVs, depending on their needs. In addition to their convenience, affordability, and ease of use, VTC services are becoming increasingly popular. It is a new service launched by the company

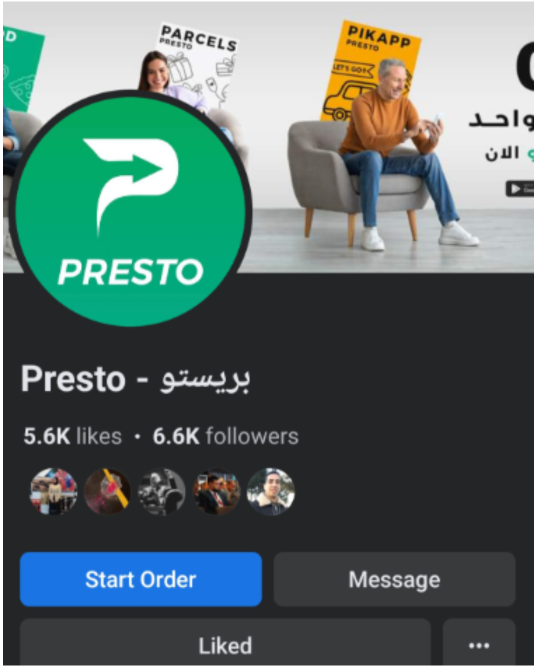
1.2.6 Digital Communication at Presto

By using electronic platforms to communicate within a company, digital communication allows companies to communicate with employees, customers, and other stakeholders more efficiently and effectively. By providing more responsive and personalized communication channels, Presto can improve customer service and develop visibility.

A. **Facebook:** In May 01, 2023

- Number of subscribers: 6.6k
- Number of posts: 15 to 20 posts per month
- The Facebook Page content includes various types of media such as images, videos, storytelling, contests, promotions, interactive games, and customer feedback sharing.

Figure 3.4: Presto Facebook account

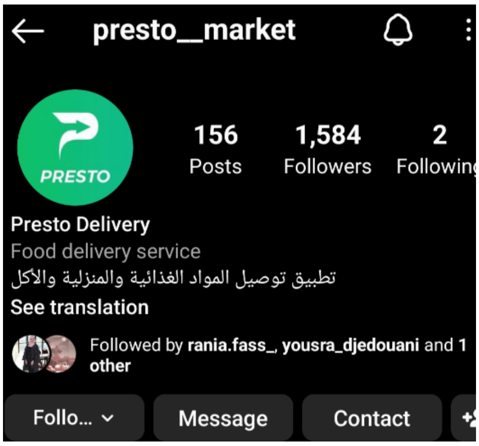


Source: The official brand page

B. **Instagram:** In May 01, 2023

- Number of subscribers: 1584
- Number of posts: 15 to 20 posts per month
- The Instagram page features a variety of content, including images, videos, storytelling, contests, promotions, interactive games, and user-generated content. The content is similar to what is posted on Facebook.

Figure 3.5: Presto Instagram account



Source: The official brand page

C. **Application:** Ordering food from restaurants and having it delivered to their desired location is possible through it. With this app, customers can browse restaurants, view menus, and order food through a user friendly interface. Besides increasing visibility and sales for restaurant partners, the app provides tools to optimize delivery operations and manage orders. As well as providing new services, it is also able to transport people and deliver packages.

D. **The process to make an order from Presto:**

   a. **Browse:** Presto offers a wide selection of restaurants to choose from. When client open the app, he can browse through various options for inspiration or search for a specific restaurant or cuisine. Once the consumer find something he is interested in, simply he can tap to add it to his order.

   b. **Order:** When the client is ready to proceed to checkout, it will be presented with his address, an estimated delivery time, and the total price of his order, including tax and delivery fees. If everything appears correct, simply the consumer should tap on ”Place order” to finalize the purchase.

   c. **Track:** Then, when the order’s almost ready, a nearby delivery person—in a car, on a bike, will go to the restaurant to pick it up. Next, they’ll drive or ride to the client and they will call him.

After learning about the food delivery service and the hosting organization that provides this service, In the next section, we will focus on developing the research methodology. This includes outlining the specific methods and techniques we will employ to gather data and analyze it effectively. By establishing a robust methodology, we can ensure the reliability and validity of our study’s findings.

Section 2 Research Methodology

In this section, we will demonstrate and discuss the techniques we used to complete our case study. The main objective of our case study is to explore the selection criteria required. Before we proceed further with our practical case, it is important to provide an overview of market research methodology. This will be followed by establishing the study's objectives and presenting the research tools employed.

2.1 Market Research Steps

Here we will learn the market research in detail.

2.1.1 Definition of Market Research

In the context of marketing, market research refers to the preparation, collection, analysis, and utilization of data and information relevant to a product, service, or situation.[1]

The goal of market research is to gain insight into individuals or organizations by systematically gathering and interpreting information using statistical and analytical techniques and methods from the social sciences.[2]

In market research, the process begins with identifying and formulating the problem, then determining the research design, collecting the data, analyzing the data, interpreting, discussing, and presenting the results.

A. **Defining the research objectives:** It is necessary to first identify the marketing symptoms or marketing opportunities in order to identify the "right" research problem. Symptoms of marketing include declining market shares, increasing complaints, and new products consumers don't adopt. Sometimes, there are no real existing problems, but rather marketing opportunities, such as potential benefits offered by new products and channels, or emerging markets that are worth exploring.[3]

B. **Designing the research plan:** The study of research plan consists of determining:

[1] DEMEURE (C) ≪ *marketing* ≫, édition Dalloz-Sirey, cinquième édition, Paris, 2005, P.35.

[2] SARSTEDT (M), and MOOI (E) (A), *Concise Guide to Market Research*, Springer Texts in Business and Economics, 2014 P.3.

[3] DEMEURE (C), Op.Cit, P.35.

- **Information sources:**[1] We have:

  - Primary information: Primary sources are direct and original sources of information about events, people, objects, and works of art. Primary sources have not been interpreted, distilled, or evaluated by any third parties.

  - Secondary information: As secondary information sources are produced at some point after a primary information source appears, they analyze, interpret, or discuss primary information sources.

- **Methodological approaches:** methodological approaches include:

  - Observational studies: They allow for the collection of information without intervening, which is useful when examining the behavior of customers.

  - Experimental research: An experiment where variables are manipulated to explore cause-and-effect relationships.

  - Qualitative research: Gaining insights into people's subjective interpretations and experiences by analyzing non-numerical data, such as:

  Interviews: Involves searching for the unconscious and conscious motivations of an individual over the course of a long duration face to face meeting.

  Focus group: An approach involves gathering a group of around ten people who are part of the target audience, and having a moderator facilitate the session. We will discuss it later in detail because it is the qualitative part of our study.

- **Sampling plan:**[2]The target population must first be determined before the sample can be created. Typically, a target population consists of individuals who have the desired characteristics. To ensure that results can be generalized, the sample must be representative of the target population.

  To construct a sample, there are two methods:

  - The three types of probability sampling are simple random sampling, stratified random sampling, and random sampling.

  - Among the non-probability sampling methods, convenience sampling, purposeful sampling, and quota sampling are included.

- **Research instruments:**[3] There are two types of instruments :

  - Qualitative tools: We are interested in exploring perceptions and bringing out

[1] https://www.how-to-study.com/study-skills-articles/sources-of-information.asp (5/6/2023 2h48 PM).
[2] HACHEMI KEMOUCHE (N), Op.Cit, P.144
[3] Idem.

aspects that cannot be expressed spontaneously and may have unconscious connections, eg (Word associations, Projective methods, Visualization, Personification, Progressive questioning and Recording devices)

- Questionnaire: In order to collect information about attitudes, opinions, behaviors, or demographics of participants, structured questions are administered.

Due to the need for a questionnaire in our quantitative applied study, which we will gradually progress to later, it is important for us to understand the questionnaire and familiarize ourselves with the method of its construction.

- Definition of Questionnaire: One of the most popular tools for collecting data in social science research is a questionnaire. The objective of a questionnaire in research is to obtain relevant data in a way that is both valid and reliable. In research methodology, validity and reliability are considered to be significant components of survey/questionnaire accuracy and consistency.[1]

- Definition of online survey: According to ROUSE *"An online survey is a questionnaire that the target audience can complete over the Internet. Online surveys are usually created as Web forms with a database to store the answers and statistical software to provide analytics. People are often encouraged to complete online surveys by an incentive such as being entered to win a prize."*[2]

- Elaboration of Questionnaire: Developing a good questionnaire requires the following:

- Draft questions for each sought-after information;
- Choose appropriate words;
- Formulate questions that are simple, clear, and easy to understand;
- Review and correct the questionnaire.

[1]TAHERDOOST (H), Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research, 2016, P.28-36.

[2]ROUSE (M), 2013 "Online Survey." Techopedia. Retrieved from: https://www.techopedia.com/definition/27866/online-survey. (5/6/2023 10h28 PM).

C. **Choice of information collection method:** Multiple options are possible:
   – Personal interviews,
   – Telephone interviews,
   – Web surveys,
   – Mail surveys.

D. **Collecting the data,**

E. **The analysis and presentation of the results:** As a result, this step allows the conclusion and recommendations obtained from the research to be expressed in a report

2.2 Presentation of the empirical study methodology:

In this part we present the objective of our study and its methodology.

2.2.1 Objective of our study

In order to determine the extent to which consumer purchasing preferences, which dictate their choices between services and products, influence company efficiency and performance, our study aims to utilize both quantitative and qualitative methods. By employing multi-attribute approach as our chosen methodology, we are able to provide the company with an effective and clear means of evaluating its performance, tracking it, understanding consumer preferences towards food delivery companies (as in our study), and determining their choices.

It is our goal to understand the preferences of consumers for the food delivery company Presto and their decision making. Towards this end, we plan to identify the most important criteria for the company's customers and convert those criteria into indicators that will allow us to assess and track its performance, by creating a dashboard for ”Presto”.

2.2.2 methodology of the study

Before proceeding, it is necessary to clarify what the multi-attribute modeling approach we used in our study entails.

- Defintion of Multi-Attriute Modeling: We define Multi-attribute modeling as the evaluation, in the minds of consumers, of attributes related to the market, brand, or product. It is the way marketing researchers believe consumers form a preference.[1]
This process consists of four steps:[2]

A. **Definition of determining attributes:**Identifying the key attributes that significantly influence consumer preferences.

B. **Evaluation of determining attributes (weights):** Assessing the importance or weight assigned to each determining attribute in the decision-making process.It could involve collecting consumer feedback through surveys or analyzing focus groups on the attributes that are most important to them.

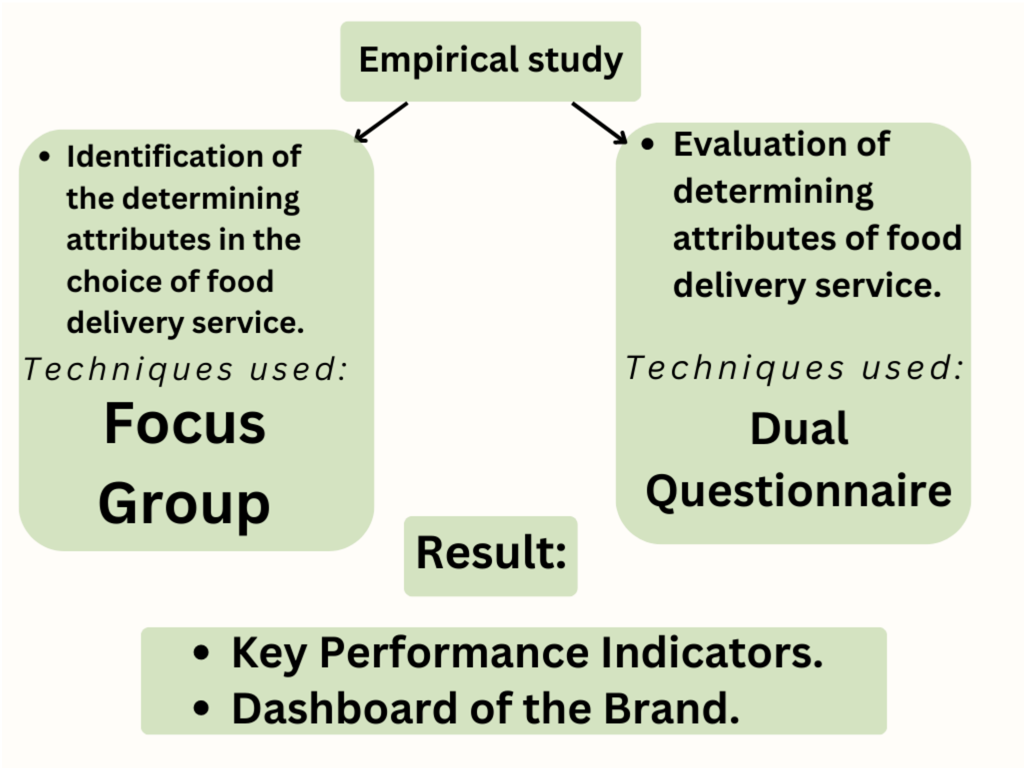
C. **Evaluation of brand positions on these attributes:**Analyzing how different brands are perceived and ranked in terms of their performance on these determining attributes.

D. **Assessment of brand preferences:**Understanding and assessing consumer brand preferences based on their evaluations of the determining attributes and brand positions.

In our study, we are not going to use all these steps, only we focus on the first one and the second:
- Our goal in Section 3 of this chapter is to **identify the determinants Attributes** of a food delivery service's purchase decision. identify key attributes that significantly influence consumers when choosing a food delivery service provider through an examination of a variety of factors and elements.
- **Evaluation of determining attributes**, once we have identified the key attributes, we should determine their relative importance or weighting, and convert them into KPIs to determine the dashboard of the company. This could involve conducting surveys to gather feedback from consumers on which attributes they consider most important when making a purchase decision of food delivery service. we will figure it in the next chapter.

[1]LEWI (G) and LACOEUILHE (J), ≪ *Branding management, la marque de l'idée à l'action* ≫, 3rd edition, Pearson éducation, Paris, 2012, P238.
[2]Idem

Figure 3.6: Organization of the empirical study



Source: Made by Us.

- Our initial research phase will focus on identifying the attributes that consumers consider crucial when selecting a food delivery service. This will involve conducting a comprehensive analysis to determine the key criteria consumers consider crucial. In order to build an extensive list of potentially significant attributes influencing the decision-making process when it comes to selecting a food delivery service, we will employ a focus group methodology to gather valuable insights and perspectives from participants.

- We will build upon the criteria identified in the initial phase of our research in this phase. A dual questionnaires is developed as second part of our study to evaluate the specific attributes. This questionnaire serves as a valuable foundation for further investigation. When it comes to selecting a food delivery service, the questionnaire will carefully capture consumers' preferences and priorities. We intend to gain a comprehensive understanding of consumer decision-making patterns by employing this dual questionnaires approach. In this stages of our study, this detailed analysis will allow us to refine our selection of attributes and prioritize the ones that will be relevant.
The case study employed both quantitative and qualitative approaches in order to achieve this.

A. Qualitative approach :

We will use the qualitative method in our case to conduct a focus group to gather a wide range of criteria for choosing a food delivery service.

a. Definition of Focus Group: Generally, focus groups are semi-structured or highly structured interviews conducted among a number of respondents at the same time and led by a moderator. For interaction among the participants and to ensure that all the participants have a voice, the group typically consists of 8 to 12 people. Focus group interviews vary in duration, but are usually between 30 and 90 minutes for employees and between 60 and 120 minutes for consumers. For focus groups with company employees, moderators usually travel to the company and conduct their focus groups there; for focus groups with consumers, they travel to a market research agency or hotel and conduct their focus groups there.[1]

b. Distinct Advantages of Focus Group: In comparison to other types of interviews, they are relatively inexpensive, they work well with socially important issues or those that require spontaneity, and they help develop new ideas. However, focus groups lack the ability to probe as well as the risk of going off topic, which makes them more difficult to manage. Additionally, a few focus group members may dominate the discussion, and ”voting” behavior may occur, hindering the development of new ideas and preventing real discussions.[2]

c. Purpose of Focus Group: The purpose of this group interview is to identify a comprehensive list of potential determining criteria for selecting a food delivery service, to be used later to develop a dual questionnaires to highlight determining attributes.

d. The focus group methodology: [3]

It consists of several stages:

A) Sampling,

B) Development of the qualitative interview guide,

C) Logistical organization of the focus group,

[1]SARSTEDT (M), and MOOI (E) (A), Op.Cit, P.79.
[2]SARSTEDT (M), and MOOI (E) (A), Op.Cit, P.81
[3]HACHEMI KEMOUCHE (N), Op.Cit, P.150.

D) Data analysis and presentation of results.

We will develop this methodology later in the next section.

B. Quantitative approach: This method involves designing a dual questionnaires with specific measurement scales to assess the participants' attitudes and preferences, which allows us to quantify the most significant attitudes. It involves developing a dual questionnaires with specific measurement scales. Through this method, we can gather numerical data that can be analyzed statistically, providing us with quantitative insights into what the participants believe, perceive, and prefer.

a. Definition of Dual Questionnaire: One of the most frequently used methods is the dual questionnaire. As a result of this method, we are able to identify the determining attributes and address both underlying dimensions effectively by considering both the importance of an attribute and the perceived difference between brands.(Pras and Tarondeau, 1981; Vernette, 1987.)[1]

b. Principles of the method:

- This method requires establishing a comprehensive list of potentially determining attributes beforehand, which can be obtained through a group interview or another method discussed in the previous section regarding attribute identification.
- The selected attributes are used to construct a dual questionnaire: the importance (score X) is represented on a scale ranging from 1 "not important at all" to 5 "extremely important," and the perceived difference between brands (score Y) is represented on a second scale ranging from 1 "no difference" to 5 "extreme difference."
- The measurement of importance and perceived difference between brands requires an interval scale, and it is preferable to use a 5-point semantic differential scale. The adjectives used should be identical for both questions. For example, if "No importance" is chosen for the first question, "No difference" should be used for the second question.[2]
- Sample size: In quantitative surveys of large populations, it is neither necessary nor possible to survey the entire population of interest. Calculating a sample size that represents

[1] DARPY (D) PIERRE (V), ≪ *comportement du consommateur, concepts et outils* ≫, Edition Dunod, PARIS 2003, P.64.

[2] HACHEMI KEMOUCHE (N), Op.Cit, P.158.

the entire target population is sufficient.[1]

c. Purpose of the method A major advantage of this method is that it considers both the importance of an attribute as well as its propensity to differentiate between brands, preventing the limitations of self-assessment methods of importance. The goal is to increase the likelihood of determining subjective attributes and to reduce the rationalization bias observed with importance scores. However, respondents often struggle to understand the concept of ”perceived difference between brands,” requiring the introduction of an example to facilitate comprehension.

d. Criteria selection mechanism The mechanisms for selecting choice criteria for a brand are organized around the following steps:[2]

- Step 1: Calculation of individual determinance scores (x ij y ij): Multiply the importance score of attribute i for respondent j (x ij) by the perceived difference score of attribute i for the same respondent (y ij).
- Step 2: Calculation of average determinance scores for attribute i (Xi Yi): Take the average of the determinance scores (x ij y ij) for each attribute i in the extensive list.
- Step 3: Calculation of the overall average determinance: It is equal to the average of the average determinance scores calculated for the extensive list of attributes.
- Step 4: Creation of the choice criteria list: Select all attributes with a score higher than the overall average determinance.

After evaluating our attributes using a dual questionnaire and identifying the most significant criteria, we will proceed to convert these criteria into key performance indicators (KPIs) that align with the proposed objectives of the company in our case study. This step will enable us to construct a dashboard for our brand.
In the next section we will see the results of the focus group and through it we will get to know these criteria

[1]HALLIL AMALOU (W), Le rôle de la connectivité du consommateur dans la qualité relationnelle, thèse de doctorat, Koléa, 2019.

[2]VERNETTE (E), FILSER (M), GIANNELLONI (J), *”Etudes marketing appliqu ees”*, Dunod, Paris, 2008, P.93

Section 3 Focus Group Results

In order to evaluate the determinant attributes, it is essential to know the key criteria on which consumers evaluate and differentiate offerings. Therefore, this section is dedicated to identifying the focus group methodology and presenting its results for define these attributes.

3.1 Identification of selection criteria using the focus group technique

Based on the methodology of the focus group conducted, we will now proceed to present and analyze the results obtained. Let's begin by providing an overview of the methodology employed for the focus group session.

3.1.1 Methodology of the Focus Group

There are steps of the focus group methodology as we mentioned in the previous section. We will now briefly explain each step, referring to our specific case, to clarify their meaning.

A. **Sampling:**

It is ideal for the number of participants to be between 8 and 12, all of whom are volunteers. It is necessary to have at least six participants in order to maintain group dynamics, but to have a maximum of 12 participants allows everyone to express themselves and to maintain effective group moderation.

As part of the selection process, participants are selected based on the study's objectives, making up a theoretical sample. In order to enrich opinions and elicit different perspectives on the subject, the selection aims to reflect reality and explore the greatest variety of testimonies available. It depends on the study's objective to determine the criteria for selection and the degree of homogeneity among participants. Common criteria include gender, age, socioeconomic status, and knowledge of the product category.[1]

In our case, In order to better manage our focus group, we have limited the number of participants to 9 and we did not encounter any difficulties in finding participants who were interested in the product under study, Food Delivery Service.

Thus, our discussion group was composed as follows:

[1] VERNETTE (E), FILSER (M), GIANNELLONI (J), Op.Cit, P.48.

Number: Nine (9) participants

Gender: Three men (33.33 percent) and six women (66.66 percent), There is a difference between the genders, as the number of women is twice that of men.

Age range: In order to capture differences in usage and preferences across different age groups, we structured the group as follows:
- Participants aged [16 to 25]: Four participants, all of them are women.
- Participants aged [25 to 45]: Five participants, three men and two women.

Occupation: The group included:
- Three university students aged 24,
- An employee in a private company aged 25
- An English teacher aged 28,
- A freelancer in graphic design aged 30,
- Three employees in a public organization aged 37.

B. **Participant Recruitment:** For our study, we recruited participants from our friends and acquaintances network. We contacted them personally, either by phone or in person, a week before the scheduled meeting. In addition to providing them with an overview of the purpose of the meeting, the group interview method, the overall theme, the meeting location, and the time, we also gave them an overview of the location, date, and time.

C. **Development of the qualitative interview guide:** During a focus group, a scenario guide directs the discussion and enables the organization of different debate questions while respecting the time allocated. This guide can be adapted as the study progresses if necessary. In the interview guide, the searcher will find: a listing of all the necessary materials, a presentation of the agenda, a presentation of the facilitator and a reminder of key points, an introduction (icebreaker), a list of themes, and a debriefing.[1]

   a. List of materials needed to conduct the focus group:
      -Prepare: Name tags for each participant to facilitate dialogue and note-taking,
      -Sheets of paper and pens.

[1] HACHEMI KEMOUCHE (N), Op.Cit, P.152

b. Presentation of the agenda:[1]

As in any meeting, the focus group should begin with an introduction that includes a briefing on the principles of group discussion, namely:

- There is no right or wrong answer; it is an informal discussion.
- One person speaks at a time, and everything said is valuable. If an idea arises suddenly, note it down and express it as soon as possible.
- Be as spontaneous as possible and speak freely.

Participants should also be informed of the possible recording of the discussion and reassured about the anonymity of their responses in the final report.

c. Introduction of the animator and participants:

In the introduction session (icebreaker), each person introduces themselves (starting with the animator) by describing their background, occupation, company, family, hobbies, but most importantly, their experiences.

d. The list of topics to be covered: In our case the list of topics is as follows

1. Delivery service usage,
2. Factors affecting delivery service,
3. Delivery Service Features,
4. Satisfaction and Improving Delivery Service,
5. Presto mobile application design,
6. Selection criteria used in the evaluation.

D. **Logistic organization of the discussion group:**

The group meeting was held at the headquarters of IProBooking B2B agency on Tuesday, March 7th , 2023, at 1:00 PM. It lasted nearly an hour and a half.

All 9 participants attended, and during the meeting, we discussed all the topics outlined in our interview guide.

3.1.2 the objective of focus group

The goal of this group interview is to compile an extensive list of determining criteria for choosing a food delivery service. This list will be utilized to create dual questionnaires that emphasize the essential attributes for selection.

[1]HACHEMI KEMOUCHE (N), Op.Cit, P.152

3.2 Results of Focus Group

In the subsequent statement, we present the findings and results obtained from our qualitative research.

3.2.1 Delivery service usage:

consumers agreed that they have had a positive experience with food delivery apps, most of them use the service regularly around two to three times per week, and there are those who don’t dispense with this service at all, while others rarely use it due to concerns about food quality, delivery time or cost. They believe that food delivery services are a useful option for busy individuals who want to enjoy restaurant meals at home or in the office.

3.2.2 Factors affecting delivery service:

The decision of consumers to use food delivery services is influenced by various factors. Chief among them is convenience, as many individuals lead busy lives and lack the time to cook or dine out. Price is another critical factor. People look for delivery services and restaurants that offer a variety of high-quality food options that are fresh and delicious. Other factors that can influence their decision include delivery time, discounts, promotions, and the dependability of the delivery service.

3.2.3 Delivery Service Features:

- One of the crucial factors that influences consumers’ choice to use food delivery services is the delivery time. They expect their food to be delivered promptly, and long delays can lead them to switch to a different restaurant or delivery service. Conversely, fast delivery can enhance their satisfaction and encourage repeat business. Nonetheless, customers recognize that delivery times are influenced by external factors such as traffic, weather, and order volume, and hence try to be patient and understanding when there are delays. Overall, delivery time plays a significant role in shaping customers’ experience with food delivery services.

- Several members of the group have encountered problems with food delivery services previously. A frequently reported issue is that the food can arrive cold or stale, leading to dissatisfaction with the taste and quality of the food. Another reported problem is delivery delays or missing items in the orders, which causes inconvenience for some members. Some members have also faced communication difficulties with customer service representatives when trying to resolve their issues. Additionally, some members have reported receiving food that was not fresh enough or encountering issues with incorrect orders or missing items, affecting their food quality experience.

- People in the group are concerned about the fees charged for food delivery. While convenience and food quality are important, cost is also a significant factor. Some delivery services charge a flat fee, while others charge a percentage of the total cost. Some restaurants may also have higher prices for delivery orders. So, people in the group may choose delivery services or restaurants based on their fees or any discounts or promotions offered.

3.2.4 Satisfaction and Improving Delivery Service

- People like the variety of food delivery options available and find it convenient to order from their favorite restaurants. However, some feel that the selection can be limited in certain locations or at certain times. Some also want healthier or vegetarian/vegan options.

- The group had some suggestions for improving food delivery services. They suggested that communication between the customer and the delivery service could be better, making real-time updates on the order status or delivery time available. They also suggested that delivery drivers should be trained better to reduce delivery times and ensure the food arrives in good condition. The group also recommended that delivery services work with restaurants to improve food quality and packaging. Finally, some suggested offering refunds or compensation for delivery failures to improve customer satisfaction.

- The group had different opinions on what would make them stop using food delivery services. Some said they would stop if delivery times, food quality, or customer service were consistently poor. Others would stop if fees or prices were too high, or if there were limited menu options. Technical issues with ordering or delivery tracking were also a concern. To improve the service, the group suggested more accurate delivery time estimates, better food packaging, more menu options, and loyalty programs or discounts for repeat customers.

- The group members are likely to suggest food delivery services to their friends if they have had good experiences with them. They appreciate the convenience and variety of options that these services offer. Good customer service, such as quick resolution of issues, also increases the likelihood of recommendations. However, negative experiences with delivery time, food quality, or customer service can lower the chance of recommendations. Overall, the quality of the service and experiences with it determine the likelihood of recommendations.

3.2.5 Presto mobile application design:

Members of the group generally find the delivery application interface of ”PRESTO” to be user-friendly and easy to navigate. Many members appreciate the clear and simple layout of the application, which makes it easy to find and order from their favorite restaurants. Additionally, some members noted that the application could benefit from additional features, such as the ability to save favorite orders or receive personalized recommendations based on past orders. Overall, members of the group have had positive experiences with the ”PRESTO” application and find it easy to use, but there is always room for improvement to enhance the user experience.

3.2.6 Selection criteria used in the evaluation:

1. Fee of delivery service.
2. Delivery speed.
3. Quality of food.
4. Availability of delivery service.
5. Discounts and promotions.
6. Restaurant ratings.
7. Delivery accuracy.
8. Customer reviews.
9. Packaging quality of delivered food.
10. Menu Variety.
11. Order tracking.
12. loyalty programs.
13. Safety of the food.
14. Responsive to customer feedback and complaints.
15. Payment options.
16. Customizable orders.
17. Pickup options.
18. Simplicity of the application.
19. Healthy food options.

Our field study depends on the development of this list as it lay the groundwork for the implementation of the dual questionnaire method. By using this method in the upcoming chapter, we will gain insight into the specific criteria that users consider when choosing a food delivery service. It will be possible to make informed decisions and recommendations based on their preferences and priorities in order to enhance their user experience and meet their needs effectively.

Conclusion

In this chapter, our main focus has been on the methodology and research approach used in the study. We have established the groundwork for the analysis and findings that will follow, ensuring a thorough understanding of the methodology, research approach, and the valuable insights gathered from the focus group. This input has enabled us to develop a list of criteria that forms the foundation of our study.

These elements play a crucial role in the overall research process and provide a basis for further exploration in the upcoming chapter. We will analyze the available options, ultimately leading us to our primary objective, which is the development of the company's dashboard.

Chapter IV: Dashboard of The brand

Introduction

After obtaining the list of criteria we need for our upcoming work and by using the questionnaire, we will now analyze the survey to extract the determinant attributes for the consumer. This will lead us to our main goal, which is to create a proposed dashboard.

This chapter is divided into two sections. In the first section, we will delve into the analysis of the obtained questionnaire data. Then, in the second section, we will create a proposed dashboard for Presto company.

Section 1 The Processing and Analysis of Dual Questionnaire data

In this section, we will systematically analyze the questionnaire data, examining each response individually. We will be able to identify and extract the determinant criteria needed for subsequent analysis through this process

1.1 Survey Methodology

In our quantitative study and survey, we have previously mentioned the methodology used. In this following, we will elaborate on the population and sampling size we selected.

1.1.1 The Purpose of the Survey:

After the focus group, we proceeded with the dual questionnaire to evaluate and determine the weights of the identified attributes. In this dual questionnaire, participants are asked to rank and compare the attributes based on their perceived importance. As a result of this comparative assessment, attribute weights can be evaluated in a systematic and quantifiable manner.

1.1.2 Sample size and Population studied:

In the context of our study, the sample was formed using the convenience sampling method, we opted for the self-administration method. We distributed the dula questionnaire online by sharing it on the Facebook page of the startup ”Presto”. We targeted the users of this platform, but it should be noted that the startup’s database only includes cell phones numbers without being filtered.

A usable sample of 200 individuals was formed within the period from 04/05/2023 to 04/12/2023.

1.1.3 Questionnaire design techniques:

The structure of our questionnaire is presented as follows:

- **Topics covered:** Our questionnaire consists of six questions divided as follows:
  - Safety data sheet: Containe three questions about: (occupational social category, gender and age).
  - A question about perceived importance of attributes.

- A question about perceived difference of food delivery Brands.
- Filter question about making an order from presto.

- **Types of questions:**

  - Closed-ended questions: Filter question (Question num 1)
  - Closed-ended multiple choice questions: Safety data sheet Questions (Question num 4, 5 and 6)
  - The five-point Rating Scale questions: rating the importance (Question num 2), rating the perceived difference (Question num 3).

1.2 Data Analysis

Her we will analyse the questions of safety data sheet, questions of perceived importance and perceived difference of attributes. we treat our data by using ”Excel” and ”IBM SPSS Statistics 22”

1.2.1 Descriptive analysis

We present the analysis of the reliability of the questionnaire and analysis of safety data sheet

A. **Analysis of the reliability of the questionnaire**

Table 4.1: Reliability Statistics.

Cronbach's Alpha	N of Items
.972	38

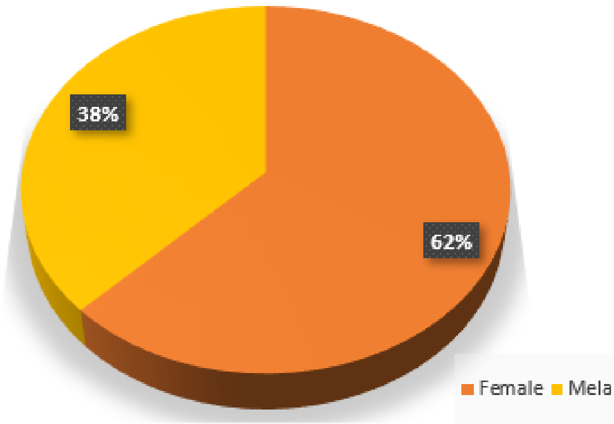
Source: Our survey data, ”Results obtained with SPSS software”.

The reliability test allows verifying the consistency of the questionnaire. For our questionnaire, the reliability is widely acceptable since the Cronbach’s Alpha coefficient is ”0.972”.

In other words, it surpasses the theoretical standard aligned with 0.6. This implies that our questionnaire is reliable for conducting a proper study.

B. **Q4:** Select your gender

Graph 1: Gender of the Sample.

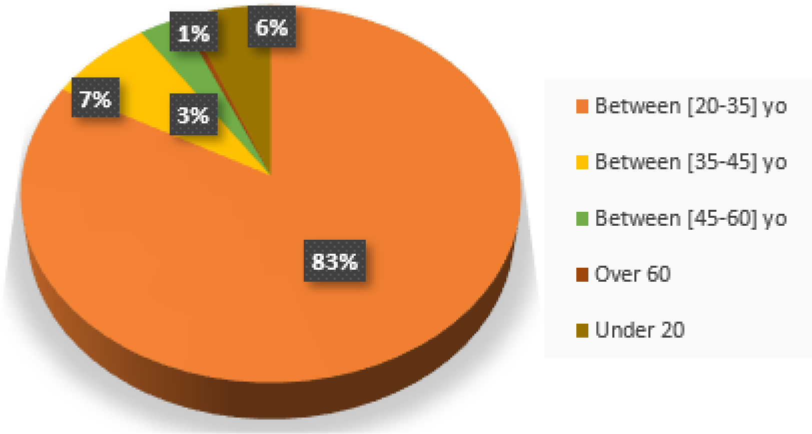


Source: Made by us on the basis of the results of the questionnaire "using Microsoft Excel"

The sample which we administered our dual questionnaire is composed from (62 percent) female and (38 percent) male, there are a gender preference in the use of Presto food delivery app,This could be attributed to several factors such as with more females finding them convenient and useful. It could mean that the app's marketing and advertising strategies appeal more to women than men, also women being more likely to prioritize convenience and time-saving options due to their busy schedules or household responsibilities. Additionally, women may be more health-conscious and prefer to order healthier meals through delivery services.

C. **Q6:** Select your age

Graph 2: Age of the sample.

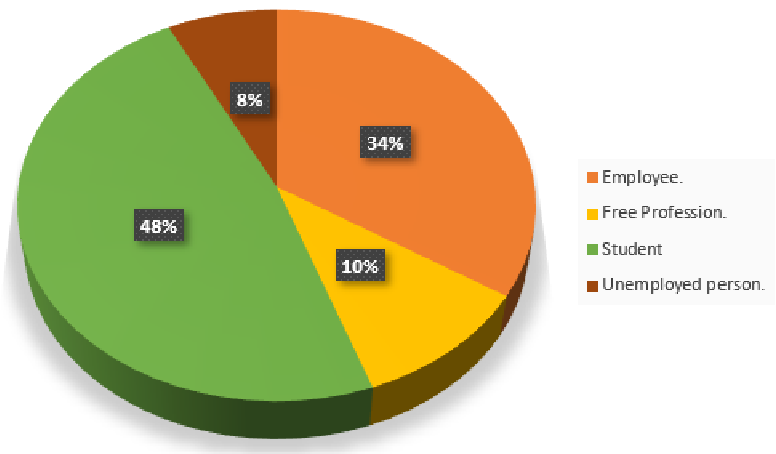


Source: Made by us on the basis of the results of the questionnaire ”using Microsoft Excel”

It is also possible that older adults may have different preferences and habits when it comes to food and meal preparation, which could influence their decision to use food delivery apps. on our sample it seems that the majority (83 percent) of users of the food delivery service mobile app are between the ages of 25 and 35. This suggests that the app is more popular among young adults who are tech-savvy and prefer the convenience of using a mobile app for food delivery. The relatively low percentage of users who are over 45 years old may indicate that older users may not be as comfortable with using mobile apps for food delivery or may prefer traditional methods of ordering food. It is also possible that older adults may have different preferences and habits when it comes to food and meal preparation, which could influence their decision to use food delivery apps.

D. **Q5:** What is Your Job?

Graph 3: Occupational social category.



Source: Made by us on the basis of the results of the questionnaire ”using Microsoft Excel”

”Presto” Food delivery service user distribution can be described as follows:

- Employees (34 percent): Those in this category are likely to use the app during lunch breaks or after work as a convenience, rather than to cook or dine out due to time constraints.

- Students (48 percent): Considering the high percentage of students using the food delivery app, students are probably a significant group of users. The convenience of ordering meals while studying or attending classes can also be attributed to their busy schedules, limited cooking skills, or limited time. A food delivery service's flexibility and variety are also often valued by students.

- Free professionals (10 percent): Independent workers or self-employed people may prefer to use this FD service app because it allows them to focus on their work without having to prepare meals. This group may include freelancers, consultants, and entrepreneurs.

- Unemployed individuals (8 percent): The presence of unemployed users indicates that some individuals without regular employment still utilize the food delivery app, perhaps because of financial constraints or personal circumstances preventing them from cooking regularly.

1.2.2 Analysis of Cross-tabulation

Cross-tabulation allows us to see if there is a relationship between two variables. We will cross-tabulate each independent variable and each dependent variable with the variables from the identification form, based on:

The chi-square test of independence is used to study the correlation between two qualitative variables, X and Y. It is used to determine if an explanatory variable included in a model is truly significant and if it contributes to explaining the predicted variable.

The hypotheses of the test are:

(H0: The variables X and Y are independent.)

(H1: The variables X and Y are dependent.)

We reject the null hypothesis between the variables if the value of the asymptotic significance is less than "Alpha = 0.05".

In the following, we construct the cross-tabulation tables except when H1 is reached; that is, when the chi-square value is significant.

Table 4.2: The cross-tabulation between gender and the importance of quality of food.

		What is your gender?		Total
		Female	Male	
Quality of food.	Not at all important	2	4	6
	Not very important	17	7	24
	Moderately important	2	7	9
	Very important	21	16	37
	Extremely important	83	41	124
Total		125	75	200

Source: Our survey data, "Results obtained with SPSS software".

According to the table, we have concluded that the majority of respondents who consider the quality of food to be extremely important are women.

One possible reason why most women consider food quality to be the most important may be their traditional role in preparing meals and providing nutritious meals for their families. Another reason could be that women are more health conscious and pay attention to their eating habits.

Table 4.3: Test de khi-deux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.680[a]	4	.030
Likelihood Ratio	10.473	4	.033
N of Valid Cases	200		

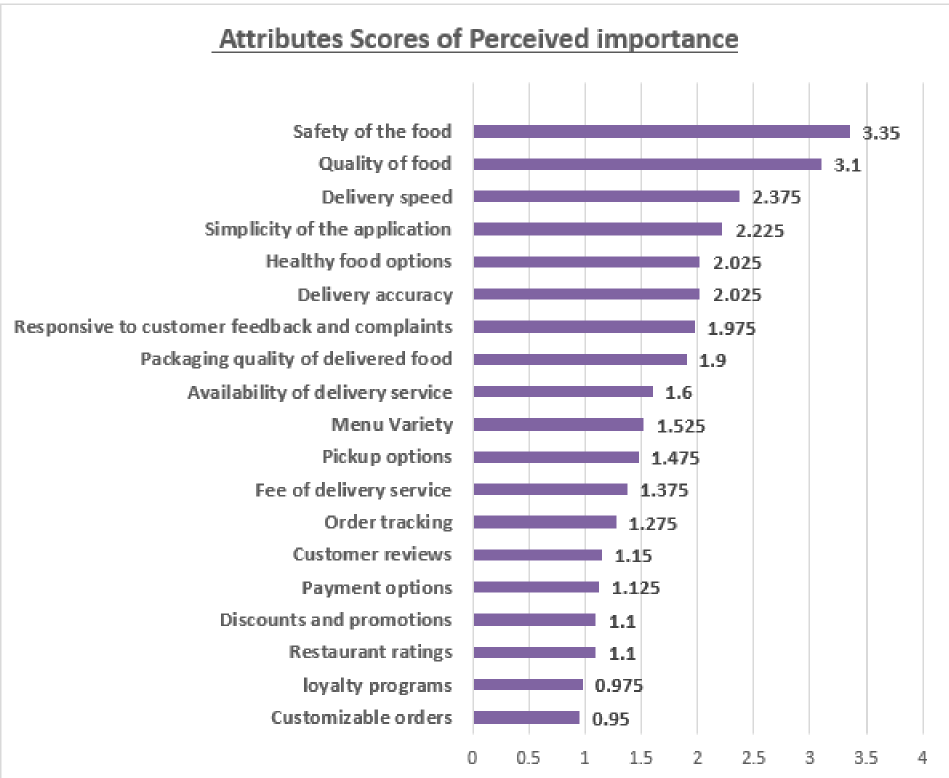
Source: Our survey data, "Results obtained with SPSS software".

According to the chi-square test (sig = 0.03), we can conclude that there is a significant relationship between gender and the quality of food delivered.

1.2.3 The perceived importance of food delivery service attributes

The importance scores obtained from the sample are shown in the figure below.

Graph 4: Occupational social category.



Source: Made by us on the basis of the results of the questionnaire "using Microsoft Excel"

In this graph, we show how consumers rate the importance of various attributes of food delivery services in accordance with their survey responses.

Consumers rated the nineteen attributes on a five-point semantic differential scale. It emerged that the safety of the food received the highest rating.

- In terms of importance, the attribute of food delivery ranked second, suggesting that consumers value the quality of the food they receive. This indicates that consumers value the overall taste, freshness, presentation, and other aspects associated with food quality.
- Consumers consider the attribute of delivery speed to be one of the most important when evaluating food delivery services, as the attribute ranked third in importance. This indicates that consumers value timely and efficient delivery as an important aspect of their overall satisfaction with the service.
- Simplicity of the application ranked in the fourth place is also considered important by users. According to the ranking, consumers value simplicity in applications. This should be taken into consideration when designing or improving applications to ensure that they meet consumer expectations.
- The attribute of healthy food options ranked fifth in terms of importance. In light of this result, it can be concluded that healthy food options are of great significance to them.
- The sixth most important attribute is delivery accuracy. Based on this result, we can conclude that consumers value reliability and precision of delivery services, that timely and accurate deliveries are important to them, and that this attribute is crucial to evaluating their satisfaction with food delivery services in general.
- Responsive to customer feedback and complaints is ranked just after delivery accuracy in terms of importance. The results of this study suggest that customers value service providers who actively engage with their feedback and resolve complaints in a timely manner. For customer satisfaction levels to increase, it is important to maintain good customer relations and address concerns effectively.
- packaging Quality of delivered food is also among the top ten criteria. The results highlight that consumers attach great importance to the quality of packaging in their food delivery experience. This ranking underscores the significant role packaging plays in shaping consumer satisfaction and their overall perception of the food delivery service.

- The attribute of availability of food delivery service ranked ninth in terms of importance. We suggest that consumers consider availability of the service to be very important among the various attributes that influence their decision-making regarding food delivery.

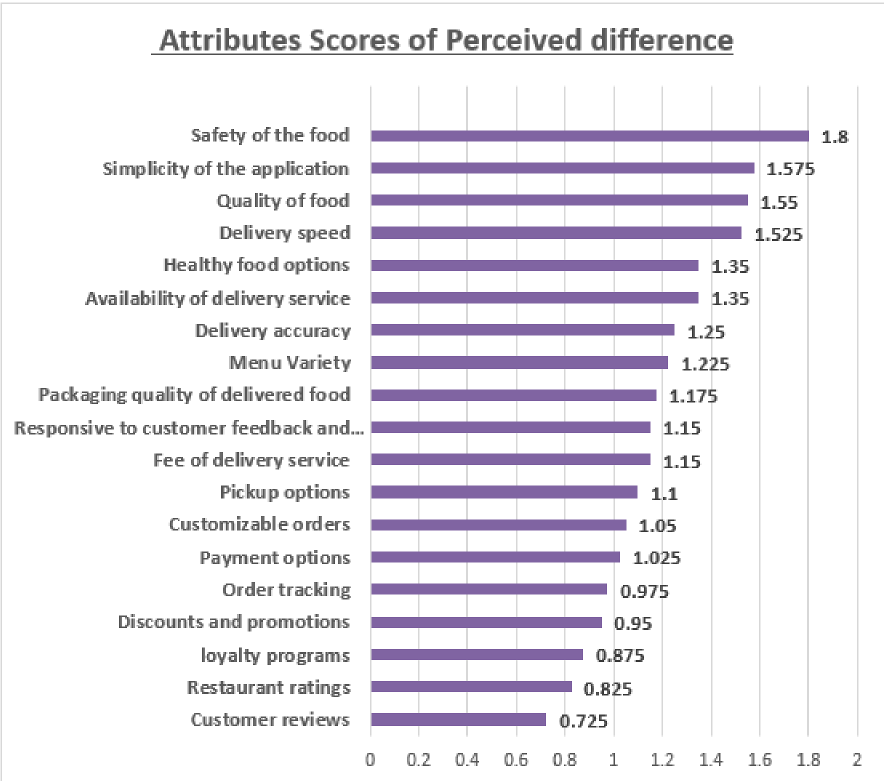
- Menu variety of food is ranked tenth in terms of importance, suggests that it holds a significant level of importance for consumers. The results indicate that customers value a variety of menu options when choosing a food delivery service. In order to enhance customer satisfaction and attract more customers to the service, it may be worthwhile to maintain and expand menu options that cater to consumers' preferences and needs.

The other nine attribute are less important than the first ten, Comparatively to the higher-ranked attributes, these attributes may have a smaller impact on consumer decision-making or satisfaction.

1.2.4 The perceived difference of food delivery service attributes

The perceived difference scores obtained from the sample are represented in the figure below.

Graph 5: Perceived difference scores of attributes.



Source: Made by us on the basis of the results of the questionnaire "using Microsoft Excel"

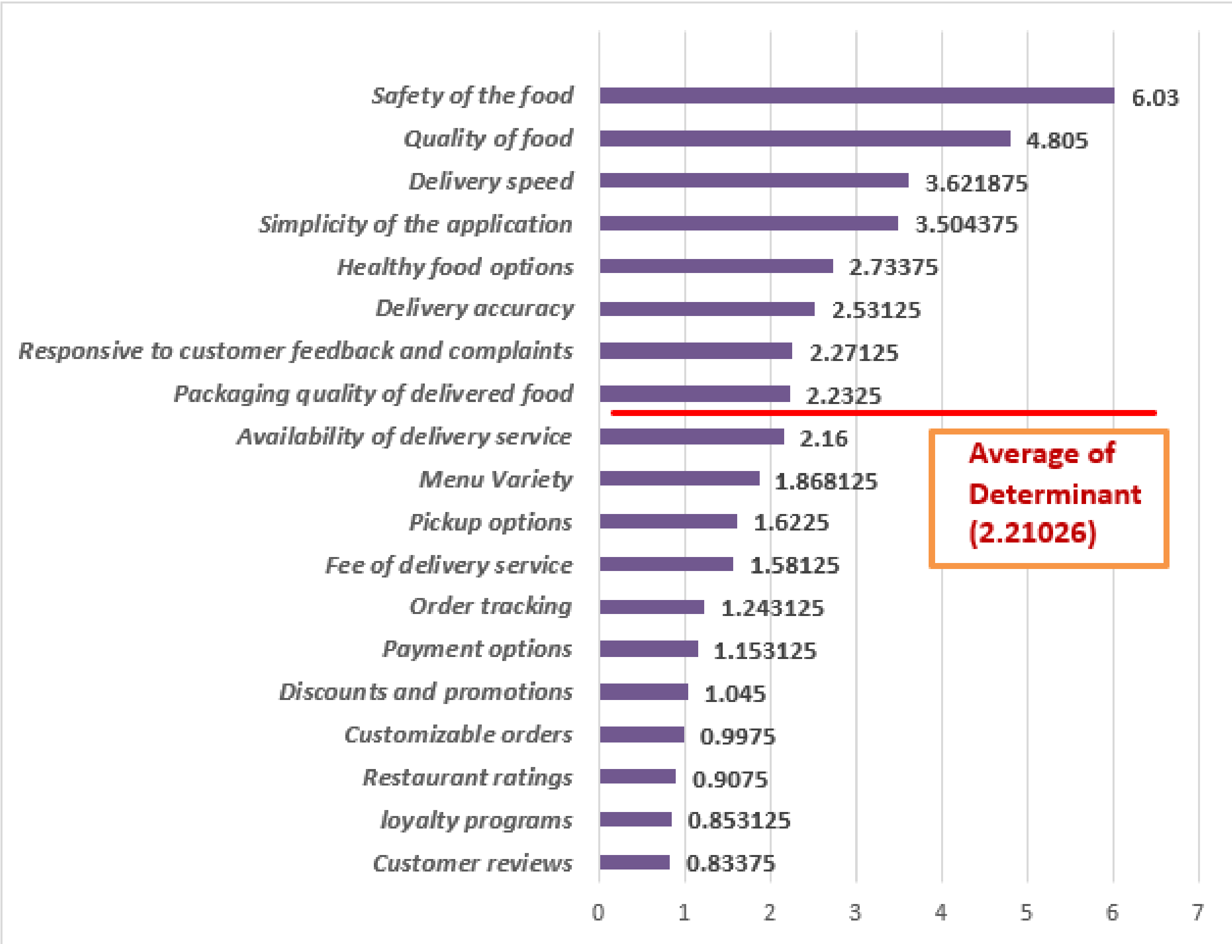
As compared to the other attributes evaluated, these top ten attributes stand out as key differentiates between food delivery companies. These attributes are highly perceived in influencing consumer perceptions and choices when selecting a food delivery service because of their high perceived difference.

- Safety of the food: In this attribute, consumers emphasize the importance of receiving safe and hygienic food, underscoring the importance of delivery companies' food safety practices.
- Simplicity of the application: Food delivery applications are perceived to be more convenient and enjoyable for consumers due to their user-friendly interfaces and smooth navigation.
- Quality of food: As a result of the perceived difference in food quality, it is important to provide customers with high-quality, fresh, and tasty food options.
- Delivery speed: In order to meet consumers' expectations of quick and prompt delivery services, consumers perceive delivery speed as a distinguishing factor.
- Healthy food options: A growing preference for healthier eating habits is reflected in the perceived difference between healthy food options and unhealthy food options.
- Availability of food delivery service: With this attribute's perceived difference, consumers can rely on the service wherever they choose, thanks to its wide coverage area and operational availability.
- Delivery accuracy: It is essential to deliver orders correctly, including accurate items, quantities, and special instructions, for a seamless and error-free customer experience.
- Menu variety: It appears that consumers appreciate a diverse menu variety that caters to different tastes, preferences, and dietary requirements, enhancing their overall satisfaction.
- Packaging quality of delivered food: In terms of packaging quality, a durable, hygienic, and visually appealing package contributes to maintaining freshness during delivery.
- Responsiveness to customer feedback and complaints: To enhance customer satisfaction and loyalty, it is important to respond quickly to customer concerns, provide timely responses, and take appropriate actions in response to feedback and complaints.

1.2.5 The determining attributes in the choice of a food delivery service. (Calculation and analysis of determinant scores).

A determining attribute is both important and discriminant. Thus, the determinant score for each attribute is obtained by multiplying its perceived importance score by its perceived difference score. The results of the dual questionnaire are presented in the graph below:

Graph 6: Ranking of attributes by average determinant score.



Source: Made by us on the basis of the results of the questionnaire "using Microsoft Excel"

The criteria referred to as "determinants" in the choice of food delivery service are those whose score exceeds the "determinant average," which is equal to (2.21026).

Based on these results, the criteria on which users of "Presto" food delivery service base their choices are eight criteria in our case. They are listed in the following order:

1. Safety of the food.
2. Quality of food.
3. Delivery speed.
4. Simplicity of the application.
5. Healthy food options.
6. Delivery accuracy.
7. Responsive to customer feedback and complaints.
8. Packaging quality of delivered food.

We will now attempt to analyze this ranking by explaining the probable reasons for which the surveyed sample evaluates the product based on these criteria.

- Safety of The food: Users consider this attribute to be highly important and perceive it to be different. In order to ensure their well-being and satisfaction, we suggest customers prioritize food that meets strict safety and hygiene standards.

- Quality of food: For users, this attribute is of great importance and makes a real difference. It indicates that your customers are concerned about receiving food that meets strict safety and hygiene standards, which ensures their well being.

- Delivery speed: The inclusion of this attribute among the top-ranked criteria indicates that users prefer fast and timely delivery of their orders if they are choosing a food delivery service.

- Simplicity of The application: An application's user-friendliness plays an important role in the decision-making process. This attribute's high determinacy score suggests that an intuitive interface is essential to a positive user experience.

- Healthy food options: Users have a preference for meal delivery services that provide a variety of healthful and satisfying meal alternatives. This criteria shows increased consumer demand for alternatives that are health-conscious.

- Delivery accuracy: Order accuracy is critical to customer satisfaction since customers value precise and accurate delivery.

- Responsive to customer feedback and complaints: Customer feedback and complaints should be addressed and resolved in a responsive and customer centric manner, as this shows the delivery service's commitment to the customer.

- packaging quality of delivered food: Users value packing quality as a significant element. According to this criterion, customers value receiving their food in well packaged containers that guarantee freshness, cleanliness, and an enjoyable experience.

After analyzing the data from our survey and achieving our objectives for this phase, we have identified essential attributes that serve as determinants. These attributes need to be converted into key performance indicators (KPIs) to be displayed on the dashboard, which will be the focus of our next section.

Section 2 Development of a Dashboard for Presto ”food delivery service”

As a result of obtaining our list of determinant attributes, this section focuses on converting them into key performance indicators. Incorporating these metrics into a proposed dashboard will help the company make better decisions

2.1 The Proposed Dashboard of Presto

Here we will discuss key performance indicators (KPIs) relevant to food delivery services. The KPIs will help us monitor and evaluate the brand’s performance. Additionally, we will create a dashboard to visualize and track these KPIs.

2.1.1 The chosen key performance indicators

Building upon the attributes identified in the previous section, we will now present the key performance indicators (KPIs) for the ”Presto food delivery service.” These KPIs are directly aligned with the objectives and key success factors of the Presto brand. By tracking these KPIs, we can assess and measure the performance of the food delivery service.
Below, we present the objectives with their corresponding Key Performance Indicators (KPIs):

1. **The objectives:**
   - Operational Efficiency and Customer Satisfaction.
   - Establish a positive brand reputation.
   - Launch of new services, from Presto food to Presto parcels and presto VTC.
   - Develop strategic partnerships and collaborations.

   The key performance indicators:

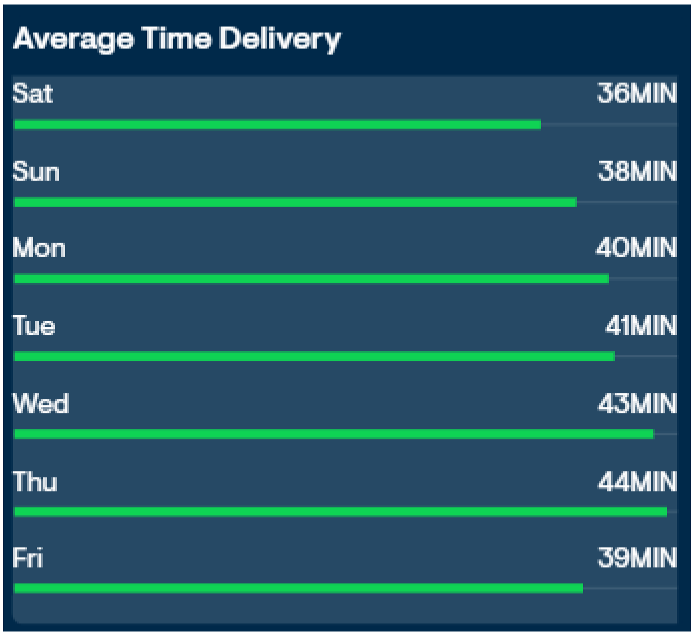
   a. **Average Time Delivery (ATD):** The principle behind the ”Average Time Delivery” KPI is to measure and track the average time it takes to deliver a food to customers.

By monitoring (ATD) Presto can assess their efficiency in meeting customer expectations and identify areas for improvement.

ATD formula :

ATD = Total delivery time / Number of orders.

Figure 4.1: Average Time Delivery



Source: Made by us on the basis of the company Data "Powered by Geckoboard".

With an average delivery time of 35 to 45 minutes per week (from 05/13/2023 to 05/19/2023), it proves the efficiency and timeliness of the Presto service in meeting customer expectations.

b. **Order Accuracy Rate (OAR):** The principle behind the "Order Accuracy Rate" KPI is to measure the accuracy of the order fulfillment process.

OAR formula:

OAR = (Number of accurately fulfilled orders / Total number of orders) * 100

The order accuracy rate of a food delivery service should not be below 95 percent, although there may be occasional errors. Generally, 95 percent of orders are filled correctly without any significant errors. There is a small percentage of minor issues that occasionally arise.

c. **Delivery Success Rate (DSR):** The principle of the ”Delivery Success Rate” KPI is is to measure the effectiveness and efficiency of food delivery service.
DSR formula:

DSR = (Number of successful deliveries / Total number of delivery attempts) * 100

Providing accurate, timely, and customer satisfying delivery operations is crucial for Presto.

d. **On-time Delivery (OTD):** The principal behind the ”On-time Delivery” KPI is to measure and track the ability of Presto to deliver its services within the agreed upon time-frame.
OTD formula:

OTD = (Number of on-time deliveries / Total number of deliveries) * 100

The aim for an on-time delivery rate of 90 percent or higher. This means that at least 90 percent of the orders should be delivered within the designated time-frame.

e. **Resolution time for complaints:** The principal of the ”Resolution time for complaints” indicators is to measure the efficiency and effectiveness of resolving customer complaints within a specified time-frame. It helps Presto monitor and manage their customer service and support processes.
Its formula:

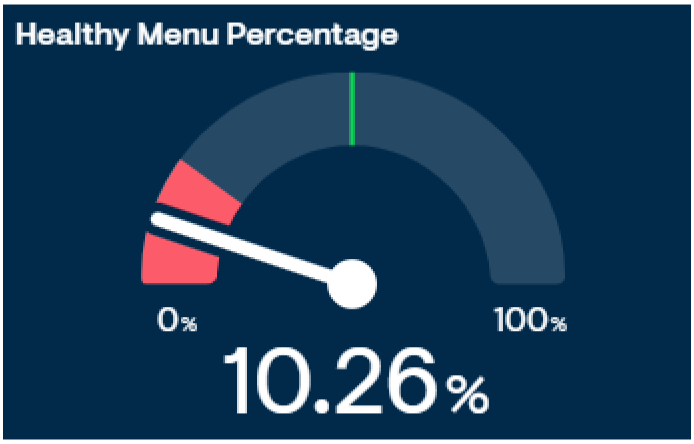
Total resolution time / Total number of complaints.

A good practice for presto society is to resolve complaints within 24 to 48 hours. It allows our company to respond quickly to customer concerns, investigate the issue, and provide an appropriate resolution.

f. **Healthy menu percentage:** The principle behind the ”Healthy menu percentage” indicators is to measure the percentage of healthy food items or options offered on a menu. The KPI reflects Presto organization’s efforts to promote healthier eating habits and align with growing consumer demand for nutritious options.
Its formula:

(Number of Healthy Menu Items / Total Number of Menu Items) * 100

Figure 4.2: Healthy menu percentage



Source: Made by us on the basis of the company Data ”Powered by Geckoboard”.

The KPI of the Healthy menu percentage for Presto ”food delivery service” indicates that out of 39 restaurants, only 4 provide a healthy menu, accounting for 10.26 percent of the total. This suggests a relatively low availability of healthy options within the service, highlighting the need for improvement in promoting and encouraging healthier food choices.

2. **The objective:**

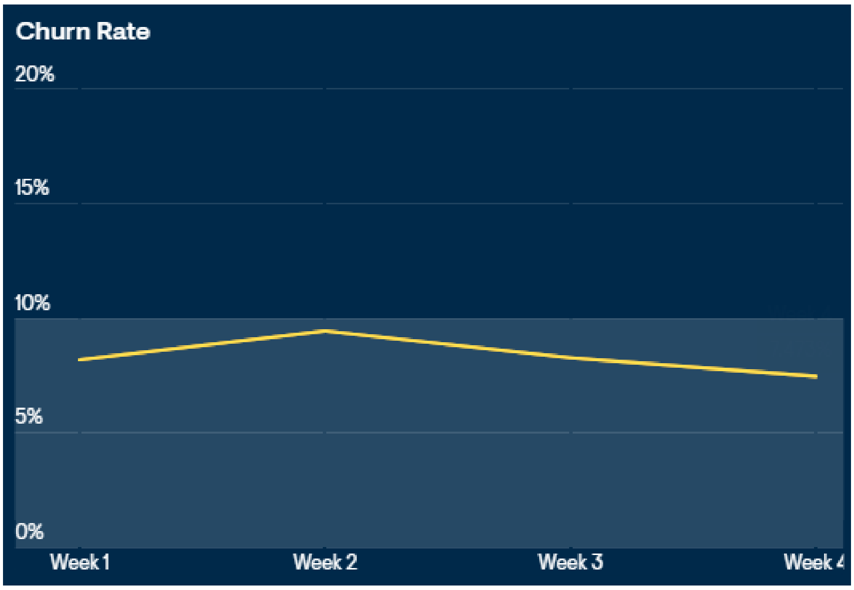
   - Build a loyal customer base.

   The key performance indicators:

   a. **Churn Rate:** The principal behind the ”Churn rate” indicators is measuring customer attrition or loss over a specific period of time.
   The higher the churn rate, the more customers are leaving the service, which can impact the overall business performance and revenue.
   Churn Rate formula:

   Churn Rate = ((Total users - Returning users) / Total users) * 100

Figure 4.3: Churn Rate



Source: Made by us on the basis of the company Data "Powered by Geckoboard".

With a churn rate below 10 percent (in a period of one month from 04/21/2023 to 05/20/2023) , the food delivery service shows strong customer retention. The majority of customers remain loyal and use the service regularly, which implies that the majority of customers are loyal. It reflects a successful effort in maintaining customer satisfaction, reducing customer turnover, and fostering long-term relationships with the user base.

b. **Customer engagement rate (CER):** The measurement of customer engagement across different platforms or channels. Customer engagement rate typically indicates the level of interaction and involvement of customers with the service, and it can be an important indicator of customer satisfaction, loyalty.

   CER formula:

CER = (Engaged sessions / Total sessions) * 100

Figure 4.4: Customer engagement rate

Engagement Rate per channel group	
Organic Social	100%
Organic Search	87.05%
Direct	85.06%
Unassigned	0.099%
Session default channel group	

Source: Made by us on the basis of the company Data "Powered by Geckoboard".

- Organic Social (100 percent): The highest CER indicates that customers are actively engaging with Presto "food delivery service" through social media platforms. This suggests a strong presence and effective communication on social media, leading to high customer interest and interaction.

- Organic Search (87.05 percent): A significant percentage of customers are engaging with the food delivery service through organic search results. This indicates that the Presto service's application is optimized for search engines, enabling potential customers to find and engage with the service easily.

- Direct (85.06 percent): A high CER through direct channels suggests that customers are directly accessing the Presto service's app. This could be a result of brand recognition, customer loyalty, or effective offline marketing efforts.

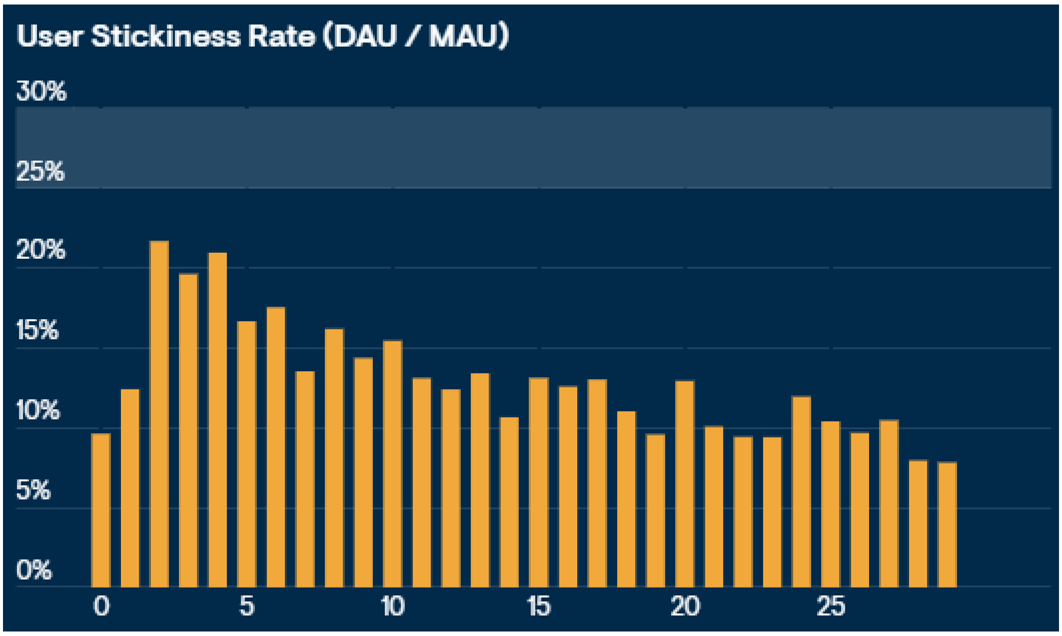
- Unassigned (0.099 percent): A relatively low CER in the unassigned category suggests a minimal engagement rate from sources that couldn't be attributed to specific channels. Further analysis is needed to determine the nature of these unassigned engagements and potentially improve tracking and measurement.

c. **User stickiness:** The principle of User Stickiness is to measure measures how often users are returning to an app and analyze the level of customer loyalty and engagement with the service. App stickiness is measured by dividing the number of daily active users by the number of monthly active users.

User stickiness formula:

User stickiness = (Daily active users(DAU) / Monthly active users(MAU)) * 100

Figure 4.5: User Stickiness Rate



Source: Made by us on the basis of the company Data "Powered by Geckoboard".

The user stickiness rate of a food delivery service, ranging from 8 percent to 22 percent, indicates the proportion of users who repeatedly engage with the platform. While the achieved percentage demonstrates some level of customer loyalty, it falls short of attaining the optimal user stickiness rate of 25 percent or higher.

3. **The objective:**

   - Stay ahead of the competition by adopting new technologies and innovative solutions.

   The key performance indicator:

   a. **App response time:** Response time is a principle of a food delivery service app to ensure prompt and efficient communication. Apps should be designed to make ordering and receiving updates on the status of orders as well as interacting with customer support as simple as possible.

4. **The objectives:**

   - Increase the sales (increase the orders).

- Improving profitability.

The key performance indiator:

a. **Sales rate:** It refers to how quickly orders are placed and fulfilled within a given period of time in a food delivery service.

   Sales rate formula:

   $$\boxed{\text{Sales Rate} = (\text{Total Sales} / \text{Total Leads}) * 100}$$

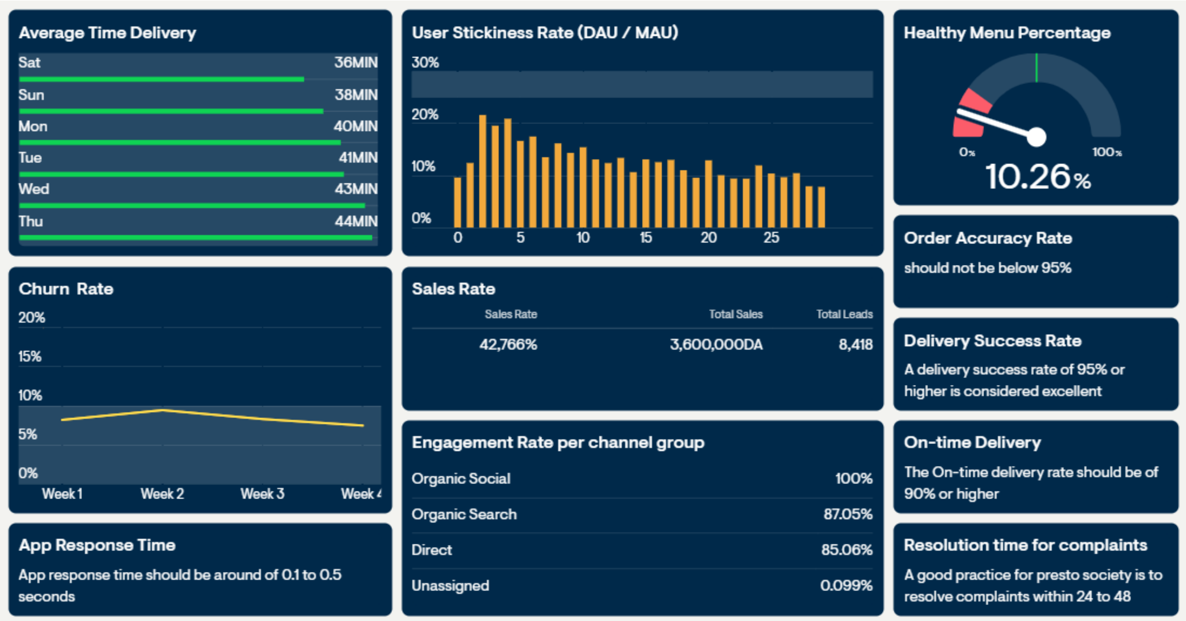
Figure 4.6: Sales Rate

Source: Made by us on the basis of the company Data ”Powered by Geckoboard”.

The KPI of total sales or orders for a food delivery service, with a percentage of 42.766 percent, suggests a significant market share and successful customer adoption, reflecting a strong position in the industry and a positive growth trend for Presto company.

The proposed dashboard of Presto ”food delivery service”:

Figure 4.7: Presto Dashboard



Source: Made by us on the basis of the company Data "Powered by Geckoboard".

2.2 Main Results and Recommendations

The goal behind the implementation of the multi-attribute approach was first to identify the key criteria that are important to customers and then convert these attributes into key performance indicators in order to construct our dashboard.

2.2.1 Results

At the end of our study, we have reached a number of interesting observations that are worth recalling.

Indeed, the implementation of the multi-attribute approach allowed us to obtain the determinant criteria based on the choice sought by the surveyed users. This enabled us to identify the chosen key performance indicators. The obtained results are summarized as follows:

- Average time delivery and On-time delivery are the indicators to measure "Delivery speed".

  Our study found that delivery speed was a crucial attribute for customers. By optimizing the delivery process, Presto company can reduce the average time taken to deliver orders, leading to higher customer satisfaction, and build a reputation for reliability. Currently, Presto company maintains a commendable average delivery time.

- Healthy menu percentage is the indicator to measure ”Healthy food options”.
  Based on our findings, it was evident that customers displayed a significant preference for healthy food choices. However, our results indicated that Presto company currently has a very low percentage of healthy menu options.

- Order accuracy rate and Delivery success rate are indicators to measure ”Delivery accuracy”, ”Safety of the food”, ”Quality of food” and ”Packaging quality of delivered food”. Ensuring accurate order fulfillment is important for customer satisfaction and they value reliable and successful deliveries. By improving delivery accuracy, Presto company can enhance the order accuracy rateand increase the delivery success rate, leading to increased customer trust and repeat business.

- Churn rate is the indicator to measure all the attributes we mentioned above.
  Our study found that all of those attributes played a role in customer retention. By maintaining high standards in these areas, Presto company can reduce the churn rate and foster customer loyalty. but for now it has a very low churn rate which means that benefit for it.

- App response time and User stickiness are indicators to measure ”Simplicity of the application”.
  We found that User stickiness rate for Presto is due to the value it should be Our study revealed that the presence of a responsive and user-friendly application had a positive effect on user stickiness. By enhancing the app’s response time, Presto company can ensure a seamless user experience, foster user retention, and promote frequent utilization of their food delivery service. This, in turn, will contribute to heightened customer satisfaction and engagement levels.

- Customer engagement rate and Resolution time for complaints are indicators to measure ”Responsive to customer feedback and complaints”.
  By continuously improving promptly addressing customer feedback and complaints, Presto company can increase customer engagement and foster a loyal customer base.

- Sales rate is an indicator to measure ”Quality of food” and ”Healthy food options”.

Our study revealed that the quality of food and the availability of healthy menu options influenced sales. Presto has a good sales rate and can improve it. By consistently delivering high-quality food and expanding the range of healthy choices, Presto company can attract more customers and drive sales growth.

The dashboard we created for ”Presto food delivery services” serves as a powerful tool for real-time monitoring, analysis, and decision-making. By integrating multiple data sources, it enables comprehensive performance evaluation and timely adjustments. Its design and implementation not only improve operational efficiency but also enhance customer satisfaction, optimize resource allocation, and enable informed decision-making for strategic growth.

2.2.2 Recommendations

- Presto should implement strict quality control processes. Continuously monitor and improve the taste, freshness, and presentation of the delivered food to exceed customer expectations.
- It must employ strategies, such as optimizing routes and hiring efficient delivery teams, to expedite the delivery process.
- To capitalize on the growing demand for healthier options and potentially boost sales, it is recommended that Presto company increase the proportion of healthy menu choices available to cater to health-conscious customers.
- Enhance the overall user experience of the food delivery application by regularly updating and improving the user interface.
- To Presto meet the growing demand for nutritious meals, Presto can expand the menu variety and availability of healthy food choices.
- The Presto company must implement strategies aimed at increasing customer engagement. A food delivery application may integrate interactive features, personalized promotions, and loyalty programs.
- Customer service responsiveness is an important objective for Presto. Customer complaints can be resolved more quickly by streamlining complaint resolution processes. Customers will be more satisfied and loyal to Presto if it demonstrates a commitment to excellent customer service.

- Utilize Presto's dashboard for data-driven insights to identify and implement targeted marketing campaigns, strategic partnerships, and new service introductions to drive sales growth.

- With the implementation of this proposed Presto dashboard and the incorporation of key performance indicators (KPIs) aligned with the company's objectives, Presto can now effectively work towards achieving its goals.

Conclusion

Throughout this chapter, we have employed techniques that have enabled us to develop our proposed dashboard.

First of all, the focus group led us to observe, along with the list of choice criteria we were seeking.

Furthermore, the implementation of the dual questionnaire technique allowed us to delve deeper into the attributes of food delivery service, understand what is important to the user, and determine how they differentiate between different market offerings.

Finally, the determinant criteria enabled us to select the key performance indicators that are relevant to the company's objectives, leading to the development of our dashboard.

General conclusion

General Conclusion

This research focused on implementing a multi-attribute approach to develop a comprehensive dashboard for the Presto food delivery service. The objective was to identify a set of criteria for evaluating food delivery services, which were then used to derive a list of determinant attributes. These attributes were further transformed into key performance indicators (KPIs) to facilitate the development of the dashboard.

In the first part of the literature, we began by discussing multi-attribute modeling in general. We specifically focused on considering the attitudes of e-consumers towards a service and explored various factors influencing consumer behavior. We then delved into the process of customer decision-making. Additionally, we familiarized ourselves with marketing performance. Our main focus revolved around the dashboard and its characteristics, as it formed the core subject of our research.

To carry out our research successfully, we initially chose a qualitative approach by employing the method of focus group. This was followed by a quantitative approach, where we developed an online dual questionnaire.

By conducting our passive focus group study, we obtained a comprehensive list of criteria. These criteria served as a foundation for our subsequent quantitative study. They provided a solid framework for evaluating and measuring key aspects of our research. This enabled us to gather data and insights in a systematic and structured manner, facilitating a thorough analysis of the phenomenon under investigation.

In order to answer our problematic, based on a review of prior studies and the findings of our own dual questionnaires by analyse it we found a list of the determinants attributes which were: (Safety of The food, Quality of food, Delivery speed, Simplicity of The application, Healthy food options, Delivery accuracy, Responsive to customer feedback and complaints and packaging Quality of delivered food).
We have three from this list of determinant attributes are included in a hypothesis we had pro-

posed, thereby rejecting the first hypothesis. **Hypothesis 01: The key attributes that should be taken into account when designing a food delivery service dashboard for Presto food delivery service include Speed of Delivery Service, Quality of the food, and Delivery accuracy.**

The identification of these determinant attributes allowed us to establish the key performance indicators that are relevant to Presto's objectives. These KPIs will play a crucial role in the development of the proposed company dashboard. By aligning the KPIs with Presto's goals, the dashboard will provide valuable insights and facilitate effective decision-making.This leads to the confirmation of our second research hypothesis, which states that **Hypothesis 02: By integrating multiple attributes into a dashboard with key performance indicators, it enables a comprehensive and simultaneous view of various factors.**

The utilisation of multi-attribute approach allowed us to :
- Evaluation of the food delivery service by considering multiple criteria and attributes. This comprehensive assessment provided a more accurate understanding of the service's performance, enabling better decision-making and improvement strategies.
- The multi-attribute approach enabled the identification of specific determinant attributes and their translation into relevant KPIs. This customization ensured that the dashboard focused on key metrics that aligned with the unique goals and objectives of the food delivery service, providing actionable insights for performance monitoring and evaluation.
- It facilitated the identification of strengths, weaknesses, and areas for improvement across various dimensions, allowing for data-driven decision-making and targeted interventions to optimize service efficiency and customer satisfaction. As a result, we are able to confirm the third and final research hypothesis. **Hypothesis 03: The multi-attribute approach has benefits in setting up a dashboard.**

This approach is really helpful for the company in implementing a dashboard and monitoring its performance.

Ultimately, we can add that this dissertation has allowed us to gain a better understanding of consumer preferences and the KPIs that are truly essential for the company of food delivery service.

However, we cannot claim that this research work is free from limitations. In our opinion, its main limitations are as follows: The company lacks a filtered customer database as we faced difficulties in reaching the users of the Presto application. Additionally, they don't possess the necessary information to calculate key performance indicators, which prevented us from calculating important KPIs.

Despite these limitations, this dissertation has allowed us to highlight the importance of using marketing studies in general, and the multi-attribute approach in particular, by Algerian companies. It sheds light on the implications they have on their overall performance.

Finally, we hope that this research, however modest it may be, can draw attention to the value of multi-attribute approach, which unfortunately remain relatively unknown to our companies.

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Appendices

APPENDIX NO. 1: ”Focus group interview guide”

- Date :
- Time: Start of meeting :

A comprehensive a list of potentially decisive attributes of food delivery service.

- Introducing myself: I am a postgraduate student at ESGEN Alger, currently working on my master’s dissertation.

- Presenting the main research axes: Our research aims to study the consumer preferences in food delivery service, and determine the attributes they consider important or crucial.

- Reminding of the principles of the group discussion:

There are no right or wrong answers, as each person has their own opinion.

All participants’ perspectives on the topics being discussed are important for the survey.

- Topics to be discussed:

- **Topic 01:** Delivery service usage:
  What is your current experience with food delivery service, how often do you use it ?
- **Topic 02:** Factors affecting delivery service:
  What factors influence your decision to use food delivery service?
- **Topic 03:** Delivery Service Features:
  How important is the delivery time in your decision to use food delivery service?
  Have you faced any issues with food delivery service in your experience, what were they,

have you faced any issues with quality of the food delivered to you?
How important are the fees of food delivery to you?

- **Topic 04:** Satisfaction and Improving Delivery Service:
  How satisfied are you with the selection of restaurants and menu options offered?
  How could delivery service failure be solved?
  Is there anything that would make you stop using food delivery , do you have any suggestions for how we could improve our food delivery service?
  How likely are you to recommend a food delivery service to a friend, why?

- **Topic 05:** Presto mobile application design:
  How do you find the delivery application interface of ”PRESTO”, how is your experience with the application, is it easy to use?

- **Topic 06:** Selection criteria used in the evaluation:
  According to you, what are the criteria that allow you to decide and choose a food delivery company among the others?

APPENDIX NO. 2: ”Dual Questionnaire”

The Contribution of Multi-Attributes Modeling in Setting up a Dashboard

We are seeking your assistance in our end-of-studies dissertation for the Higher School of Management and Digital Economy, where we aim to investigate consumer preferences in selecting food delivery companies. Our focus is on the PRESTO food delivery service, and we kindly request your insights through this survey. This form is open to all PRESTO customers, whether you are an individual or a professional. Rest assured that all responses will be kept confidential and we sincerely appreciate your time and cooperation.

rais.zineb.30@gmail.com Changer de compte

Non partagé

* Indique une question obligatoire

Did you make an order from "PRESTO" ? *

◯ No

◯ Yes

IF yes continue, IF no stop the questionnaire.

When choosing PRESTO food delivery service, how important are each of the following criteria to you? *

(Please circle the score you give to each criterion)

	Not at all important	Not very important	Moderately important.	Very important.	Extremely important
Fee of delivery service.	○	○	○	○	○
Delivery speed.	○	○	○	○	○
Quality of food.	○	○	○	○	○
Availability of delivery service.	○	○	○	○	○
Discounts and promotions.	○	○	○	○	○
Restaurant ratings	○	○	○	○	○
Delivery accuracy	○	○	○	○	○
Customer reviews.	○	○	○	○	○
Packaging quality of delivered food.	○	○	○	○	○
Menu Variety	○	○	○	○	○
Order tracking.	○	○	○	○	○
loyalty programs.	○	○	○	○	○

Safety of the food.	○	○	○	○	○
Responsive to customer feedback and complaints.	○	○	○	○	○
Payment options.	○	○	○	○	○
Customizable orders.	○	○	○	○	○
Pickup options.	○	○	○	○	○
Simplicity of the application.	○	○	○	○	○
Healthy food options	○	○	○	○	○

How do these same criteria help you distinguish between PRESTO and other different food delivery companies in order to choose one of them? *

(Please circle the score you give to each criterion)

	No perceived difference.	Low difference.	Medium difference.	High difference.	Extreme difference.
Fee of delivery service.	○	○	○	○	○
Delivery speed.	○	○	○	○	○
Quality of food.	○	○	○	○	○
Availability of delivery service.	○	○	○	○	○

Availability of delivery service.	○	○	○	○	○
Discounts and promotions	○	○	○	○	○
Restaurant ratings.	○	○	○	○	○
Delivery accuracy.	○	○	○	○	○
Customer reviews.	○	○	○	○	○
Packaging quality of delivered food.	○	○	○	○	○
Menu Variety.	○	○	○	○	○
Order tracking.	○	○	○	○	○
loyalty programs.	○	○	○	○	○
Safety of the food.	○	○	○	○	○
Responsive to customer feedback and complaints.	○	○	○	○	○
Payment options.	○	○	○	○	○
Customizable orders.)	○	○	○	○	○
Pickup options.	○	○	○	○	○

Simplicity of the application.	◯	◯	◯	◯	◯
Healthy food options.	◯	◯	◯	◯	◯

What is your gender? *

◯ Male

◯ Female

Select Your Job: *

☐ Student.

☐ Employee.

☐ Free Profession.

☐ Unemployed person.

Select your age. *

◯ Under 20

◯ Between [20-35] yo

◯ Between [35-45] yo

◯ Between [45-60] yo

◯ Over 60

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