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# Consumer Perceptions of Online Shopping and Willingness to Use Pick-Up Points: A Case Study of Morocco

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**Abstract:** The use of pick-up points by consumers is one of the most developed areas of research in the literature on last-mile logistics over the last decade. In this regard, several researchers have attempted to expose the factors that influence consumers' online shopping behavior and their willingness to use pick-up points. However, no study has addressed this issue in African countries. The aim of this research is to examine the online shopping behavior of Moroccan consumers, focusing on their opinions about using pick-up points to receive/return goods purchased online. This research adopted a qualitative approach through focus group sessions with Moroccan consumers. The results indicate that temporal and spatial flexibility, competitive prices, and the quality of the retailer's website are the main factors encouraging consumers to buy online. On the other hand, product risk, delivery risk, privacy, and security were identified as the factors that prevent consumers from buying online. In contrast, the location, density, security, and opening hours of pick-up points were considered to be the factors that influence the Moroccan consumer's choice to use this delivery option when buying online. These findings are important both for parcel delivery companies that want to establish pick-up point networks in Casablanca and for public authorities and local communities that want to formulate policies and implement strategies leading to more sustainable urban environments.

**Keywords:** pick-up point; consumer behavior; online shopping; last-mile delivery



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## 1. Introduction

Consumers' access to internet-based applications such as e-commerce, information retrieval, and teleworking has improved significantly with the development of information and communication technologies. According to [1], 58% of the world's population has access to the internet, this is because information and communication technologies allow consumers to participate in various activities without travelling.

E-commerce has grown dramatically in recent years. This growth leads to an increase in the number of parcels delivered to end consumers and an increase in urban goods vehicles [2]. As we know, home delivery is the most common delivery mode [3–6]. In some cases (e.g., the parcel is fragile, confidential, or very expensive), the delivery of parcels requires the presence of the consumer at their home, so the consumer must confirm the receipt of their parcel by signing a receipt. As a result, the number of failed deliveries has increased, this assumes that consumers cannot be available during delivery hours (say 08:00–12:00/14:00–18:00) [7,8]. It is worth noting that even though parcel companies

(operating worldwide) use advanced technologies to improve communication with consumers, almost half of home deliveries fail on the first attempt [9]. In this case, courier companies force consumers to arrange for their packages to be re-delivered at another time or to be collected from the company's depot, resulting in lower consumer satisfaction. This also implies an increase in vehicle kilometers travelled (VKT) by consumers (to collect parcels) and/or parcel transport companies (to re-ship parcels) as well as an increase in environmental emissions in urban areas [10–13].

In order to mitigate the problem of home delivery failure and to increase the last mile delivery efficiency, various last mile delivery solutions have been evaluated, such as delivery outside the hours 08:00–12:00/14:00–18:00 [14,15]; delivery authorizing the courier to access the consumer's residence, through "smart locks" [9]; delivery within predetermined time slots [16]; crowd-sourced delivery [17,18]; and delivery to pick-up points [19,20].

In Europe, several companies have successfully implemented pick-up point networks on a nationwide scale, such as Kiala, DHL [21]. However, this solution has only recently been introduced in Morocco. Jumia Maroc, Relais Express and Chronopost have established collection points, mainly in the form of service points, in three of Morocco's largest cities, namely Casablanca, Rabat, and Tangier. Other major parcel delivery companies in Morocco, such as Jiblili and Selfbox, have taken up the challenge of providing the more efficient service by setting up a limited number of such points in a few cities. However, the trials cannot specify the actual demand for pick-up points, as the operational characteristics of these points (e.g., type of pick-up point, opening hours, etc.) may not be relevant and do not match consumer expectations.

It is important to note that the shopping and travel behavior of Moroccan consumers who are not highly dependent on motor vehicles, is very different from that of consumers living in developed countries, where the number of pick-up points is important. Take for example the rate of motorization, which according to [22] is 7%, meaning there are 70 vehicles/1000 inhabitants. The motorization rate in Morocco is very low compared to European countries where the average is around 600 vehicles/1000 inhabitants. In addition, urban land use patterns in large Moroccan cities are different from those of large European cities (e.g., Paris). This is the case with the economic metropolis Casablanca, where many commercial districts have been developed outside of the city center. This decision has encouraged other businesses to settle in the suburbs of the cities [23], both contributing to the urban sprawl and to the development of shopping-related activities. This paper addresses this issue by examining the reasons that encourage or discourage Moroccan consumers to shop online and to use pick-up points. A few marketing-oriented studies [24–26] have been carried out to identify Moroccan consumers' purchasing behavior. However, no study has examined Moroccan consumers' willingness to use pick-up points. To this end, the aim of this paper is as follows: "Examining consumers online shopping behavior, with a focus on their views about using these points to receive/return goods purchased online".

The paper is structured as follows: the first section describes previous research, the second section presents the methodology, the third section discusses the results, and the last section is devoted to the conclusion, recommendations, and future research directions.

## 2. Literature Review

The literature review focuses on two main sections: the first one is dedicated to the factors impacting the consumer's online shopping behavior, while the second section gives an overview of variables influencing the acceptability of pick-up points by consumers.

### 2.1. Consumer's Online Shopping Behavior

Online shopping constitutes an interdisciplinary research area. It has been analyzed by researchers and practitioners with different specialties, such as: logistics, marketing, transport planning, land use planning, and business management. Before reviewing the factors affecting the consumer's willingness to buy on the internet, it is necessary to focus

on the personal characteristics of the consumer so that we have a clear view on this topic. The consumer's attributes discussed in the literature are gender, age, education level, occupation, and partner status. Starting with gender, this factor has a direct impact on the willingness of consumers to buy on the internet. According to [27], men have a higher propensity to purchase online compared to women. This finding is contradictory to the studies conducted by [28] which showed that women buy online more than men. The age of consumers also influences online shopping behavior. Refs. [27,29] reported that young people are the age group most likely to buy online. Moreover, Ref. [30] demonstrated that consumers under 35 years are more likely to buy online, unlike other consumers who prefer to buy their products from traditional shops. The education level of consumers also has an effect on the choice of purchase mode. Educated people are more likely to buy online than less educated people [28]. Furthermore, consumers' occupations also influence online shopping behavior. According to [27,30], full-time employees and students buy more online. The status of the consumers is also reported as a determinant of online shopping behavior. According to [28], single consumers prefer to buy their products on the internet, unlike couples who want to touch and check the desired product before buying it.

In the same vein, it is interesting to note that several factors can encourage consumers to buy online, including time saving, temporal and spatial flexibility, availability of detailed information, as well as competitive prices offered by companies operating in the online channel [28]. According to [31], the growth of online shopping can dramatically change consumer travel behavior. The results of their study showed that consumers living in areas with many shopping opportunities buy online more than those living in areas with relatively few shopping opportunities. Furthermore, they stated that time-pressed consumers can save time by shopping online. In the same vein, it is reasonable to expect that useful, accurate product information provided on websites gives consumers a sense of confidence and security. This information can also enable consumers to overcome the feeling of uncontrollability and improve their decision-making ability when browsing multiple shopping sites [32,33]. The proposition of lower prices compared to the prices of products available in "Brick and Mortar" shops was also reported as a determining factor of the consumer's online buying behavior [34–36]. On the other hand, Ref. [37] reported that product variety, consumer opinions, and special offers also attract consumers to online shopping. In addition, Ref. [38] indicated that services offered by some companies, such as free delivery, after-sales service, cash on delivery, and return processing can also influence consumers' online shopping behavior.

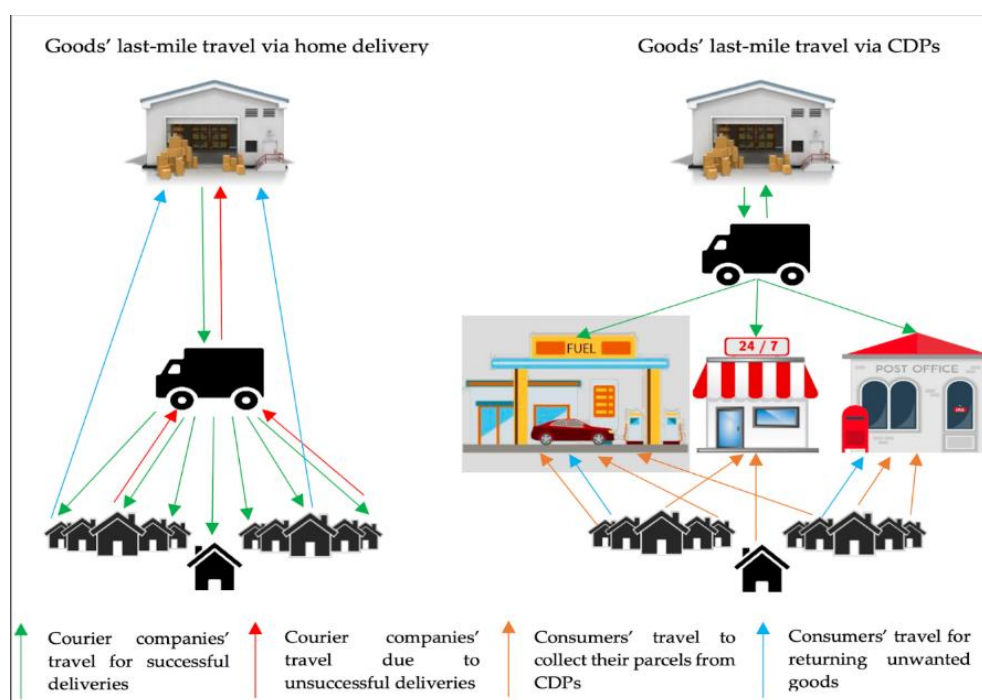
Though e-commerce has several benefits for consumers, some of them do not prefer to buy their desired products online. This can be due to several factors, namely: personal information hacking, product risk, and delivery risk [28]. Sometimes, consumers do not check the credibility of the online retailer before purchasing a product on the internet, which in turn contributes to an increased personal information hacking risk. Concerns regarding the protection of this information are becoming prevalent, especially during the payment process. Sharing personal information on unknown online payment sites makes consumers feel uncomfortable and unsafe [39]. Privacy risk has been identified by [40] as one of the main factors preventing consumers from purchasing online.

Due to the impersonal nature of e-commerce, it is impossible for consumers to test the product before the physical delivery [41]. As a result, consumers assume the risks of receiving products that do not meet their requirements or do not function as they are supposed to. In addition, the presentation of defective or non-genuine products as new and genuine products on the internet prevents consumers from purchasing online [42]. According to [43], consumers are less likely to purchase certain categories of products online, namely cosmetics and perfumes, since these articles need to be tested before purchasing them. Other studies have proven that product risk is negatively correlated with consumers' purchase intention [41,44]. The literature shows that delivery risk also affects consumer purchase intention. According to [43], delivery time significantly affects the consumer's online shopping behavior. Delivery failure also represents a key determinant of their

purchase intention. However, some consumers do not worry about this issue, since most online retailers offer a second delivery if the first one fails [44].

## 2.2. Acceptability of Pick-Up Point Delivery by Consumers

In developed countries, such as France, Belgium, Germany, and the United States, the pick-up point (collection and delivery point) has become a relevant point for urban parcel distribution [21,45]. There are two types of collection and delivery points, namely: (1) unattended pick-up points and (2) attended pick-up points. The first type refers to a set of lockers where consumers can pay for their online orders, collect their parcels, and have goods that do not meet their needs returned if necessary. Unattended collection and delivery point use PINs (Personal Identification Numbers) to control delivery by the carrier and collection of the package by the consumer [46]. In the case of monitored pick-up points, parcels are delivered to specific locations, such as: petrol stations, the post office, the pharmacy, or the grocery shop. At these collection and delivery points, shop staff facilitate the drop-off and collection processes [45]. There are several advantages to using pick-up points. Firstly, they can reduce the VKT (vehicle kilometers travelled) of parcel delivery companies, as the number of delivery locations and redelivery attempts will be reduced. In this case, courier vans will no longer need to go to each consumer's home (Figure 1). In addition, since the pick-up points are located along major roads and near public transport terminals, i.e., bus/metro stations and railway stations, they can offer consumers the opportunity to collect their parcels (or return the product) during their daily commute, thus reducing consumers' VKT [28]. In addition, when a pick-up point is located close to a consumer's home or workplace, car trips can be replaced by walking, thus improving the quality of the urban environment [47].



**Figure 1.** Traditional and modern models of last-mile delivery “adapted with permission from Kedia, 2020” [1].

European consumers have a preference for using pick-up points when buying a product on the internet, this finding has been justified by the daily growth of pick-up point networks [21]. This is the case with UPS which implemented more than 20,000 pick-up points in 2017 [1]. The Table 1 shows the highest operating pick-up point networks in the world.

**Table 1.** Most operating pick-up point networks in the world.

| Name            | Type  | Number | Countries                         |
|-----------------|-------|--------|-----------------------------------|
| UPS             | SP/PL | 22,000 | North America and Parts of Europe |
| Pick-up Service | SP/PL | 20,000 | 14 European countries             |
| Amazon          | SP/PL | 19,500 | Parts of Europe                   |
| Mondial Relay   | SP/PL | 13,000 | Seven European countries          |
| Kiala           | SP    | 6700   | Five European countries           |

The adoption of the pick-up point delivery solution by consumers requires consideration of various factors, including the socio-demographic characteristics of consumers, namely: gender, age, education level, and income, and the characteristics of the pick-up point network: location, density, and opening hours [9]. Starting with socio-demographic characteristics, Ref. [28] have affirmed that gender also influences consumers' willingness to use collection and delivery points. In addition, young people and employees are more willing to use this service, in contrast to the elderly and unemployed. The study conducted by [45] on online shoppers in the Netherlands, shows that consumers with a high education level and previous experience of online shopping are more likely to use the option of pick-up point delivery when purchasing a product online. Moreover, women were found to be more likely to use this delivery option. On the other hand, Ref. [21] indicated that the availability of smartphones, tablets, laptops, internet penetration, and the frequency of physical store trips are all factors that can identify potential locations for pick-up points.

According to [48], the location of these collection/delivery points is the main determinant for consumer adoption of this delivery method. In contrast, Refs. [12,28] stated that population density has a significant impact on consumer willingness to use this delivery option. People living in urban areas are more likely to use the click and collect service in contrast to those living in suburban areas [49]. According to [45], living within a 5-min trip by car increases the likelihood of using the collection points. Based on the study conducted by [50], post offices constitute the ideal place to locate the pick-up points, as they are widely accessible and have proven to be very useful in minimizing VKT and emissions. However, Ref. [21] stated that the pick-up point should be located close to a train station. The opening hours of such points also influence the consumer's willingness to use the pick-up point delivery option [45]. The factor of parking availability near the pickup point has also been found to affect consumer acceptability of this type of delivery [28]. Simultaneously, [51]'s work showed that parking availability, hours of operation, time slots, and delivery fees significantly affect consumers' choice of pickup and delivery points. In contrast, Ref. [9] showed that reliability, convenience, and privacy are the main criteria that can encourage consumers to use this delivery option.

From what has been mentioned above, it is obvious that the consumer's online shopping behavior and their willingness to use pick-up points depends on a number of factors. However, these factors are not necessarily the same in all countries, they vary in function of local conditions. Taking as an example the proportion of households owning a laptop, this rate remains low in Morocco (a developing country) compared to Paris (a developed country) [52]. The population density in the city of Casablanca (15,263 inhabitants/km<sup>2</sup>) is also low, if we compare this to other countries (Paris: 20,544.8 inhabitants/km<sup>2</sup>). The motorization rate in Morocco is likewise lower than in European countries (e.g., France or Spain) [22]. All these differences could imply an indirect correlation with the use of pick-up points by Moroccan consumers.

### 3. Materials and Methods

This research was a qualitative case study. To collect the data, the first author, El Moussaoui, went to the pick-up points located in the districts of Maarif, Ghandi, and Ain Sebaa. El Moussaoui joined the consumers who pick up their parcels at these points by

talking to them about the research topic in advance and requesting them to answer the questions (semi-directive interviews). However, the majority of the consumers refused to be interviewed (some said that they are employees and do not have the time to respond to the questions, and others stated that they are afraid of being affected by the COVID-19 virus). Consequently, this study used a focus group technique, which was accepted by all consumers on condition that the focus group session would be organized on the weekend, and that all participants would wear a mask.

In the case of qualitative research, the researcher must interact directly with the selected sample of individuals. The sample size must be smaller than studies based on quantitative data [53]. According to [28], the sample size for a qualitative study should be between 10 and 40 interviewees. Since this research applied the focus group method and the qualitative study is only about consumers, a sample size of 60 was used. This choice can also be justified by the following reason: When deciding on the sample size, it must not only take into account the size of the population, but also the tolerated margin of error and the accuracy intended in the results. If the answers of some participants in the survey were not 100% correct, this will not influence the validity of the results. In short, a larger sample size will increase the reliability of the generalization.

In this study, ten participants were taken per session. During the fifth focus group session, the participants' responses began to reiterate those of previous groups, this process is called "saturation". The fifth session provided data that had already been discussed before. At this point, the sample size was limited to 50 people.

It should be noted that any qualitative survey based on focus groups or semi-structured interviews requires a structured document called an interview guide (Appendix A). As indicated by [54], an interview guide needs to start with general questions and then move on to specific questions to put the interviewee at ease. The selection of the people who participated in the focus groups was based on their gender, occupation, and level of education. However, all focus group members were required to be residents of the city of Casablanca to be allowed to participate. In the five focus group sessions, there were five age categories, namely 18–30 years, 31–40 years, 41–50 years, 51–60 years, and 61 years or older, with most members (56%) belonging to the youngest group (between 18 and 30 years). In addition, 54% of the participants were women. The profile of the participants is summarized in Table 2.

**Table 2.** Profile of participants in focus group sessions.

| Participant      | Category | Number | Percentage |
|------------------|----------|--------|------------|
| Gender           | Male     | 23     | 46%        |
|                  | Female   | 27     | 54%        |
| Age              | 18–30    | 28     | 56%        |
|                  | 31–40    | 12     | 24%        |
|                  | 41–50    | 5      | 10%        |
|                  | 51–60    | 3      | 6%         |
|                  | 61 Plus  | 2      | 4%         |
| Family situation | Single   | 31     | 62%        |
|                  | Married  | 19     | 38%        |
| Study level      | Without  | 0      | 0%         |
|                  | Bac + 2  | 6      | 12%        |
|                  | Bac + 3  | 12     | 21%        |
|                  | Bac + 5  | 25     | 50%        |
|                  | Bac + 8  | 7      | 14%        |

**Table 2.** *Cont.*

| Participant | Category   | Number | Percentage |
|-------------|------------|--------|------------|
| Occupation  | Student    | 17     | 34%        |
|             | Employee   | 26     | 52%        |
|             | Retired    | 2      | 4%         |
|             | Unemployed | 4      | 8%         |
|             | Homemaker  | 1      | 2%         |

At the beginning of each session, participants were put at ease to facilitate exchanges. Each session was recorded using an iPhone 10 digital recorder and transcribed for later analysis. There are several software packages available for the content analysis of qualitative research, such as Nvivo 10 [55]. The next section of this paper is devoted to the analysis of the qualitative data collected from the 50 consumers who participated in the 5 focus group sessions conducted between 19 November and 23 December 2022.

#### 4. Results and Discussion

As we know, content analysis and interpretation are the final phase of any qualitative survey. The synthesis of the results of this analysis will contribute significantly to completing the theoretical inventory relating to the consumer's online shopping behavior and their willingness to use the pick-up points. In this context, this study processed the consumers' attributes using qualitative data analysis software (Nvivo 10). The results of the content analysis of these attributes are as follows:

##### 4.1. Consumers' Attributes

Starting with gender, the most dominant gender is female (27 women). This is exactly the case with some studies conducted in India and China which revealed that female consumers buy online more than male consumers [28]. The age of the consumers also influences online shopping behavior. According to the results of this study, the age category 18–30 is the most dominant category (28 consumers), followed by the age category 31–40 (12 consumers), which shows that young Moroccans are the most likely consumers to buy online. This finding may be due to the progressive use of information and communication technologies by younger adults (smartphones, tablets, computers, etc.). This is particularly the case with the study conducted by [27] who showed that young people are the age group most likely to buy online. The education level of consumers also impacts the choice of purchase mode. Consumers with a Bac + 5 (25 individuals) and a Bac + 3 are the most likely to buy products online. This is particularly the case with the study conducted by [56] who indicated that well-educated individuals are more likely to shop online than less educated individuals. In addition, consumers' occupation also influences online shopping behavior. The employee's category is the most dominant category (26 consumers), followed by students (17 consumers). This is exactly the case with the studies conducted by [27,30] which show that full-time workers and students buy online more than others. The partner status of the consumer had earlier been reported as a determinant of purchasing behavior. According to [28], single consumers prefer to buy their products on the internet, unlike couples who want to touch and check the desired product before buying it. This finding was confirmed in the current study, with singles constituting almost two thirds (31 persons) of the total participants (50 consumers).

Understanding how consumers perceive online shopping (Section 4.2) made it easier to understand their acceptability of pick-up points (Section 4.3). In each of the sub-sections, selected extracts are presented.

#### 4.2. Consumer Online Shopping Behavior

The results of the analysis of the first axis of the study “consumer online shopping behavior” allowed us to classify the selected themes into two main categories, as shown in the table below (Table 3). Let us take as an example the theme of “spatial flexibility”, which refers to the possibility to buy a product without having to go to physical shops. Several codes were developed during the focus group sessions, namely: “avoid travel”, “save time”, and “avoid parking”.

**Table 3.** Code development—consumer online shopping behavior.

|                                  | Theme                              | Codes                                                                                            |
|----------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------|
| Advantages of online shopping    | Spatial and temporal flexibility   | Avoid travel; save time; avoid parking.                                                          |
|                                  | Content and quality of information | Choose the desired product; offer alternative products; rely on the comments and reviews rubric. |
|                                  | Competitive prices                 | Deals save my money; special offers motivate my purchasing behavior.                             |
| Disadvantages of online shopping | Privacy and security               | It depends on the website; I feel comfortable only if I buy from a well-known website.           |
|                                  | Product risk                       | We were surprised when we received the product; I will not buy from these retailers again.       |
|                                  | Delivery                           | It depends on the day of delivery; I have already missed a home delivery.                        |

##### 4.2.1. Spatial and Temporal Flexibility

Spatial flexibility refers to the possibility to buy items without travelling to a shopping center. The results show that online shopping allows consumers to minimize trips to physical shops, save time, avoid parking, but most importantly save physical energy. This is elucidated in the following, “We can order anything we want online with any device connected to the internet. This allows us to avoid travelling and therefore to save time for other things” E.A.

Temporal flexibility implies the possibility to shop after working hours or at any time of the day. Participants in the focus group sessions stated that they often buy on the internet when they are busy with other things and do not have time to go to traditional shops, as well as during sales and promotions. This finding was confirmed by a participant’s statement, “I prefer to buy online when I don’t have time to go to physical shops, but also during sales periods” R.M.

From this, it can be alluded that the combination of the two sub-themes represents one of the advantages of online shopping, as the consumer can buy the product he wants at any time and without having to go to a shop. This is directly in line with the studies conducted by [30,31] who have indicated that online shopping allows consumers to buy their desired products at their preferred time (after working hours or on the weekend) without travelling to traditional shops.

##### 4.2.2. Content and Quality of Information

An e-commerce website includes several types of information: product-related information, such as prices and product descriptions; and service-related information, including order and delivery information. The results of this study show that the content (i.e., the quantity, variety, and usefulness of the information provided on the website) and the quality (which is measured in terms of relevance, accuracy, timeliness, completeness, and consistency) of the information are two key elements for consumers opting to buy online.

To encourage consumers to buy their products on the internet, all information provided on shopping sites must be up-to-date, sufficient, consistent, and easy to understand [33]. For example, a participant said, “Most websites give the consumer a lot of details about the product, such as: color, ingredients, size, etc., in order to make it easier for him/her to choose the desired product” O.R. When the authors asked about the information quality of the website,

all respondents said that the reliability and reputation of the website directly influenced their purchase decision. For instance, one participant said, *“The quality of information for me is the reliability of the information and the presence of all the desired data (price, size, description, specificities). If I can’t find what I need to check the product, I may not buy it”* I.K. This response of the consumer participating in the focus group sessions is consistent with the study carried out by [32] who proved that consumers’ evaluation of products and services can be influenced by the presence of all information related to the product, but also by the brand’s reputation. This can enrich consumers’ online shopping experience by giving them a sense of pleasure and creating a positive shopping atmosphere.

#### 4.2.3. Competitive Prices

Online shopping offers businesses the opportunity to reach consumers globally and directly. However, consumer satisfaction is a challenge for many internet sellers, as the online environment is highly competitive. Indeed, consumers are attracted to online shopping not only because it is very convenient but also because it offers competitive prices. The results show that employees find the prices of products reasonable, unlike students, retirees, and homemakers who indicate that prices have increased significantly especially during the pandemic period. This is illustrated by the following statements: Employee, *“The prices of products are moderately reasonable, there is a margin of increase, but it is normal during the pandemic period”* S.M./Student: *“I don’t think so, as prices have gone up recently, so it’s no longer reasonable”* K.H. Based on this finding, it can be deduced that the competitive price of the product significantly influences the consumer’s purchase decision. This is the case of the study conducted by [34] who showed that pricing has a direct impact on the attractiveness of the consumer to buy their products on the internet.

The results also showed that the simplest reason for consumers to buy online is undoubtedly to save money by taking advantage of the cheaper prices offered by online retailers. For example, a participant said: *“Yes, I always take advantage of the special offers offered by websites, they motivate me to consume more, and save my money”* R.M. Similarly, another said: *“Special offers: promotions, discounts and free delivery, allows me to save money, and encourages me to purchase online”* A.Y. This is in line with the study conducted by [35] which indicates that to influence the consumer’s buying behavior and encourage them to buy on the internet, it is necessary to make the prices of the products sold online more competitive than the prices of the products available in the physical shops. Similarly, special offers should be emphasized [37,38]. Furthermore, consumers need to be informed about various sales promotion programs through the launch of advertisements, which will make online shopping more attractive and popular for them. Ref. [36] agreed with [35]’s point of view, they showed that the price list of online products has a significant impact on the consumer’s online buying behavior. To stimulate internet shopping, this list must be less expensive than the usual price list in physical markets. Online retailers therefore need to offer more competitive prices to attract more consumers and encourage them to make a purchase decision. In sum, it can be alluded that a competitive price and an attractive promotion can positively influence the buying decision of consumers.

#### 4.2.4. Privacy and Security

Privacy and security indicate the basis of any online transaction [9]. Privacy refers to consumers’ concerns about the misuse of their personal information, while security refers to consumers’ concerns about their personal data being compromised and transmitted to a third party [39]. The results highlight these two concepts. For instance, one participant said, *“Security is being able to browse the website without fear of having a problem (hacking, piracy). Confidentiality is being able to entrust data that will not be used to my disadvantage or fall into the hands of other companies”* E.S. Another participant said, *“Privacy and security are the keys to success in e-commerce. According to a study I conducted on e-commerce in the food retail sector, security and the lack of regulation are the real obstacles to the development of this new mode of consumption by Moroccans”* E.O.

Once consumers are faced with a risk of personal information hacking (such as their phone number, date of birth, or credit card information), they will be reluctant to buy online in the future. For example, one participant declared, *"I would not like my personal data to be accessible to everyone. A simple doubt about the privacy of a website pushes me to avoid buying a product online"* O.R. This statement is consistent with the study conducted by [40] who indicated that the privacy risk represents the main constraint for consumers shopping online, as they must disclose their private information to complete an order. When the authors asked the question *"Do you feel comfortable entering your banking information on the shopping site? Why?"*, most of the interviewees' answers leaned towards website security. The results show that consumers attach great importance to security. They only shop online on known platforms supported by a reputable payment system. To illustrate, a participant declared, *"It all depends on the website, I only buy from a well-known website, like: X and Y"* S.V. This is directly in line with the study conducted by [39] who have affirmed that consumers tend to buy a product from a seller that they trust or a branded website that they know well.

#### 4.2.5. Product Risk

In the context of electronic commerce, consumers must rely solely on the information and images displayed on the website, as they cannot touch the product. They based their choices only on advertisements and brand reputation [41]. According to these researchers, product risk refers to the perception that a purchased product does not perform as originally intended, which can significantly influence the consumer's purchasing behavior. Such a risk involves the loss of product standard, meaning that the desired product does not match the expected product, making consumers dissatisfied with the product and sometimes its brand. Product risk is also called performance risk, it refers to the possibility of buying an article that does not meet the specifications of the product put on the website. When consumers fail to properly assess the quality of a product online, they risk receiving a product that does not meet their expectations [42]. This was the case for some participants in this survey who were surprised by the product that was delivered, as it was totally different from the product launched on the website. This is illustrated by the following statement, *"I was a bit disappointed, as the product I bought looked totally different from the product launched on the retailer's website"* A.T.

It should be noted that some online retailers do not offer after-sales services, which also affects the frequency of online purchases [28,44]. The results of this survey are directly in line with the literature review. Most of the participants in the focus group sessions were angry with some online retailers who refuse to exchange the delivered product, which does not fully meet their needs (e.g., broken, etc.). In this context, they stated that this reason encourages them to not purchase products from these retailers' websites in the future. This was elucidated in the following, *"Some sellers like X are not serious and due to lack of time, I give up. Therefore, I do not buy from these suppliers again"* E.O. This confirms that product risk is negatively correlated with consumers' purchase intention.

#### 4.2.6. Delivery Risk

Delivery is one of the biggest concerns for consumers wishing to purchase their products over the internet. The results showed that delivery companies that do not deliver parcels within the agreed time frame may discourage consumers from buying online again. For instance, one participant said, *"It all depends on the day of delivery, if the carrier can deliver the product the same day or the next day, yes I will order it, if not I will go to the shop to buy it"* B.A. This is directly in line with the study conducted by [43] who stated that most consumers who opt for online shopping consider the factor of delivery time as a criterion impacting the consumer's buying behavior. Not delivering the parcel on time may discourage them from purchasing online.

Most consumers (both employees and students) who participated in this study indicated that they had already missed a home delivery, which may be due to their occupation

(for employees) or their university schedule (for students). Although this type of problem is common and frequent, online shoppers do not worry about missing home delivery, as most online retailers offer a second delivery [44]. This was also confirmed by one of the interviewees, *“The parcel company communicates the day of delivery, but not the time, as they cannot know the delivery time spent on other consumers and their organization during the day. However, they always offer me a second delivery after two days at the latest”* H.A. Nevertheless, 2 consumers out of the 50 participants in this survey indicated that the parcel delivery company could not deliver the product a second time. From their responses, it can be deduced that the transport company made this decision because of the increased costs of fuel, handling, and the loss of time that could be spent on other deliveries. This is illustrated in the following speech, *“Yes, I had experiences in this sense (missing a home delivery), the parcel company informs me about the day of delivery and not the exact time. The offer of a second delivery depends on the company, some of them offer me a second delivery the next day, while others inform me that it is impossible to deliver the parcel another time because of the increased transport costs”* T.M.

#### 4.3. Consumer Acceptability of Pick-Up Point Delivery

The results show that the factors cited in the literature review influence Moroccan consumers' choice to use a pick-up point for the collection of their products purchased online. But which factor is more important to which group of people? Discussions with participants in the focus group sessions identified several codes (Table 4), for example: *“A high number of these points may encourage me to use this delivery option again”*; *“I will travel fewer kilometers and save travel costs”*.

**Table 4.** Code development—Acceptability of pick-up point delivery by consumers.

|                                                              | Theme                                  | Codes                                                                                                                                                                               |
|--------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Factors influencing consumers' choice to use a pick-up point | Location and density of pick-up points | I prefer to find them near my home or my workplace; save time and fuel costs.                                                                                                       |
|                                                              | Parking availability                   | Sometimes I don't find a car park beside the post office, but it doesn't matter to me; I can park my car in a safe place and walk a few dozen meters to avoid any parking problems. |
|                                                              | Pick-up point security                 | I consider supermarkets, post offices, and petrol stations as secure pick-up points; they are well-lit and often have security cameras.                                             |
|                                                              | Opening hours of the pick-up points    | I prefer to collect my parcel from supermarkets, they are more convenient, not closed on weekends and stay open until 10 pm; post offices usually close at 4 pm.                    |

##### 4.3.1. Location and Density of the Pick-Up Point

The location of the pick-up point has a significant impact on consumer behavior. The results of this study indicate that this factor allows consumers to minimize the number of trips related to online shopping, the physical effort, but also the transport costs. For instance, one consumer said, *“I prefer to find them close to my home or to my university because these places will save me time, physical effort but also travel costs”* A.I. (Male, 18–30, Student). This statement is consistent with the study carried out by [48] which indicated that pick-up points located close to the consumer's home, university, or workplace can encourage them to use these installations when purchasing a product on the internet while minimizing travel costs and reducing the number of car trips. However, pick-up points located in regular shopping areas or on daily and usual routes (home–work) allow consumers to combine parcel collection with other usual trips [19]. This finding was supported by the research results. For example, one participant said, *“I prefer to find the pick-up points on my work-home trip because it is more convenient and saves me time”* T.M. (Female, 51–60, Employee).

The density of the network of pick-up points also constitutes a factor that consumers consider when deciding to use these points. The results showed that the high density of these collection and delivery points can encourage consumers to use this delivery option again since it allows them to travel fewer kilometers to collect their packages. To illustrate, a participant declared, *“The existence of a high number of pick-up points in Casablanca may encourage me to always use this type of delivery on online shopping since I will travel fewer kilometers and save travel costs”* A.T. (Male, 31–40, Employee). This is the case of the studies conducted by [9,28] who showed that a dense network of such points allows them to save money and minimize the VKT.

#### 4.3.2. Availability of Parking

The availability of parking within the proximity of pick-up points seems to be another factor that can affect the attractiveness of such points. However, the focus group sessions carried out have shown that car owners have no problem if they are unable to find parking spaces next to the pick-up point, they can park their vehicles and walk a few dozen meters. Indeed, other consumers don't care about the availability of parking near pick-up points since they are not motorized. This is illustrated in the following statements, *“Sometimes I can't find a car park beside the pick-up point, but it doesn't make any difference to me. I can park my car in a safe place and walk a few dozen meters to avoid any parking-related problems, including lawsuits due to unauthorized parking, I am talking about second lane parking”* Z.E (Female, 31–40, Employee)/ *“I am not motorized, so I don't care if there are parking spaces or not”* M.B. (Male, 18–30, Student). These statements are inconsistent with the studies carried out by [28,51] which indicated that the factor of parking availability significantly affects the consumer acceptability of this type of delivery.

#### 4.3.3. Pick-Up Point Security

The security of pick-up points also represents a factor influencing consumers' choice to use these points in online shopping. From the results, it can be deduced that supermarkets, post offices, and petrol stations are the most secure type of pick-up points. For instance, one participant said, *“I consider supermarkets, post offices, and petrol stations as safe pick-up points because they are well-lit and often have security cameras”* K.Z. (Male, 18–30, Unemployed). Similarly, another participant said, *“Finding a security guard at the door of shopping centers, petrol stations, and post offices gives us a feeling of security”* S.O. (Female, 31–40, Employee). This concurs with the studies conducted by [9,47] which indicate that supermarkets, post offices, and petrol stations are the most secure hotspots as they have cameras and security guards and use facial recognition technology to reduce theft. There is always the possibility of theft after the collection of parcels, outside the scope of security cameras. For this reason, the pick-up point should be equipped with additional lights and security cameras (24/7) that record everything that happens in these facilities. In addition, a private security system should be considered for all pick-up points to ensure maximum security and to encourage consumers to use this delivery option when they purchase a product on the internet.

#### 4.3.4. Opening Hours of the Pick-Up Point

Opening hours constitute another factor that may influence consumers' willingness to use a pick-up point. As we observed in the field, there are legal restrictions on the hours of operation of some pick-up points. This means that parcel collection from these points is too limited. Pick-up points such as petrol stations/supermarkets remain open until 10 p.m. all week, which allows consumers (especially employees and students who are busy with their work and studies respectively) to collect their parcels at their convenience, in contrast to pharmacies and post offices, which have a rather limited time slot. These findings were supported by the statement: *“I prefer to collect my parcel from supermarkets and service stations, they are more convenient, do not close at weekends and stay open until 10 pm unlike post offices which usually close at 4 pm and pharmacies which close on Sunday”* C.H (Female, 41–50, Employee). From this, it can be alluded that supermarkets and petrol

stations are characterized by long opening hours, which makes them attractive collection points for consumers. This agrees directly with the literature. According to [45], reduced opening hours of pharmacies and post offices represent a barrier for consumers when they want to collect their parcels. At the same time, Ref. [28] showed in their study that it is difficult for consumers to collect their parcels from post offices and pharmacies during weekdays, as these conventional pick-up points stay open until 16:00 and 18:00 respectively.

This study can be summarized as follows: For the unemployed, retired, and homemakers, the location, density, and security of the pick-up points are the only factors that affect their choice of this delivery option (the factors of parking availability and opening hours do not have a considerable influence). For employees and students, location, density, security, and opening hours are the main factors influencing their willingness to use this delivery option. The second group also excludes the factor of parking availability but considers the factor of opening hours as another determining factor in their choice of the option of pick-up point delivery when buying a product on the internet. This can be justified by the fact that employees and students are busy all the time with their work and studies, respectively, unlike the others who are free and have time to collect their parcels when they want. Consumers' ignorance of the parking availability factor can be explained by a single reason, namely: the low rate of motorization in Morocco.

## 5. Conclusions

Faced with the evolution of consumer purchasing patterns in terms of practicality, proximity, and service personalization, which is notably illustrated by e-commerce, a new last-mile delivery solution has emerged: pick-up point delivery. Although pick-up points are used widely in developed countries, this last-mile delivery solution has only recently been introduced in African countries (developing countries). Several parcel delivery companies in Morocco have taken the initiative to test pick-up points by setting up a limited number of such points in a few cities (notably Casablanca). In this context, the authors conducted a qualitative case study using the focus group technique to understand the perceptions and expectations of consumers who use the pick-up points after purchasing a product online.

Several factors have proven to be the main advantages associated with online shopping: (1) spatial flexibility: the possibility of making purchases without going to physical shops; (2) temporal flexibility: the possibility of shopping at any time of the day; (3) great information content: the possibility to compare several shops and products; and (4) best deals: the possibility to buy products at a lower price.

Similarly, several factors were identified as the main disadvantages associated with online shopping. These include (1) privacy and security issues: e.g., the risk of losing credit card information; (2) product risk: the risk of damage or loss of goods purchased online/the inability to test the quality of a product; and (3) delivery risk: the delivery of a parcel to the wrong place after the confirmation of the online order.

In terms of factors affecting the consumer's willingness to use the pick-up points, there was a divergence of opinions between employees and students; and the unemployed, retired, and homemakers. For the first group: the location, density, security, and opening hours are the main factors influencing their willingness to use the pick-up points when purchasing a product online. For the second group: the location, density, and security of the pick-up points are the only factors that affect their choice of this delivery option.

## 6. Recommendations

In recent years, many initiatives have been introduced by public authorities to combat the negative impacts of urban logistics. It is clear that urban freight occupies a special position in the concerns of these actors. Since urban freight is a branch of transport, it seemed logical to follow the same reasoning applied to passenger transport and mobility. However, the functioning of urban freight transport poses completely different challenges than those of passengers. The studies conducted by various researchers during the past

decade have provided some useful lessons and insights into the field of urban logistics. Urban consumption patterns have changed dramatically, e-commerce has become an important part of the retail sector and has changed the way in which goods are delivered in cities. This article focuses on how pick-up points can complete the actions already taken by public authorities to organize urban logistics, in particular e-commerce distribution.

In fact, the number of pick-up points needed in a city depends on the willingness of consumers to use this delivery option. In addition, the proliferation of pick-up points by different companies has little effect on environmental gains and does not represent a direct economic benefit to businesses. The main challenge is how to increase the number of pick-up point users.

#### *6.1. Recommendations for Urban Planning Authorities, Transport Planners, Retailers, and Parcel Transport Companies*

- Urban planning authorities should take into account consumers' choice of location for pick-up points when planning urban development (e.g., placing supermarkets near residential areas).
- Transport planners should envisage providing adequate infrastructure to encourage the use of alternative transport modes, such as cycling, by providing a dedicated cycle path and secured bicycle parks close to the pick-up points. Since the safety/security of parcels is a major concern for individual consumers, they should seriously consider installing security cameras in their residential premises to combat unattended parcel theft, especially in areas where the risk of theft is high.
- Retailers who are only active in physical shops, may consider also operating in the online environment, as the proportion of the Moroccan population shopping online has increased significantly. Retailers can benefit from knowing the factors influencing consumers' online shopping behavior. For example, providing more product information and offering competitive prices to online consumers could increase their sales and profits.
- Parcel transport companies can also take the results of this study into consideration when developing a network of pick-up points. For example, supermarkets are potentially suitable locations for a collection point, as they are densely located in the city and easily accessible, especially in residential areas. Similarly, logistics service providers should take into account the population distribution between different districts of the city when deciding on the optimal location of pick-up points. Due to the high sensitivity to shipping costs, courier companies could also consider offering financial incentives to consumers who use the pick-up delivery option (e.g., reducing delivery costs) to motivate and encourage other consumers who opt for home delivery to choose this type of delivery in the future.

#### *6.2. Recommendations for Researchers, Practitioners, and Academics*

- From a theoretical perspective, this paper can be used as a reference or a starting point for future research on this topic. The results of this qualitative study will contribute significantly to the theoretical literature on consumer online shopping behavior and their willingness to use pick-up points. In addition, they will allow researchers and practitioners to identify the convergence and divergence points between the data collected from the Moroccan context and the existing literature.
- From a methodological perspective, the data collection technique used in this study (focus group) may encourage researchers and practitioners to use it in their future research, as it reduces the time needed for data collection and ensures a larger sample size, which is not the case for semi-structured interviews.

### **7. Limitations and Future Research**

This study presents some limitations:

- It only considered FMCG products (for example, milk, gum, fruit and vegetables, toilet paper, soda, beer, and over-the-counter drugs like aspirin). The results related to certain factors (competitive prices) may be different if we focus on several products. Future research can take this limitation into consideration by focusing on different types of products.
- The authors have ignored some major events, such as COVID-19. The latter can radically change consumers' online shopping behavior and create new normality, which has not been considered in this study. The effects of COVID-19 had a significant impact on the global economy. At the beginning of the pandemic, containment had put strong pressure on supply chains, as goods had to keep circulating, and most consumers stayed at home. As a result, online shopping evolved rapidly and unexpectedly. The new security regulations have significantly affected the urban logistics sector. Restaurants, retailers, and all kinds of producers started to open e-commerce channels and develop delivery services. They have tried to address restrictions and adapt to changes in customer behavior so as to be more competitive in the market. Urban freight deliveries have been particularly affected, both positively and negatively. On the negative side, e-commerce companies have found difficulties in coping with the increase in orders, which has led to delays and service interruptions. Logistics service providers also suffered from a lack of resources, especially in terms of personnel and capacity. New security regulations have made direct deliveries more difficult and pushed logistics service providers to adopt new digital processes for delivery transactions. On the positive side, urban freight deliveries benefited from an unusual lack of congestion and easier access to parking, which in turn reduced delivery time. Containment has improved the efficiency and success rate of deliveries. However, with the return to normality, it is unclear how consumer behavior and urban freight flows will evolve. All this needs to be studied soon.
- This study did not take into consideration certain factors such as urban land use schemes. Therefore, it may be necessary to include these factors in future studies before implementing a network of pick-up points. In addition, the access of several vehicles at the same time to these points paves the way for other future research to investigate the effect of the use of this delivery option on traffic conditions in the proximity of such points. On the other hand, the authors have chosen only participants who use pick-up points. It would be appropriate to conduct future research, collecting data from both users and non-users of these points.

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## Appendix A. Interview Guide

### 1. General information about the interviewee

- First name/Last name: \_\_\_\_\_
- What is your gender?
  - ☐ Male
  - ☐ Female
- What is your age? (Years)
  - ☐ 18–29
  - ☐ 30–39
  - ☐ 40–49
  - ☐ 50–59
  - ☐ 60–Plus
- What is your family situation?
  - ☐ Single
  - ☐ Married
- What is your level of education?
  - ☐ None
  - ☐ Bac
  - ☐ Bac + 2
  - ☐ Bac + 3
  - ☐ Bac + 5
  - ☐ Bac + 8
  - ☐ Other
- What is your profession?
  - ☐ Student
  - ☐ Part-time employee
  - ☐ Full-time employee
  - ☐ Unemployed
  - ☐ Homemaker
  - ☐ Retired
  - ☐ Other

### 2. Consumer online shopping behaviour

#### Spatial and temporal flexibility

- Does buying online allow you to avoid trips to physical stores? If yes, how? If no, why?
- When do you prefer to buy online? Why?

#### Information content and quality

- Does buying online help you choose the product you want? If yes, please explain how?
- How much does the quality of information on the website influence your buying decision?

#### Competitive prices

- Are the prices of imported FMCG products reasonable in Morocco? If not, please give examples?
- Do you benefit from special offers (low-priced products) when buying online? If yes, what do you get from these offers? Do these special offers influence your buying frequency (the number of purchases made by a customer over a given period)? If yes, how? If no, why?

#### Privacy and security

- What does privacy and security mean to you?
- Do you feel comfortable entering banking information on the shopping site? Why?
- Are you surprised one day by the hacking of your personal data? If yes, how did you manage this situation?

## Product risk

- What does product quality and experience mean to you?
- Have you bought products (FMCG) online without having touched them first? If yes, were you satisfied with the quality of these products? If not, why?
- How would you react if you found the product you bought online broken?

## Delivery risk

- When buying a (FMCG) product on the internet, when do you prefer to receive it?
- If you need a product as soon as possible, were you prepared to order it on the internet?
- Have you ever missed a home delivery? If so, does the parcel delivery company ever inform you about the time you have to go to your home to collect your parcel? Does the parcel delivery company offer you a second delivery? If not, where do you look for your parcel?

## 3. Acceptability of pick-up point delivery by consumer

## Location and density of the pickup point

- Where do you prefer to find the pick-up points ? Why these locations?
- Does the location and density of pick-up points have a significant effect on your trip to collect your parcel? Please explain how?

## Parking availability

- Have you encountered any parking problems when collecting your parcel from a pick-up point?

## Pick-up point security

- How would you describe the security?
- What are the most secure pick-up points in your opinion? Why?
- ☐ Service stations
- ☐ Supermarkets
- ☐ Pharmacies
- ☐ Post offices
- ☐ Dairies
- ☐ Other

## Opening hours of the pick-up point

- At what time you prefer to collect your parcel?
- ☐ 09:00 a.m.–12:00 a.m.
- ☐ 12:00 a.m.–14:00 a.m.
- ☐ 14:00 a.m.–18:00 a.m.
- ☐ Other
- From which type of pick-up points you prefer to collect your parcel? Why?

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