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DATA-DRIVEN URBAN COMMERCE MANAGEMENT: THE CASE OF VILLENA

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Abstract

Local commerce has been impacted by various external factors over the last decades. From the changeover to the euro in the early 2000s, to the great economic recession in 2008, to a global pandemic in the last two years. During this period, society has continually evolved, changing tastes and preferences, which has been a major challenge for small businesses.

In this way, local trade has been studied by economists and institutions in order to push it towards new trends. The presence on the Internet is increasing, which is why the digital transformation is becoming so important. New technologies provide a wide range of opportunities for commerce, but they must be used correctly, otherwise they will be incurring on a cost. In this context, data and data-driven management is one of the main pillars by which local councils, associations and businesses are being guided.

The research has been carried out in several stages. Firstly, a contextualization of urban commerce and open shopping centers was carried out. In addition to explaining the many concepts related to the subject, a presentation of the city under study was made. Finally, a qualitative research was carried out in collaboration with the marketing consulting company *Neuromobile* and *Asociación de Comerciantes de Villena*. Thanks to the cession of the data collected through a survey carried out by them, it has been possible to accomplish an analysis of the same, obtaining several conclusions that will be presented at the end of the study.

Keywords: local commerce, smart city, data, people, shopping experience, Villena.

Resumen

El comercio local se ha visto afectado por diversos factores externos en las últimas décadas. Desde el cambio al euro a principios de la década de los 2000, pasando por la gran recesión económica de 2008, hasta una pandemia mundial en los últimos dos años. Durante este periodo, la sociedad ha evolucionado continuamente, cambiando gustos y preferencias, lo que ha supuesto un gran reto para el pequeño comercio.

Así, el comercio local ha sido estudiado por economistas e instituciones para impulsarlo hacia nuevas tendencias. La presencia en Internet es cada vez mayor, por lo que la transformación digital está adquiriendo una gran importancia. Las nuevas tecnologías aportan un amplio abanico de oportunidades al comercio pero se debe hacer un correcto uso de estas, ya que si así no fuera, se estaría incurriendo en un coste. En este contexto, el dato y la gestión a través de este es uno de los principales pilares por el cual tanto ayuntamientos como asociaciones y comercios se están guiando.

La investigación se ha llevado a cabo en varias etapas. En primer lugar, se ha realizado una contextualización del comercio urbano y de los centros comerciales abiertos. Además de explicar los numerosos conceptos relacionados con el tema, se realizará una presentación de la ciudad objeto de estudio. Por último, se llevará a cabo una investigación cualitativa en colaboración con la empresa de consultoría de marketing *Neuromobile* y la *Asociación de Comerciantes de Villena*. Gracias a la cesión de los datos recogidos a través de una encuesta realizada por ellos, se ha podido realizar un análisis de estos, obteniendo varias conclusiones que se presentarán al final de la tesis.

Palabras clave: comercio local, ciudad inteligente, datos, personas, experiencia de compra, Villena.

Laburpena

Lekuko merkataritzari hainbat kanpo-faktorek eragin diote urteotan. 200ko hamarkadaren hasieran eurora aldatu zenetik, 2008ko atzeraldi ekonomiko handitik, azken bi urteotako mundu mailako pandemiaraino. Aldi horretan, gizarteak etengabe eboluzionatu du, bere gustuak eta lehentasunak aldatuz, eta hori erronka handia izan da saltoki txikientzat.

Horrela, ekonomialariek eta erakundeek tokiko merkataritza aztertu dute joera berrietara bultzatzeko helburuarekin. Interneteko presentzia gero eta handiagoa da, eta, beraz, eraldaketa digitala garrantzi handia hartzen ari da. Teknologia berriek aukera ugari ematen dizkiote merkataritzari, baina behar bezala erabili behar dira, horrela ez balitz, kostua izango litzateke. Testuinguru horretan, udalak, elkarteak eta dendak datua erabiliz eta kudeatuz gidatu behar dira.

Ikerketa hainbat etapatan banatu da. Lehenik eta behin, hiri-merkataritza eta merkataritza-gune irekiak testuinguruan kokatuko dira. Gaiarekin lotutako kontzeptu ugariak azaltzeaz gain, aztergai den herriaren aurkezpena egin da. Azkenik, ikerketa kualitatibo bat egin da *Neuromobile*, marketin-aholkularitzako enpresarekin eta *Asociación de Comerciantes de Villena*-rekin lankidetzan. Haiek egindako inkesta baten bidez jasotako datuen lagapenari esker, datuen azterketa egin ahal izan da, eta tesiaren amaieran aurkeztuko diren hainbat ondorio atera dira.

Gako-hitzak: tokiko merkataritza, hiri adimenduna, datuak, pertsonak, erosketa-esperientzia, Villena.

1. INTRODUCTION

Society is constantly evolving, and with it, new trends and preferences to satisfy. Local commerce is an economic activity that has had to analyse these emerging trends to adapt its offer to customers' needs. Additionally, they have come up against a very difficult competitor, the Internet and its online shopping platforms. Shopping portals such as Amazon or online shops have made customers prefer to wait a few days to receive their products rather than pay a higher price in their local shops.

In addition, the current situation, marked by the Covid-19 pandemic, has pushed the vast majority of shops to their limits, and in many cases, they have had to close. Businesses have had to join forces and make a maximum effort to find solutions to the loss of customers. For the reason that local commerce has to compete against the world’s largest companies, they need to rely on business associations, institutional support and professional advice.

Setting programs up as quickly as possible might sound a proper solution. Even if the programs are different from each other, all of them should aim to solve the existing problem. However, it is essential to understand the reality in as much detail as possible to be able to design those plans and data analysis is the first step for that.

1.1. PURPOSE AND OBJECTIVES OF THE INVESTIGATION

In the following lines, the purpose of the present work will be presented in the first place. Next, the objectives, which are divided into general (objectives) and specific (sub-objectives). We will try to answer the proposed objectives through the quantitative part of the investigation, by analysing the results of the survey.

The objective of this study is to analyse the urban shopping area in a medium-sized town. The aim is to discover the profile of the person who purchases locally and for this purpose we are going to study the municipality of Villena in Alicante, Spain. To do this, a comparison will be made of how customers behave in different places where they can make their shopping.

In addition to this, we are also going to find out how factors such as proximity, price or trust exert an influence on customers when making their purchases. Moreover, this study aims to offer solutions to the problems that customers have expressed in the survey, to help the commerce of the town improve customers’ shopping experience and consequently, the number of sales. It is also intended to try to analyse the factors why local shops are losing customers in the younger age groups, as a first step to designing strategies to retain and attract this young group to participate in the local economy.

- **Objective 1: describing the behaviour of individuals in the local commerce of Villena, as well as their tastes and preferences.**
    - Sub-objective 1.1: defining the frequency of purchases on the urban commerce of Villena.
    - Sub-objective 1.2: describing the product preferences on the urban commerce of Villena.

  - Sub-objective 1.3: describing how the younger demographic group (18-44 years old) interacts with local commerce in Villena.
  - Sub-objective 1.4: to segment Villena's shoppers into divergent groups and to describe each of those groups.
- **Objective 2: to ascertain which are the main purchase motivators in the local commerce of Villena.**
  - Sub-objective 2.1: Finding out if the factors that act as purchasing levers vary depending on the age of the person.
- **Objective 3: measuring the satisfaction level of the clients with the local commerce of Villena.**
  - Sub-objective 3.1: understanding the problems that local commerce of Villena faces.
  - Sub-objective 3.2: getting to know personal opinions about what type of products people miss on Villena's local shops.
- **Objective 4: design a series of recommendations to the town council and *Asociación de Comerciantes de Villena* to improve their urban shopping experience and the services offered.**

The objectives pursued in this research have been designed by the author together with the collaborating company and the association of commerce in Villena, under the supervision of the professor tutoring it. These have been modified throughout the process to meet the needs of the stakeholders.

1.2. SCOPE

To develop this research, information has been sought in various manuals, magazines, websites, among others, to develop the contextualization of urban commerce and the literature review.

In addition to this, we have also used the data obtained from a survey carried out in January 2022 in the town of Villena and which have been provided by the collaborating company in this work, Neuromobile. In addition, both Asociación de Comerciantes Villena and the town council have provided reports and written documents that have helped in the preparation of this document.

As mentioned above, the study has been carried out on the data obtained from a survey conducted by *Neuromobile* in the town of Villena in February 2022. Although the vast majority of the participants are residents of the town, it is worth mentioning that there is a slight participation of both tourists and people from neighbouring towns, people living in the province and people who spend their holidays in the village.

1.3. JUSTIFICATION OF THE PROJECT

The continuous changes that local commerce has undergone in recent decades, together with the uncertainty brought by COVID-19, have led many local councils to start working to help their commerce and to promote their cities or towns as tourist points of interest.

Although businesses benefit from this support on an individual basis, it is true that joint association and collaboration is becoming increasingly important. Data-driven management is becoming more and more important, as by knowing the profile of the shopper and understanding their needs, more effective programs can be implemented.

The project has been motivated by *Neuromobile*'s interest in analysing the data obtained in the survey carried out in Villena and thus be able to establish future relations of formal and academic collaboration with the University of the Basque Country (UPV/EHU). At a certain point in the conversations between the teaching staff and the company, the possibility was given that one of the students at the university could carry out his final degree project, analysing the data obtained by the company and drawing the corresponding conclusions.

As the author was about to start his previous work, which was related to the current one, the professor, Jon Charterina, proposed a change of subject and this was accepted.

2. REVIEW OF THE LITERATURE

At this stage of the work different aspects and concepts related to local commerce will be encountered. The problems that businesses have had to face in recent years and some examples of how they have dealt with them will be presented.

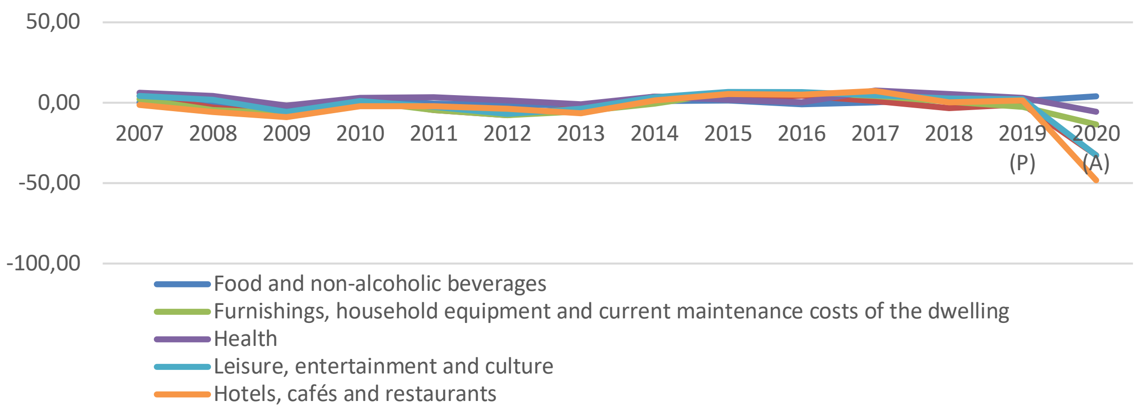
2.1. URBAN COMMERCE REVITALIZATION PROGRAMS

During the 1990s, there was an increase in retail supply in both Spain and the rest of the world. This increase in supply brought with it one characteristic, and that is that it came from outside urban centres, rather than from traditional locations such as city centres. This phenomenon is known as the third wave of retail decentralization (Schiller, 1986) and considerably affected both shops and the urban centres of Spanish cities.

The appearance and development of new technologies has evidently changed consumer habits (Marrero, 1999) which have meant a real revolution for traditional establishments. In fact, and through this process, a way of understanding commerce is being promoted and new sales channels have been developed such as online commerce. To exemplify the importance and proliferation of new technologies in commerce, a statistic from the National Institute of Statistics (INE) will be mentioned. In 2021, 85.37% of companies with less than 10 employees had computers, while ten years earlier, in 2011, the percentage fell to 69.7%.

The coronavirus pandemic has also been a turning point for economic activities on the cities, but especially local commerce as it depends on to bring together many people, companies and institutions. This is known as agglomeration economy (Albizu et al., 2020) and as during the confinement, shops around the world had to remain closed for months, all the benefits of agglomeration were gone. During this time, many managers have realized the need to adapt their businesses to the new sales channels, to communicate and deliver their products to customers. Moreover, a change of this magnitude has had a profound impact on both consumption patterns and consumer preferences.

Figure 1: Annual rate of change in household final consumption expenditure



Source: compiled by author based on INE

The graph above (INE) shows the impact of the coronavirus crisis on a year-to-year rate of change in final consumer spending by Spanish households. It is after 2019 when the demand of households fell sharply. As it can be seen, the environment around us is fast changing and unpredictable, which is why the revitalization of commerce, and the promotion of cities are the subject of concern, study and debate in the world's most advanced economies.

Ana Seguí indicates in a study on local commerce in Alicante (Seguí, 2004), that urban commerce can be located in three areas within the locality: the historic centre, the extension area of the city and the new outskirts. Each location has different characteristics and, therefore, it is useful to know how to differentiate between them and to understand the advantages and disadvantages that each one has over the others.

Table 1: Advantages and disadvantages of urban commerce depending on location

Historic centre		Extension area		Outskirts	
Advantages	**Disadvantages**	**Advantages**	**Disadvantages**	**Advantages**	**Disadvantages**
The image of the city	Not accessible by car	High population density	Loss of local identity	Low-priced building land	Strong competition between large platforms
Customers retained by neighbourhood shops	Technology introduction on traditional commerce	Main area of residence	Concentration of franchises	Better accessibility than previous areas	Need for a private vehicle

Pedestrian streets	Lack of partnership	Car parking facilities	Private or paid parking spaces	Aggressive marketing campaigns	Difficulty of pedestrian access
Fragmented and specific offer	Lack of marketing and promotion activities	Good transport connections	Growing traffic and congestions	Extended business hours	Very similar shops

Source: compiled by author based on Seguí (2004)

Many factors affect the success or failure of urban commerce in a town or city as it can be seen on the table above. However, the main factor to consider is the customer, as it should be their needs and interests the guiding star of a city's offer (de Castro et al., 2006). If these tastes or preferences are not properly considered, urban commerce in the municipality will be doomed to failure. Both retailers and institutions must align themselves to take advantage of the opportunities that arise on the environment.

In this sense, institutions together with business associations across Spain have started up several programs to help retailers retrofit their businesses. There exist multiple plans and programs which has been designed with different purposes. Some of them are focused on innovation or internationalization whereas others are intended to strengthen local shopping.

Retail Euskal Eskola is a project carried out by the Department of Tourism, Commerce and Consumption of the Basque Government. Its goal is to be a reference in the professionalization and improvement of the competitiveness of local commerce in the Basque Country. Retailers, through the website, can access a wide range of online free courses in which they are able to expand their knowledge on different areas. Digital transformation, retail marketing, consumer behaviour or digital marketing are examples of them. Furthermore, they offer 6 months of personalized advice with the aim to for understand and implement the tools that new technologies offer (Retail Euskal Eskola, n.d.).

A larger and more specific plan was performed by the Department of Innovation, Economic Development, Employment and Trade of the town hall of Valladolid. They designed an integral plan of support to proximity commerce based on 4 strategic lines, 14 programs and 41 projects that was implemented during 2019 and 2021. Improving competitiveness, stopping the emptying of city’s commercial centre, improving, and promoting quality employment and becoming sustainable are the strategic lines, which mark the general objectives of the plan (Ayuntamiento de Valladolid, 2019).

With the purpose of demonstrating that not all integral plans are built for same end, the so-called “VI Plan Integral de Fomento del Comercio Interior de Andalucía 2019/2022” is going to be introduced. The strategic objectives of this program are to promote innovation and implement new technologies, rational and balanced trade management and improve competitiveness and entrepreneurship. This is going to be achieved by actions such as simplifying bureaucracy, seminars or implementing apps (Junta de Andalucía, 2019).

The commercial revitalization programs and plans that have been mentioned in the previous lines are about improving the situation from what already exists. The revitalization concepts and ideas that will be introduced in the following section are more profound, as they have more to do with urban planning.

2.2. URBAN COMMERCIAL CENTRE

A study carried out by the University of the Basque Country on how to improve urban commerce, states that at world level, two types of commercial revitalization programs are among the best known. These are: the Business Improvement Districts (BIDs), which come from America, and the Town Centre Management (TCM), which was originated in the United Kingdom (de Castro et al., 2006).

(Mitchell, 2001) defines BIDs as a private initiative from organizations in which the owners of different businesses located in a certain area have voluntarily decided to pay a fee to meet the cost of promoting and improving the business area. Those organizations align together with the local Public Administration to achieve the best possible functioning of the ecosystem. The main difference between BIDs and TCMs is that the first one is a private initiative carried out by organisations while the second is born through the public initiative of municipalities (de Castro et al., 2006). TCMs are led by a manager who strives to develop joint strategies between the public and private sector to develop and promote commercial areas.

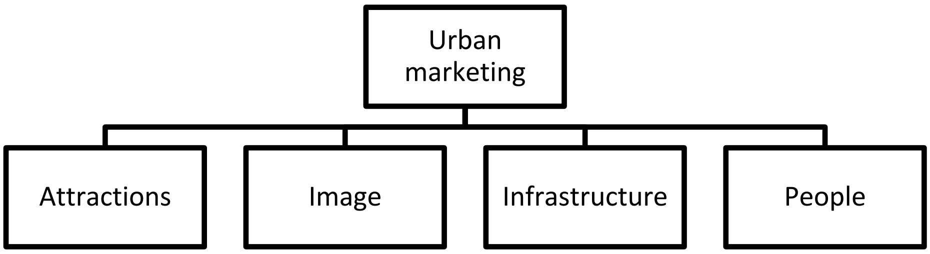
In Spain, another figure has been predominant in terms of revitalizing urban commerce, namely open commercial centres. This concept is also known as urban area shopping centres, urban commercial areas or commercial urban area and it has been implemented across multiple Spanish urban areas to boost its commerce. According to Sebastián Molinillo "the urban shopping centre is a grouping of political, economic agents and cultural aspects of a delimited urban area, linked through a legal personality that, with a common external management and a criteria of unity and its own image, pursues improvement of the socioeconomic situation of its surroundings" (Molinillo, 2002).

Due to the business grouping that an open shopping centre requires, the promotion of associationism becomes very important. Shop assistants, entrepreneurs and the local administration become responsible for promoting the OSC, as it is a city project, and all roles are important (Auren Consultores, 2020). As the open shopping centre must position itself as a commercial destination of interest, it must have a brand image and a series of services that give it added value.

Urban marketing is another concept that is connected to the topic and needs to be explained. This concept was born as a trend of non-profit marketing in Europe and the United States during the nineties of the last century. It is an efficient tool for localization of commercial areas (Pancorbo et al., 2018). It enables the city and its institutions to be in permanent contact with its target groups, recognize their demands to develop products and information programs that fit with their necessities (Pancorbo, 2005). People are who generate urban demand and it is a task of the urban manager to adequate the offer strategically. As it has been mentioned before, if shopping tastes and preferences of clients are not correctly examined a mistake will be made.

Urban marketing studies the behaviour of four variables that influence urban management: infrastructure, attractions, image and people (Pancorbo et al., 2018). If the four elements are explained, as it will be done in the following lines, the influence that each of them has over urban commercial areas will be understood.

Figure 2: Variables affecting urban management



Source: compiled by author based on Kotler, Haider y Rein (1993)

Attractions is the variable referred to physical points and events that appeal to citizens, visitors, businesses, and investors. Attractions can be divided in different categories, such as natural, human made or cultural (Turistum, n.d.). Beaches, national parks or mountains can be an example of natural attractions, while monuments are human made and music festivals can be categorized as cultural attraction. According to Martínez (2000), commerce is a vertebral instrument of the city attraction as it confers personality, image, and vitality. De Elizagarate and Zorrilla (2006) argue that the loss of commercial attractiveness is, in many cases, linked to the loss of attractiveness of the city.

Pancorbo (2008) indicates that the image of the city is the sum of beliefs, ideas and impressions that every person has about it. This idea or image is subjective, as it varies from one person to another. The Bronx in New York is an example of the image that each person has of a neighbourhood or locality in his or her head. A tourist might have a dangerous and unsafe image of this neighbourhood, while a person who lives there perceives it as his or her home. Regarding commercial areas, it is important that they have a unique and differentiated image as it helps on improving the shopping experience.

Infrastructure for Kotler, Haider and Rein (1993), it is the physical skeleton that structures a city. The elements that constitute this skeleton support the development of activities of all kinds, from social to economic ones. As it has been mentioned by Rovira (2008), pedestrian accessibility or the availability of parking spaces are factors that affect to the perceived quality and image of cities and urban commercial areas.

The last factor and the most important one is people and this variable contribute to the necessities of citizens. Once again, it is important to study their preferences as they are fast changing and sometimes unpredictable. The aim of the present paper is to study their preferences through real data.

2.3. DATA-DRIVEN MANAGEMENT

The development of new technologies as well as the increase of publications on social media allows the processing of millions of data and information, the Big Data. This information is stored in the cloud, and it is up to data managers and analysts to collect, organize, process and analyse it (Del Valle, 2022). It is a challenge for data analysts to provide quick answers by analysing corporate and stakeholder information needs.

This has given origin to the concept of "Effective Information Governance", which focuses on how to improve the management of information to extract its maximum value, obtain the greatest benefits and improve the competitiveness of businesses and enterprises (Smallwood, 2019). It is essential to find easy sharing and collaboration of these to drive innovation and decision making.

This decision-making technique is a reality today and more and more institutions and companies are using data analysis to guide their strategies. Local commerce is not being left behind in this digital transformation, but there is a general lack of knowledge about the opportunities it brings (Alarcón, B.D., 2021). In the article written by Alarcón, Oliver Risack, a Belgian sociologist living in Toledo, is interviewed. He argues that by analysing data properly, it can be transformed into business strategies with which to achieve greater profitability or new clients. Both Oliver and Marcos[1], from *Neuromobile*, confirm that small businesses make their management and decision making based on intuition and this must be left behind.

For all these reasons, an analysis is going to be conducted on the perceptions of Villena's commerce, as well as the different profiles that go to the different shopping channels that the town offers.

3. CONTEXTUALIZATION OF THE CASE

On this phase of the investigation, the case will be presented. To get a better understanding of the case, a description of the city will be provided. Later, reference will be made to the application that was developed to pursue the objectives set by *Asociación de Comerciantes de Villena* and the town council.

3.1. VILLENA

Villena is a Spanish city which is part of the Valencian Community. Located in the northwest part of Alicante, it is the capital of the region of Alto Vinalopó and it is the hub of smaller towns, such as Biar, Sax, Fuente de la Higuera, Yecla and Caudete. This interior city was settled around its Arabic castle, which now is being used as a touristic attraction.

[1] Excerpts from conversation with Marcos García, CEO of Neuromobile. <24/02/2022>

Figure 3: 2021 aerial image of Villena

Source: Wikimedia Commons (2008)

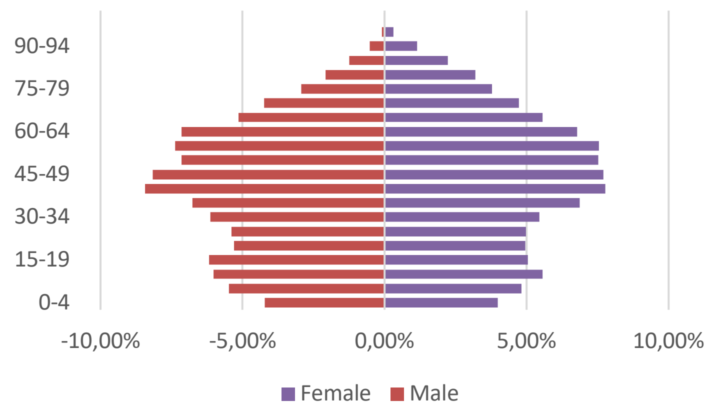
Villena has a network of roads that connects it with nearby town and cities, which also includes a highway that connects directly with Alicante on side and with the capital of Spain, Madrid on the other one. It also has a commuter train station, and a high-speed station that is connected to the Spanish high-speed train network.

With a land surface of 345,37 km2 there was living 34.025 people in the city back in 2021. Population density varies depending on the commercial zones into which the town is divided. As can be seen in Annex 1, Villena is divided into eight main areas of affluence, and it is the most central ones that have the highest population density. Thus, affluence areas 1, 2, 4, 5 and 6 are where most people live.

The average age of residents in the town also varies depending on the commercial zones. The second picture on the same annex shows how older people tend to live in the central shopping areas, while younger people tend to live in shopping areas further out, such as 3 or 7. There is a reason for this, which is that housing is cheaper on the outskirts than in the historic centre of the town.

It has relevance on the region as 64,74% of the habitants live there. The population pyramid below shows the population by five-years groups and gender in Villena on 1st January 2021. (Ayuntamiento de Villena, n.d.)

Figure 4: 2021 population pyramid of Villena



Source: compiled by author based on INE

The figure displays a pyramid with a regressive shape, which means that the population tends to be middle-advance aged. This happens because there is a large group of people living in Villena, which are between 30 and 64 years old, representing the 50,4% of the people living in the town. The group from 15 to 29 is the 14,94% and the ones over 64 years old is 18,62% (Instituto Nacional de Estadística, 2021).

Regarding economic activity, there were 2.243 companies in Villena in 2021, from which 11,77% were dedicated to industrial activities and 12,8% to construction. The main economic activity in the city are services, which represent 42,44% of the companies in the city. (*Empresas por municipio y actividad principal(4721)*, n.d.). The unemployment rate on 31st January 2022 was 13,13%, almost 3% superior than the average on the Valencian Community (*Datos Estadísticos | Trabajo | Villena - ARGOS*, n.d.).

The city has registered 35.384 tourists during 2021 which is a larger number of tourists than before the global pandemic. This has a moderate impact on the economy of Villena, which has been affected during the last couple of years (Prats, 2022).

The commercial amount indicator shows there are 19 establishments per 1000 habitants. 251 are classified as traditional alimentation commerce, 120 are focused on apparel and footwear, 96 to homeware. Additionally there are 9 supermarkets, 1 hypermarket and 22 mixed classified commerce (Ayuntamiento de Villena, n.d.).

They also have a commercial association named *Asociacion de Comerciantes de Villena* (from now on, it will be referred as ACV). It stands for conducting the town into a shopping city, offering the citizens the opportunity of having some fun while purchasing at their urban shopping centre. To achieve that, the association defends and represents the business interests, improves capabilities and decision making, communicates by continuous diffusion, and saves costs; always driven by the principles of cooperation, participation, environmental compromise, equality, and innovation. (Asociación de Comerciantes de Villena, n.d.).

Figure 5: Logo of *Asociacion de Comerciantes de Villena*

Source: Asociación de Comerciantes de Villena[2]

This Association, in collaboration with the Villena Town Council, launched the open space shopping centre project in 2005. It was born with the purpose of improving the accessibility, urban planning, lighting, cleaning and parking of the commercial streets of the city.

This open space shopping centre has been so successful that in 2017 the Ministry of Economy and Competitiveness awarded it the National Interior Commerce Award in the category of Open Shopping Centres. This award rewards the promotion and modernization of the sector as well as the partnership shown by all parties involved in the project (Alcaraz, 2017).

[2] The image has been provided by Asociación de Comerciantes de Villena for use in this study. <15/03/2022>

3.2. *03400 VILLENA* APP

As it is stated on *Neuromobile*`s web page, *03400 Villena* is a digital platform that's has been launched as an app which has become into a solution of communication with citizens that provides services to different areas of the town hall. From festivals to tourism or economic development, this platform emphasizes the relevant role that local commerce has within the economic and cultural activity of the city and the importance of improving urban commercial environment management through data.

This solution was implemented by Neuromobile back in May 2020 in the middle of Covid-19 pandemic to boost the local economy by enabling new channels of communication with citizens. The outbreak had a relevant role on the initial success of the app because it provided the information of the evolution of the pandemic in the city, which was part of the new services that were essential during that period. When the app was launched, 2000 initial downloads were achieved.

As *Asociación de Comerciantes de Villena* indicates, women are the ones that use most this app, since only 38,42% of the users are men. Moreover, 43% of the users are older than 45 years, which shows that this segment has find the app useful. There are more than 350 businesses participating in the app, which has also helped growing ACV in 50 more members. As this platform of capturing data enables a large flexibility to offer services to citizens, together with the town hall and with ACV they have added new services to capture new segments. By adding local restaurants home delivery services and management of tickets for summer concerts and festivals they have pushed young people from 18 to 25 people into local shopping.

This app is an implementation of the *Dynamic Urban Commerce* (DUC) solution offered by *Neuromobile*. This company was born between 2013 and 2014, through an idea that raised during Start-up Weekend contest in Murcia. It was first designed to serve as platform to develop marketing actions and dynamics for shopping malls. However, in 2018 in turned into a management platform that helped on decision making. They were totally settled on the shopping mall sector, so decided to adapt the capabilities of the platform to help urban areas getting dynamized. Large research was made across Spain, trying to find associations that were trying to enliven and activate local commerce. It was this moment when they contacted ACV, and the DUC solution was introduced to the association. Since the objectives of the association met with the vision of the company, they began to cooperate and *03400 Villena* App platform was released as an adaptation of the DUC solution.

DUC is a configurable, unified, and smart platform that provides the tools to manage the territory, linking the city, with its businesses, residents, and occasional tourist. It is designed to improve the shopping experience and boost the participation of the population of the geographical area the tool is targeted on. The dynamization of commercial areas is achieved by obtaining market data and analysing it to understand customer behaviour in the commercial space. By studying the collected data, dynamic marketing campaigns are created, and the tools built inside the platform help retailers to make decisions.

The purpose of this platform is to become the solution by integrating a powerful set of digital tools (BIGDATA) with a simple and intuitive interface that serves as a platform of administration and performs data management (SMARTDATA) to assess and measure the impact of the activities in which the resident and occasional citizen participates. Due to its architecture and development, it is a project that can be implemented rapidly and is easily scalable.

DUC also serves as a simple communication interface with the consumer. It is designed to be the only contact point between the client and the manager where information about local economic and cultural activities is shared. Through the platform, the customer also is provided with exclusive content and offers that are not available at any other medium.

Furthermore, bidirectional personalized communication between local businesses and administrations is offered to the inhabitant. It means that through the platform the client can directly contact businesses or administration. This leads into facilitating consumers to participate in surveys or inquiries and improving incident management and communication.

As mentioned, DUC provides technicians and managers of the urban environment with multiple levers of action such as bonds, coupons or discounts that promote economic activity. Example of those levers are segmentation of content from a single repository or facilitating connection with digital channels such as websites or social networks. Those levers also help to create dynamization plans, execute of them and monitor the objectives and main key performance indicators (KPI) of the results obtained. This solution follows the principles of the Sustainable Development Goals since it advocates for a sustainable urban and rural development through an intelligent tourism[3].

Thanks to this application, all activities related to encouraging shopping in Villena's local shops, such as promotions and prize draws, have been automated. This has made it possible to reduce the association's promotional costs by 35%.

It also serves as a data collection platform. As the application registers users, it also registers their behaviour with local commerce. For example, it is possible to obtain the average ticket of the participants in the different campaigns that are carried out. The "Villenear" campaign totalled 15,066 tickets with a value of 604,051€. By recording the data, it can be seen that the average ticket was 40€ and that the person with the most tickets has registered 218 different participations or that the ticket with the lowest value was 0.10€.

As data management is one of the objectives of both *Neuromobile* and *Asociación de Comerciantes de Villena*, a survey was launched through this platform in January 2022. The aim of the survey was to understand the shopping preferences of people in the town in order to offer them the best possible service. Once the survey was over and the information had been compiled into a database, it was time to analyse the data in order to draw conclusions for improvements.

4. METHODOLOGY

In this section of the work, the different techniques used to carry out the research about the concrete and real image of urban commerce in Villena will be explained. Firstly, the process followed from start to finish will be presented, so that a clear vision of the workflow is provided. Secondly, the sources of information used will be mentioned, and finally, the survey will be alluded.

[3] Information obtained from various documents provided by the company Neuromobile. <10/02/2022>

4.1. TIMELINE OF THE INVESTIGATION

Once the case was introduced to the author of the study, and was accepted by him during mid-February, it was decisive to design a timeline. Thus, there is a greater orientation towards responding the proposed objectives and drawing the appropriate conclusions and recommendations. For each phase of the investigation a guiding timeline has been set, which has been modified depending on time.

It is also worth mentioning in this section the involvement of the *Neuromobile* team, as well as town council workers and members of *Asociación de Comerciantes de Villena*. Several meetings have been held with them, which have served to guide the work. In the first meeting, both students and teachers met the people involved in the task and were informed of the objectives of the project. In the following meetings, the progress made in the research was reported, as well as making small adjustments as they arose during the development of the project.

Table 2: Timeline of the investigation

Tasks	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22
Information search							
Case introduction							
Contextualization							
Objectives							
Univariate analysis							
Bivariate analysis							
Open-ended answers analysis							
Multivariate analysis							
Conclusion and recommendations							
Delivery							
Presentation							

Source: elaborated by author

4.2. SOURCES OF INFORMATION USED

As mentioned in section 1.2 of the project, the information used to carry out this work has been consulted from various sources. Firstly, for the literature review part, manuals, journals, websites, integral plans of various Autonomous Communities and INE data have been used. All the sources consulted have been included in the bibliographical section, prior to the annex.

Secondly, data obtained from the survey carried out in Villena has been used. This information was shared through an excel sheet provided by *Neuromobile*. At this point, I would like to thank the people involved in the project both for providing their work and their data. I would like to mention Marcos García and Raul García, both CEO of the company *Neuromobile* and María Ángeles García and María José Sauco, both part of the administration and management of *Asociación de Comerciantes de Villena*. In addition to providing the data, these people have also contributed with information about the town of Villena and various technical data about the survey.

4.3. QUANTITATIVE TECHNIQUE: SURVEY

In this last part of the methodology, technical data on the survey performed in Villena will be presented. Consequently, it will be explained how the information collection process was carried out, into which parts the survey was divided and finally and the sample obtained will be described.

4.3.1. Information collection system

The platform used to carry out the online questionnaire has been *Tally*, a tool to create forms recommended by *Neuromobile*. This program allows making attractive forms for the user by including images, videos or emojis. The results obtained are connected with the DUC platform for the automatic updating of customer data.

The survey could only be solved through the app *03400 Villena* and to encourage participation among citizens, the first one hundred individuals who answered were awarded. It was open for response between January 25th and February 1st, 2022.

The questionnaire between ACV and *Neuromobile*, was disseminated through various channels. First, a press release was sent to local and regional media on January 27, 2022, which was published by the newspaper of Villena, *Cadena Ser* and *Confecomerç* among others. Two *WhatsApp* channels were also used, one to send the survey to customers and another to send it to establishments associated with ACV. The survey was also diffused through *Facebook*, *Instagram*, and *Twitter*. In addition, within the *03400 Villena* app, push messages and a MOF in the form of a button were created to carry out the survey from the app. Finally, a newsletter was used to send the survey to app users and partners.

4.3.2. Description of the survey

The questionnaire consists of six parts and was designed by the company *Neuromobile* to help the association know the customer and their assessment of local commerce. Moreover, their aim is to understand their buying habits in the face of the evident change in trends, visible especially after the pandemic. The survey is divided in the 7 different but connected parts.

Part 1 is designed to obtain a sociodemographic description of the buyer in the urban commerce of Villena. It is made up of eight questions where name, surname, gender, age, familiar situation, place of residence, phone number and name are asked. Not all the information is relevant for this research as only gender, age, familiar situation and place of residence will be valuable for the description of the sample obtained. The objective is to know possible common characteristics among individuals in order to segment the target audience.

The following part, Part 2, is composed of thirteen questions and tries to respond general aspects related to shopping at commerce in Villena. Respondents are asked about the frequency of their purchases, and which are the main reason for doing them.

In the third part of the questionnaire, individuals are asked if they buy products from the following categories: groceries, beauty/health, fashion/complements, home/decoration and leisure. they give an affirmative answer, they must rate their level of satisfaction with the product category from 1 to 5.

Part 4 is dedicated to the municipal marketplace of Villena. This place is a municipal building that currently has 25 food stalls open. Twelve questions have been formulated in order to gather data about shopping habits in this place. They are asked first whether they buy there or not and only will answer the questions regarding the municipal marketplace if they response affirmatively. Questions are related to expenditure, frequency and product categories.

Part 5 is similar to the previous one, but surveyed people are asked about the street market held on Thursdays. They are asked first whether they buy there or not and only will answer the questions if they give an affirmative response. Then, eight questions related to frequency, product categories and expenditure appear.

Part 6 is a fourteen-question brief investigation about online shopping habits and purchasing at shopping malls. The frequency of the purchases as well as the product categories have been analysed. Additionally, people who shops at malls are asked to clarify which shopping mall do they visit.

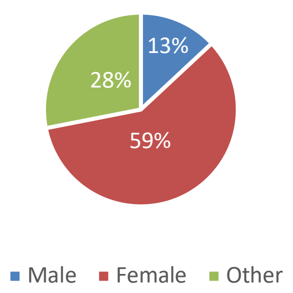
The objective of the last part, part 7, is getting to know the perceptions and opinions of the individuals regarding their motivations and problems they encounter. With the aim of giving a response to those objectives, respondents are given some options to choose from regarding their reasons for purchase. Same method is used when asking about the main problems of the city of Villena. There also exist a final open question where individuals have the opportunity to write about what kind of products or brands do they miss in the local commerce of Villena.

A copy of the survey used is attached to the annex 2.

4.3.3. Description of the sample obtained from the survey

Sociodemographic variables (gender, age, family situation, place of residence) are key to understand the characteristics of the sample obtained. The results of the surveys have been collected in an Excel table from which a series of graphics have been made for a correct interpretation of them.

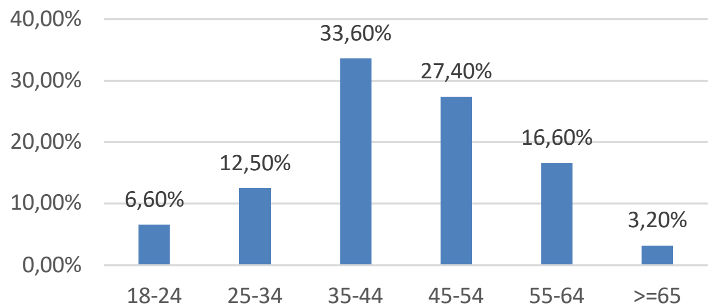
Figure 6: Percentage of the sample according to gender



Source: compiled by author based on obtained data

The first variable that is going to be analysed is gender. As it is shown on the graphic, almost 59% of the people who completed the survey was female whereas only 13% was male. This means the number of women has been larger than men. However, there is a considerable number of participants that defined themselves as other.

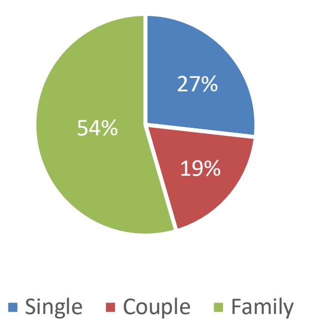
Figure 7: Percentage of the sample according to age



Source: compiled by author based on obtained data

The second demographical variable which has been analysed on the survey is the age of every participant. As it can be observed there is a greater participation among older people than younger people. This happens because 61% of the sample is concentrated between people from 35 to 54 years old. Another significant group is people between 55 and 64 years which represent 16,6% of the total. There is even a slight participation among people who is 65 years or older. The first age groups (18-24 and 25-34) have also participated in a 19,1%. Taking everything into consideration, it can be stated that the sample obtained from the survey is considerably distributed.

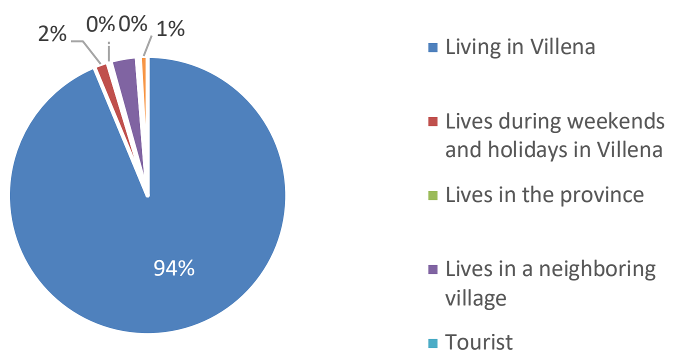
Figure 8: Percentage of the sample according to familiar situation



Source: compiled by author based on obtained data

The next demographical variable is familiar situation. It has been divided into being single, being with a couple or in a family. People living in families account for just over half of the total. It is followed by couples representing 19% and finally people who is single picturing 27%. This distribution is coherent with the one made according to the age, as people from 35 to 64 tend to live on families.

Figure 9: Percentage of the sample according to place of residence



Source: compiled by author based on obtained data

The last variable that has been analysed is the place of residence. Since this survey was designed to get to know the opinion of how to improve commerce in Villena and its environment, it is logical that the largest number of participants do live in the city (94%). There are also some participants who live in neighbouring villages (3%) and others that come to Villena to live during weekends and holidays (2%), but they are not relevant.

5. RESULTS

During this stage of the investigation, the results obtained from the survey will be examined. Quantitative results will be analysed following univariate, bivariate and multivariate techniques. In the end, the open-ended question will be also analysed.

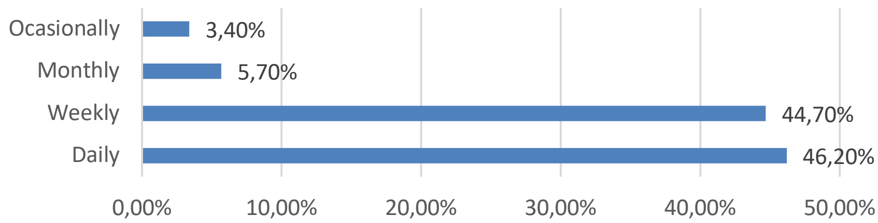
The micro-data obtained through the questionnaire was collected in an *Excel* table by *Neuromobile*. They shared this document with 559 valid answers in February 2022 through a confidentiality agreement with the research report tutor, Jon Charterina. The professor dedicated himself to coding these answers to be able to analyse them using the *IBM SPSS Statistics* software. Once the *SPSS* results were obtained, they were sent to the author of this final degree project so that he could deeply analyse them.

5.1. UNIVARIATE ANALYSIS

The first analysis is going to be the univariate, as it allows studying the variables of the survey individually. For some of them, the average, the median, the standard deviation and the maximum and the minimum of the data under study have been extracted.

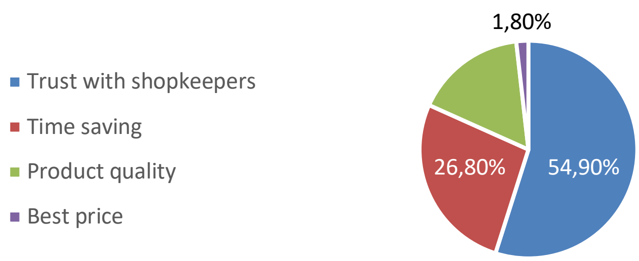
The following graphs refer to the second part of the survey, where to know the experiences of urban local shopping in Villena, individuals were asked about their habits in order to delimit and understand their perceptions and preferences (obj. 1).

Figure 10: Frequency distribution to the question: "How often do you shop at Villena urban commerce?"



Source: compiled by author based on obtained data

Figure 11: Frequency distribution to the question: "What is the main reason for making these purchases?"

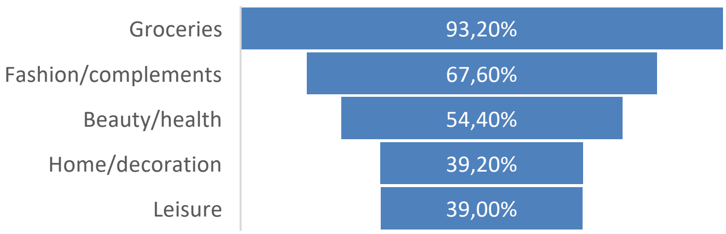


Source: compiled by author based on obtained data

These two graphics, analyse two of the questions raised about the shopping experience. In the first one, it can be observed that the great majority of the sample, 90,9%, shops at Villena urban commerce daily and weekly (sub-objective 1.1).

Behind the reasons for these purchases, it is clear that people who shop in Villena are not motivated by price, as only 1,8% do it for that reason. They are mainly encouraged by trust with shopkeepers (54,9%) that may result from the size of the city. As it has been mentioned in the description of Villena, there was 34.205 people living in 2021, and it is probable that people know each other. Further, 26,8% responded time saving as other important aspect of their purchases and 16,5% answered quality (obj. 2).

Figure 12: Frequency distribution to the question: "What type of purchase do you usually make?"



Source: compiled by author based on obtained data

This graphic allows to answer the proposed sub-objective 1.2 as it represents which are the tastes and preferences of people who buy in Villena. The data was obtained for each product category but for a better understanding, it has been collected in one graph. It is shown that from the 559 people who answered the survey, leisure and home/decoration products are the ones that are bought less. Almost all surveyed people go grocery shopping (93,2%). Also, fashion/complements (67,7%) and beauty/health (54,2%) categories have a considerable importance on the purchases.

Next, customer satisfaction with the shopping experience in each of the types of products is analysed. In the survey there was a section in which participants had to evaluate their experiences, attributing the value 1 to a poor experience and a 5 to a great experience (obj. 3).

Table 3: Descriptive statistics of variables related to customer satisfaction

Variable	Mean	Median	Mode	SD	Min	Max	Cases	Lost
Globally	**4,36**	**4**	**5**	**0,824**	**1**	**5**	**559**	**0**
Groceries	4,55	5	5	0,637	2	5	521	38
Beauty/health	4,54	5	5	0,693	2	5	304	255
Home/decoration	4,21	5	5	1,002	1	5	219	340
Leisure	3,88	4	5	1,189	1	5	218	341
Fashion/complements	4,27	5	5	0,881	1	5	378	181

Source: compiled by author based on obtained data

As it can be observed in the table, all product categories have a satisfaction level greater than 4 points except for leisure. These results mean that overall, people are really satisfied with the urban local commerce in Villena. Apart from that, based on the obtained standard deviations, it can be said that there is discrepancy in some categories. It is observed that the categories with less controversy on satisfaction levels are groceries and beauty/health. However, leisure and home/decoration categories, which have a standard deviation above 1, show the most discrepancy between the answers.

Customer satisfaction can be analysed using the Net Promoter Score method (Reichel, 2003) which also provides information about customers recommending the product or services to family or friends. This method will measure satisfaction levels with the commerce of Villena globally.

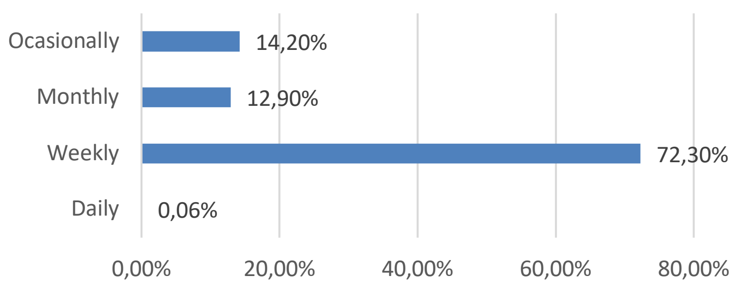
As mentioned before, individuals had to rate their shopping experience from 1 to 5. Depending on their answer, clients can be divided into three groups: promoters, individuals whose satisfaction is rated as 5; passives, individuals whose satisfaction level is rated as 4 and detractors, whose satisfaction level is somewhere between 1 and 3. 53,7% evaluated their satisfaction with a 5, 32,5% with a 4 and 13,8% from 1 to 3.

Based on the results from the survey, the NPS is positive which means that there is a larger number of promoters than detractors referred to the satisfaction with local commerce of Villena.

NET PROMOTER SCORE = % OF PROMOTERS - % OF DETRACTORS
NPS = 53,7% - 13,8% = 39,9%

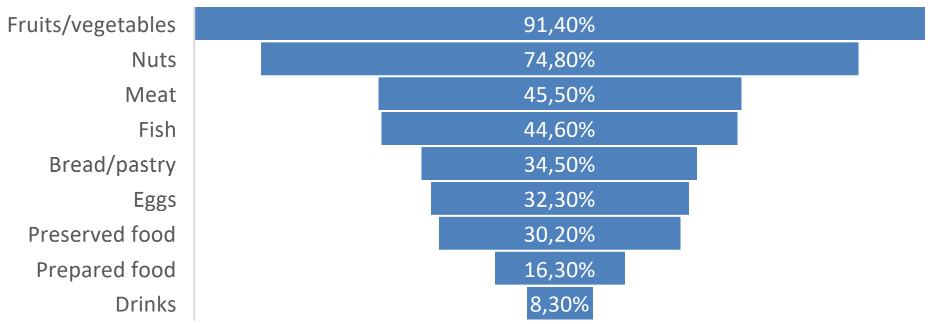
The third part of the survey has been designed to collect information about the municipal marketplace. To achieve greater data accuracy, respondents had to answer first if they used to shop at this place. 58,1% of the 559 participants affirmed shopping at the municipal marketplace while 41,9% said no. This means that the following graphs are a representation of the 325 people who buy there.

Figure 13: Frequency distribution to the question: "How often do you shop at the municipal marketplace?"



Source: compiled by author based on obtained data

Figure 14: Frequency distribution to the question: "What type of purchase do you usually make at the municipal marketplace?"



Source: compiled by author based on obtained data

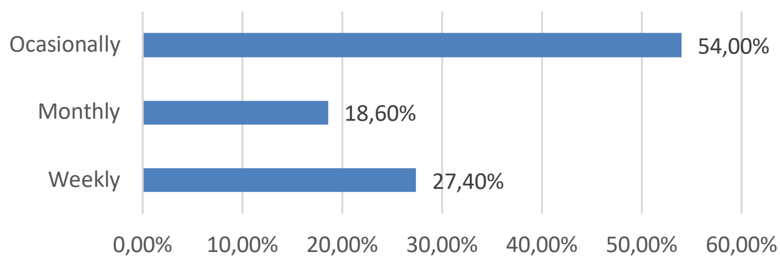
These two graphics represent the results for the questions designed to gather information about the municipal marketplace. In the first one, it can be observed that the great majority of the people that shop there do it weekly (72,3%). The rest do it occasionally or monthly on a similar distribution.

The first one represents which are the product preferences when purchasing at the municipal marketplace. Participants have only been able to choose from that product range since only foods and drinks are sold in that place. While a large majority buy fruits and vegetables (91,4%) and nuts (74,8%), only 8,3% purchase drinks at the municipal marketplace. Although in recent years there has been a trend towards prepared food, only 16,3% buy it.

Also, 67,7% of the people who buy in the municipal marketplace affirm that their expenditure is usually between 20€ and 60€. Only 8,8% spend less than 20€ and 23,5% over 60€.

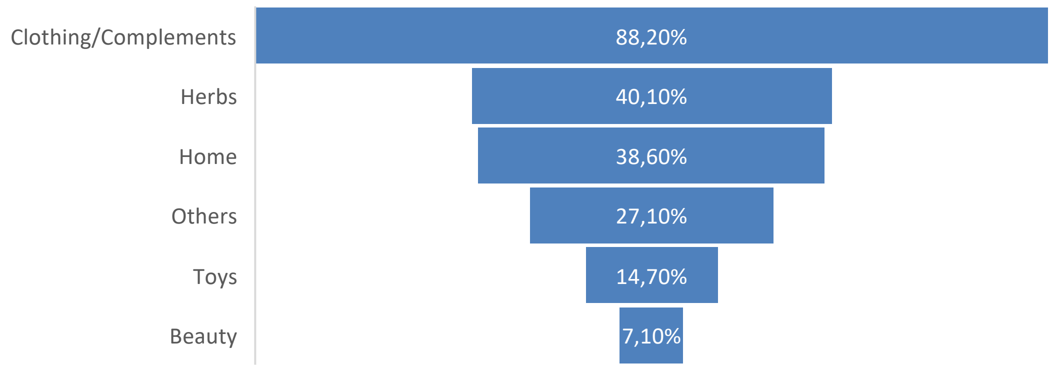
The fourth part of the survey collects information about the street market which is held during Thursdays. As well as in the previous part, respondents had to answer first whether they used to shop there. 39,4% of the surveyed people did not buy at this place, whereas 60,6% did it. As a result, the following graphs are a representation of affirmative answers only.

Figure 15: Frequency distribution to the question: "How often do you shop at Thursday's Street market?"



Source: compiled by author based on obtained data

Figure 16: Frequency distribution to the question: "What type of purchase do you usually make at Thursday's Street market?"



Source: compiled by author based on obtained data

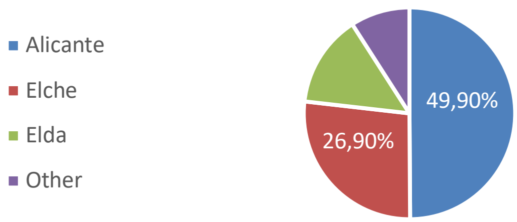
Street market in Villena is held on Thursdays every week. 27,4% do never miss the occasion and go shopping to the street market. However, half of the people do it occasionally and 18,6% monthly.

The second graph gives clear evidence that beauty products are the least purchased category of products in this type of market. Instead, clothing and complements are the preference of the respondents (88,2%). About 40,1% and 38,6% of the people shop for herbs and home-related products, respectively.

The fifth part of the survey is related to other places where people might shop: shopping malls and online commerce. The same logic has been followed as before, where surveyed had to answer the question "Do you buy at this place?". A proportion of 63,3% affirmed shopping online whereas 66,9% affirmed going to shopping malls to make their purchases.

Regarding the frequency of purchases in these two places, the results coincide and most of surveyed make them occasionally (72,5% online and 78,9% on shopping malls). The results for shopping malls are coherent since one of the main reasons behind people buying in urban local commerce of Villena was saving time. There is also a piece of evidence about the new shopping habits related to the use of digital platforms, as 7,9% of people who buy online do it weekly.

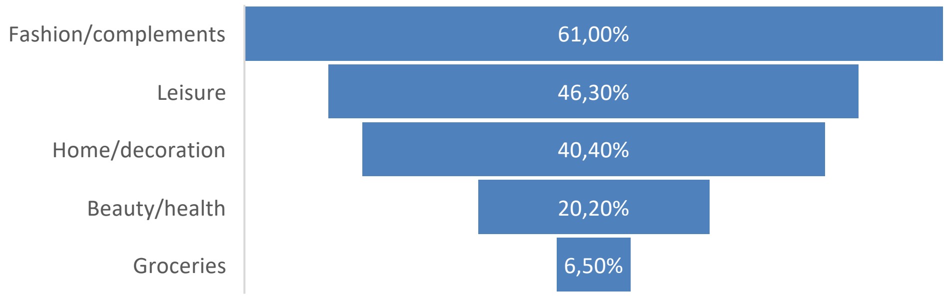
Figure 17: Frequency distribution to the question: "Which shopping mall do you usually visit?"



Source: compiled by author based on obtained data

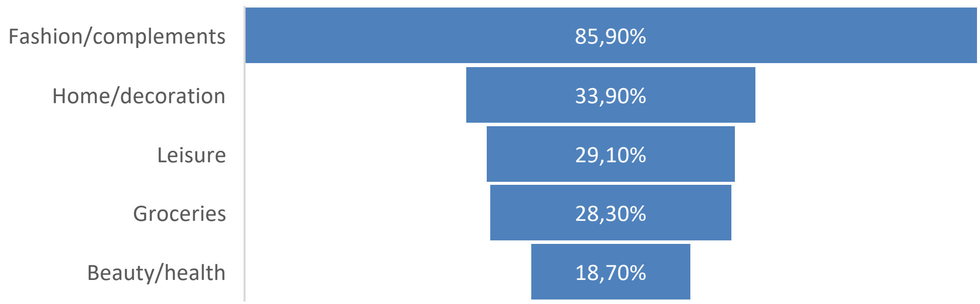
To achieve a greater description of the preferences of the participants, they were asked about which shopping mall they usually visit. According to the results, half of them usually drive to the shopping mall in Alicante whereas 26,9% visit other one in Elche. The results are logical since Alicante is the capital of the province and the mall is bigger and provides a larger range of shops and services.

Figure 18: Frequency distribution to the question: "What type of purchase do you usually make online?"



Source: compiled by author based on obtained data

Figure 19: Frequency distribution to the question: "What type of purchase do you usually make at shopping malls?"

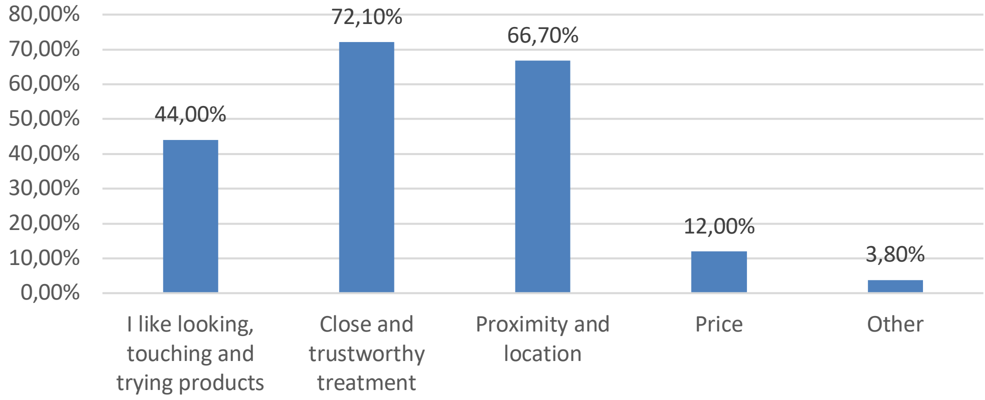


Source: compiled by author based on obtained data

The last two graphs, which are a representation of the product categories that are bought online and in shopping malls, are going to be analysed together. Fashion and complement products are mostly bought both online (61%) and in shopping malls (85,9%). One of the reasons that the majority is larger in shopping malls could be that people can try on the products, whereas there is a higher risk online to purchase an incorrect size. Another coherent finding is that people buy fewer groceries online (6,5%) than in shopping malls (18,7%). This happens because it is not common for markets and supermarkets in Spain to provide home delivery services.

The last part of the survey gives a response to the reasons people make their purchases at Villena's urban commerce as well as diagnosing the problems it faces (objective 2 and sub-objective 3.1).

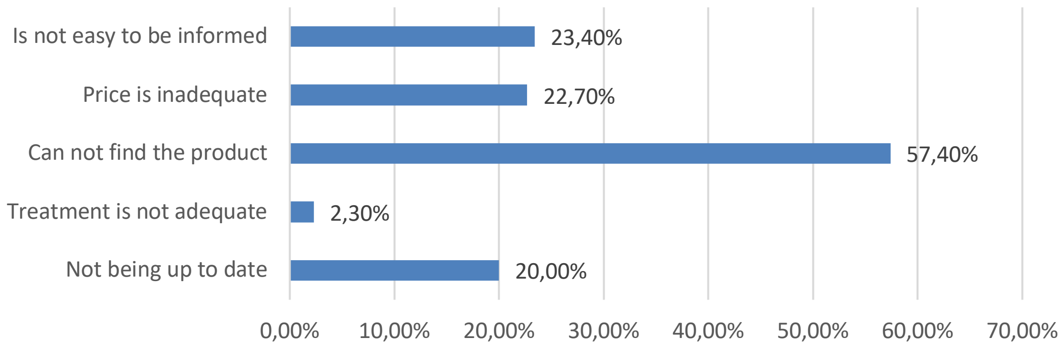
Figure 20: Frequency distribution to the statement: "I buy in the local commerce of Villena because:"



Source: compiled by author based on obtained data

As mentioned earlier during the univariate analysis, the price was not a relevant reason that made clients purchase products in the local commerce of Villena. That affirmation is shown again in the graph above since only 12% voted for it. From the others, it can be observed that close and trustworthy treatment is the motivator with the greatest influence, 72,10% when making purchases. It is followed by proximity and location (66,7%) which is related to saving time and was the second motivator in figure 11. A proportion of 44% of the individuals like buying in the commerce because they can look, touch and try the products.

Figure 21: Frequency distribution to the statement: "The main problems of commerce in Villena are:"



Source: compiled by author based on obtained data

People who buy in local shops seem to be happy with the treatment since only 2,3% of the individuals find it inadequate. It is logical to get this result since closeness and trustworthiness are the main motivator of purchase for buyers. However, 57,4% of the surveyed agree that they cannot find the product or products they are looking for. Some respondents have written in the open-ended question which products are they missing, so later in the study, emphasis will be placed on this issue. Further, 23,4% affirm that is difficult to be informed while 22,7% that price is inadequate.

5.2. BIVARIATE ANALYSIS

The following analysis, the bivariate analysis, aims to find out the existing relationships between different relevant variables in the research compared to the sociodemographic variables that surveyed people have indicated.

5.2.1. Description of the youngest demographical group

The first bivariate analysis is aimed at describing the demographic group considered to be the youngest. Therefore, all the questions proposed in the questionnaire were related by using cross-reference tables to the age of the surveyed. This demographical separation of the results helps into responding sub-objective 1.3.

People from 18 to 44 years of age are considered to be part of the young demographical group. By contrast, people over 44 years old are the ones considered to be elderly.

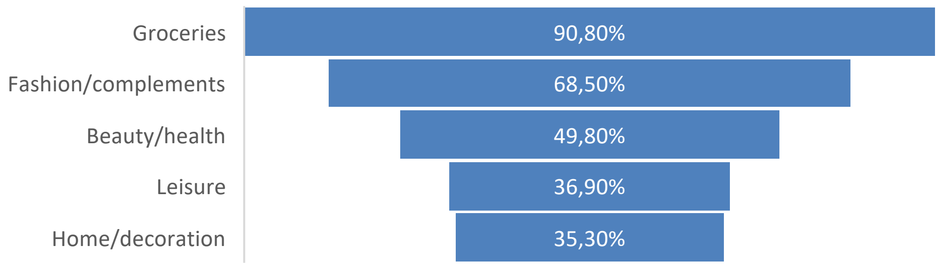
The vast majority of young people shop in local shops in Villena on a weekly (51.9%) and daily (36.6%) basis. This distribution is also found in the older demographic group, so it is not a difference that characterizes them. These results are due to the fact that, as will be seen below, the products purchased in the market are usually staple foods, which need to be purchased with a high frequency. However, young people are less likely to shop locally daily compared to people from an advanced age. This is because older people are retired, they usually have more free time than younger people who are studying or working. As the international centre on ageing says, municipal markets survive because of the elderly (Centro Internacional sobre el Envejecimiento, 2018.)

If we analyse the motivators for purchases (sub-objective 2.1), we can affirm that the main reason for young people to buy in local shops in Villena is trust in the shopkeepers (48.5%). Time is also given great importance, with many of the surveyed (30.5%) citing travel savings as a reason. As mentioned above, young people have less free time to go shopping so saving time by purchasing products on shops located in the town is key for them. This statement is further affirmed by the fact that in another question, people between 18 and 44 years of age stated that they shop at Villena market because of its location and proximity.

Age also influences where each demographic group shops. Due to a greater understanding of technology, youth make greater use of digital platforms than older people to make purchases. Justifying this with data, 67.5% of young people shop online while only 58.7% of older people do so. Young people show a higher frequency of shopping in e-commerce, with 36.7% doing so on a weekly or monthly basis. This result drops to half, 15.9%, among people over 44 years old. Another relevant place for young people to shop is in shopping centres, to the detriment of municipal market and Thursday Street market (61%). Younger shoppers are gradually moving away from traditional commercial establishments.

A vast majority of the young people, 89,3%, that visit the municipal marketplace, purchase fruits and vegetables. In addition, nuts (69,8%) and meat (51,5%) are other relevant are other categories that have a considerable number of customers. Younger people are less likely than older people to buy canned food. On the other hand, they show a greater interest in prepared food, with 21.9% doing so compared to 10.3% of the older population. This demonstrates that purchasing preferences for product categories among different age demographic groups exist. In order to get a visual picture of what people between 18- and 44-years old buy in the local market in Villena, the following graph has been prepared which presents the results in aggregated categories.

Figure 22: Type of purchase do you usually make do young people make at Villena urban commerce



Source: compiled by author based on obtained data

Young people are satisfied with local commerce in Villena, with a score of 4.33 out of 5. Referring to the category of leisure, dissatisfaction among young people grows as 12.8% of those who buy this category rate it with 1 or 2 stars. The problem can be linked to the fact that 57,3% of the youth do not find what they are searching for in the commerce of the city. This is a point on which both the Villena council and ACV should work, so that the leisure demands of the inhabitants are covered.

5.3. MULTIVARIATE ANALYSIS

In this phase of the work, a multivariate analysis will be undertaken using the cluster technique. This aims to understand the differences in the behaviours of groups that are different from each other and how people who are similar act.

5.3.1. Characterisation of consumers in Villena by profiling

A characterisation of consumers in local commerce in Villena will be conducted by performing a cluster analysis. The Ward method will be used as it will allow to group the variables, achieving the greatest homogeneity and the greatest divergence between them (De la Fuente, n.d.). This will help into responding sub-objective 1.4.

For the characterization of buyers, the sample is differentiated according to a list of variables that differentiate the respondents without identifying them (this distinction is important, as will be seen). The differentiating variables for classification by cluster analysis are presented in the table below. These variables have been chosen as they are the original ones and are the ones that best summarize who are the satisfied and unsatisfied shoppers. The variable name has been translated to respect the language in which the paper is being written.

Table 4: Differentiating variables for classification by cluster analysis

Shop_Groceries	What type of purchase do you usually make? (Groceries)	{Yes/No}
Shop_Beau_Health	What type of purchase do you usually make? (Beauty/ Health)	{Yes/No}
Shop_Home_Deco	What type of purchase do you usually make? (Home/ Decoration)	{Yes/No}
Shop_Leisure	What type of purchase do you usually make? (Leisure)	{Yes/No}
Shop_Fashion	What type of purchase do you usually make? (Fashion/ Complements)	{Yes/No}
SatisfLC_Dico	Are you satisfied with local commerce?	{Yes/No}

Source: compiled by author based on obtained data

By means of a cluster analysis, two segments have been defined and characterized by means of these variables. The individuals could have been grouped into four groups, achieving a clearer differentiation, but to meet our objective, a segmentation into two groups was more convenient. To do this, cross-tabulations of each of the above variables with respect to the created variable Clu_2: {Cl1; Cl2} have been used. A comparison of the distribution of the proportion of "Yes" versus "No" responses in each cluster are used. The following table summarizes this comparison in each cluster (For more detailed information, see the annexed tables on annex 3).

Table 5: Summary of the comparison in each cluster

Variable	Interpretation
Shop_Groceries	Proportion of "Yes" over " No": Slightly higher for Cl2.
Shop_Beau_Health	Proportion of "Yes" over " No": Much higher for Cl2.
Shop_Home_Deco	Proportion of "Yes" over " No": Much higher for Cl2.
Shop_Leisure	Proportion of "Yes" over " No": Much higher for Cl2.
Shop_Fashion	Proportion of "Yes" over " No": Much higher for Cl2.
SatisfLC_Dico	Proportion of "Yes" versus "No or Not so satisfied with local commerce": Slightly higher for Cl2.

Source: compiled by author based on obtained data

As can be seen from the table above, in general Cl2 is more likely to contain individuals who shop in all commerce categories, and who are generally very satisfied with local commerce. Therefore, CL2 will be referred to hereafter as the *Enthusiasts* segment, and in contrast, Cl1 is referred to as the *Reluctant*. A closer inspection of the data in the annexes section (annex 3) shows that the categorizing variable is Home/Decoration as all the people who shop in this category are classified as *Enthusiasts*. The Beauty/Health, Leisure and Fashion/Complements variables reinforce this as they help to classify the clusters. The graphs and data indicate, in relative terms, how *Enthusiasts* contain a higher number of people who shop in these categories than people who do not.

With this differentiation in mind, the next step is to further characterize and identify the components of each segment by considering an even larger list of variables. By crossing the two clusters with the socio-demographic variables, it will be possible to compare and describe how both *Enthusiasts* and *Reluctant* buyers are. The following variables are used for this purpose:

Table 6: Characterization of clusters with sociodemographic variables

Variable	Interpretation
Age	Age groups (4): Ratio of *Reluctant* (CL1) over *Enthusiasts* (CL2). 18-34: Much higher (Cl1 >> Cl2). 35-44: Higher (Cl1 > Cl2). 45-54: Higher (Cl1 > Cl2). 55 or more: Slightly higher (Cl1 < Cl2).
Gender	No differences.
Familiar situation	No differences.
Residence	No differences.

Source: compiled by author based on obtained data

According to the results of the comparison of response proportions, it can be observed that only the Age variable can provide some insight into how each cluster is characterized. The proportion of *Reluctant* respondents is much higher among the youngest, and higher in the next two age groups. Finally, among the oldest (55 or more), the two groups are almost equal, with some slightly higher proportions of *Enthusiasts* than *Reluctant* respondents. The results can be observed more extensively in Annex 4 where each cross table explain each of the variables above. The other socio-demographic variables (gender, family situation and residence) do not show significant differences to be able to categorise the clusters, it is therefore assumed that there is no association between these variables and the segmented groups. If the graphs in the annexes are observed, it can be seen that they show similar composition.

Summarizing, it can be said that Age is the categorising variable of the two clusters. Within the *Reluctant* segment there is a greater presence of young people, while the older ones tend to be the *Enthusiasts*.

Finally, the following relation of variables is examined with respect to the proportion of *Reluctant* and *Enthusiasts*. It is important to note that none of these variables were considered in the creation of the classification rule, so if there are significant differences, this is a sign that the differentiation between *Enthusiasts* and *Reluctant* goes beyond the variables cited in the first table.

Table 7: Characterization of clusters with more variables

Variable	Interpretation
How often do you shop at local shops in Villena?	No differences.
Do you usually shop at the municipal marketplace?	Yes: higher presence of *Enthusiasts.* No: higher presence of *Reluctant* shoppers.
Do you usually buy in Thursday's Street market?	Yes: Relatively larger presence of *Enthusiasts*. No: Relatively higher presence of *Reluctant* shoppers.

Do you shop in online commerce?	No: Relatively higher presence of *Reluctant* shoppers. Yes: Majority choice in both groups, although with relatively higher presence of *Enthusiasts.*
Do you shop in shopping malls?	No differences.

Source: compiled by author based on obtained data

If the characterisation variables are analysed individually, it can be seen that the variable measuring the frequency of purchases in Villena's shops does not give any differences, since in relative terms, the frequencies are similar. Therefore, there is no association between frequency and belonging to one or other cluster. This is also repeated with purchasing in shopping malls, so there is also no association between going to shopping malls and being Enthusiastic or *Reluctant*.

Referring to the cross-tabulation of whether individuals from the different clusters shop at the municipal market, the following can be stated. There is an association between shopping at the municipal market and belonging to one cluster or another. This is because in relative terms, there is a greater presence of individuals categorised as *Reluctant* (47%) than *Enthusiasts* (33.6%) who do not shop there. This association is also observed with shopping or not shopping at Thursday's Street market. Among those who do not shop there *Reluctant* are, in relative terms, predominant with 44.6%. Also, in relative terms, there is a higher number of *Reluctant* (43.2%) who do not buy from e-commerce than *Enthusiasts* who do not buy from e-commerce (26.2%). Tables can be reached on annex 5.

5.4. ANALYSIS OF OPEN-ENDED QUESTIONS

As mentioned in the description part of the survey, part 7 of the questionnaire was dedicated to finding out people's perceptions and opinions about commerce in Villena. In this way, respondents were asked which products or brands they missed in Villena, giving them the opportunity to write a free response. This analysis will help giving an answer to sub-objective 3.2.

A total of 559 responses were obtained, all of which differed from each other. To be able to analyse the responses, they needed to be categorized. To do this, several categories and sub-categories had to be created and classified response by response. As can be seen in the following table, the main answer categories were fashion, none, leisure, promotions, and others.

Table 8: Categorization of the open-ended questions

Categories and sub-categories	Number of answers
Fashion	**217**
General	56
Specific shops	48
Children	41
Sports	22
Youth	22

Others	16
Large sizes	12
None	**130**
None	130
Leisure	**99**
Youth	26
General	21
Shopping mall	20
Electronics	16
Cinema	10
Others	6
Promotion	**71**
Variety	47
Price	9
Service	6
Marketing	6
Quality	3
Others	**42**
Hostelry	16
Trends	13
Home	7
Others	6
Total of answers	**559**

Source: compiled by author based on obtained data

As it can be seen in table 3, a variety of responses were obtained from the open-ended question. The most repeated category is "fashion", as 38,8% of the surveyed are missing products from this type of category in Villena's shops. Leaving aside people who miss fashion products in general, it is worth mentioning that 16% of people have a special interest in children's and youth clothing. There is also a huge interest in specific brands such as *Primark* or shops like *Zara*, *Bershka* and *Pull & Bear* from the *Inditex* group. An interesting note within this category was the interest shown by 12 people in large sized clothing. Whether the lack of specific shops or products for special groups of people, this category is the one that creates the most conflict in the village.

Secondly, 23,26% of those surveyed indicated that they had not missed any product in the local shops in Villena. In fact, they were very happy as they find every product they are looking for. Some of them also indicated being satisfied with the town's offer, as it was in line with their capacity.

"Leisure" was the third most mentioned category in the responses (17,71%) since many people were dissatisfied with the town's offer in this area. There is a demand for more leisure-related activities for the younger demographic groups. On the other hand, it is worth mentioning that a considerable part of the respondents demand infrastructure such as shopping malls and cinemas.

In fourth place, with 12,7% of the responses, is the category of "promotions". In this category, responses concerning the lack of variety have been added, which account for 8.4% of the total. In smaller percentages, people are missing lower prices, better product quality and a higher quality of service offered by the shops. Mention should be made here of the lack of promotion of activities and shops and the fact that in Villena, when returning products, the money is not refunded but vouchers are given back.

In the “others” category, the responses that could not be added in the other categories were collected. 16 people showed a special interest in improving the range of restaurants in Villena, with special mention of fast-food chains such as *MacDonalds*. Finally, the lack of trendy products such as vegan and healthy products, which are on the lips of most people, was also mentioned.

6. CONCLUSIONS, DISCUSSION, RECOMMENDATIONS AND LIMITATIONS

The objective of the last stage of this investigation is to present the conclusions that are obtained with the analysis, as well as opening a debate about the topic. Additionally, recommendations from the obtained results will be provided to *Asociación de Comerciantes de Villena* and the town council so that they can improve their urban local shopping experience.

6.1. CONCLUSION

Customer shopping habits have transformed over the last decades due to changes in the tastes and preferences of the population. We live in a digital era in which many of the purchases are made through digital channels. In addition, along with this, healthy and environmentally friendly lifestyles have been established, so managers must try to offer products and services that meet these preferences. The COVID-19 pandemic has directly affected the economy and urban commerce which has influenced on managers having to restructure businesses and strategies.

In order to understand and study human behaviour and the conditioning factors of the shopping trends on a medium sized town/city in Spain, a quantitative investigation of the market was carried out between *Neuromobile*, Jon Charterina and the author of the study, Julen Pérez. This has made possible to draw a series of conclusions in relation to the proposed objectives.

The survey has enabled to make a description of the behaviour of individuals regarding local commerce in Villena (objective 1). In relation to this and sub-objective 1.1, it was found that people mainly buy in local shops on a weekly and daily basis. This is due to the fact that the main category of product bought in Villena is groceries, which is a product with a high turnover (sub-objective 1.2). Deeper data regarding shopping frequency and product preferences can be found at point 5.1.

Local shops are losing their younger customers due to their changing tastes and shopping preferences, and therefore the parties involved in the project proposed the objective of understanding how this group behaves (sub-objective 1.3). They are increasingly moving away from traditional commerce, as 67.5% of young people buy through online channels and do so much more frequently than older people. They also show a greater interest in novelty products, such as prepared food. This group, as is to be expected, is the one that shows the greatest dissatisfaction with leisure in Villena.

The cluster analysis led to the conclusion that there are two groups of shoppers in Villena's local shops, the *Enthusiasts* and the *Reluctant* (sub-objective 1.4). The *Reluctant* are characterised by the fact that they are the youngest shoppers and that they do not buy products in the home/decoration category. They also tend not to shop at the Thursday's Street market or at the municipal marketplace. *Enthusiasts*, on the other hand, are the older shoppers, aged 55 and over, who shop in almost all product categories and go to both the municipal marketplace and Thursday's Street market.

Objective 2 aimed to find the factors that act as leverage and motivate people to shop locally. In this sense, people indicated that the trust they have with the salespeople has a great influence because they allow them to see the products up close, as well as to try them out and touch them. The second most named factor was the time saving, as the proximity of the shops avoids people having to drive to other places to do their shopping. Regarding sub-objective 2.1, the reasons why individuals shop in Villena's shops do not vary according to age, as the frequency of responses is similar between young and old people. There is only a slight difference in that older people buy in local shops because of the treatment and trust in the seller.

The survey concluded that people in Villena are satisfied with local commerce (objective 3). This is because the commerce was rated 4.36 out of 5 points. However, if we look at the problems that people see in Villena (sub-objective 3.1) we can see that they indicate that sometimes they do not find the products they are looking for. They also say that it is not easy to be informed about promotions and that the products are not only expensive, but also that the shops often do not stock the most up-to-date brands. Regarding sub-objective 3.2, it has been possible to obtain opinions about the products that the people who shop in Villena most miss. Based on the fact that only 23,26% of people are totally satisfied with the offer, the rest demand a greater variety of products and services. The people surveyed particularly emphasize the lack of fashion and leisure products and services, especially for the younger age groups.

6.2. DISCUSSION AND RECOMMENDATIONS

After completing the qualitative research and analysing the results obtained, it is possible to deduce a series of important factors in the field of urban commerce that the association together with small businesses should take into consideration to improve shopping experience and the services they provide to citizens. This would answer the fourth and last objective of the research.

The most obvious conclusion from this paper is that young people are distancing themselves from local commerce in the town as they are more reluctant to shop. Therefore, both the association and the shopkeepers must look for ways to encourage them to stop being reluctant and become enthusiastic, or at least to do more shopping in Villena. In this sense, it was also found that young people are the most dissatisfied with the fashion products and accessories and with the leisure activities, which are insufficient in the town.

In particular, in the open-ended question, mention was made of the lack of shops such as Zara or Primark. Opening shops belonging to these companies would not be convenient for small businesses, as small local clothing shops cannot afford to set the low prices of the first ones. Furthermore, as the purpose of the study is to improve the local shopping experience in Villena, making such a recommendation would go against the objective. Therefore, my recommendation is based on trying to offer fashion products in a non-traditional way, i.e. to encourage the purchase of fashion from local shops through the experience. One of the open responses analysed, gave me the answer on how implement the recommendation, through second-hand markets.

My experiences and stays in other countries have allowed me to discover that this activity is very well established abroad. In particular, I was surprised to see how many second-hand clothes markets and shops there are in Helsinki, and how people get together and spend their afternoons looking for clothes. But this trend towards vintage clothing is also a reality in cities like Madrid and Barcelona. Among the benefits, it is worth highlighting that the clothes that are bought tend to have lower prices. In addition, it contributes to a lower consumption and production of clothes, as the clothes that are no longer worn are reused.

On the other hand, I would recommend holding an annual alternative market, in which the clothing, footwear and accessory shops of Villena would offer their products in an outdoor market. In this way, fashion, design and recycling would be promoted, breaking away from the everyday. Both events or activities would help both to satisfy the fashion needs of the town and to promote leisure, as they are a good excuse to get together with family or friends and spend a good morning or afternoon.

Another way to improve the shopping experience in Villena is to look at the reasons why individuals shop there. As can be concluded, time saving is a relevant factor when it comes to shopping in Villena's local shops. Taking this point into account, it would be possible to go further and set up a service to deliver products from local shops to customers' homes. *Dendak Bai* is the association of shops in Durango, the town where I live, and has already set up this type of service. It works in such a way that the customer fills in a form indicating the details and the establishment has to contact the delivery drivers, so that they can make the delivery to the place and time desired by the customer. The shop charges the customer the price set for the delivery when the customer makes the payment to the shop. At the end of the month, the shop pays the association for all delivery services. The addition of this service in Villena's local commerce would make shops and retailers more flexible, thus offering greater value to customers.

Lastly, it is worth mentioning that data-driven management is a reality today and must be executed correctly. As Marcos García[4] stated in one of the many meetings that have been held to carry out this study, gone are the days when managers of small traditional stores made their decisions through feelings and perceptions. A step forward must be taken and go with the flow of digital transformation and managing from data is a pending task. More important than the quantity of data is the quality of the data, because if the data is not descriptive and relevant, it will not allow designing strategies for change. Once the conclusions are drawn, strategies should be set to solve the problems that the commerce is facing and I recommend benchmarking actions. In this way, strategies that have been successful in other cities or towns could be implemented. It is at this point where specialized companies such as *Neuromobile* must align with associations and businesses in order to get the most out of it and row in the desired direction.

[4] García, M. Op. Cit. <24/02/2022>

6.3. LIMITATIONS AND FUTURE LINES OF INVESTIGATION

The market study that has been carried out has a series of limitations that affect somehow the efficiency and accuracy of the data and therefore the results obtained. In the first place, the survey was designed and carried out to obtain data about commerce in Villena. Even though it is a medium-sized city, it is not possible to make decisions aimed at other cities or towns of similar size based on the results obtained from the survey. It can give us a small brushstroke to make recommendations to other cities, but the ideal would be a study of the area since in Spain, not all regions and provinces have the same habits, purchasing power, commerce or quality of services.

Secondly, there is many participants, 157 to be exact, who did not want to disclose their gender, ticking the "Other" box. This is an important figure as it is 28.1% of the total number of respondents, and even more knowing that only 73 of the participants are men. If the sex of these people had been known, the statistics obtained by segmenting by sex would have been much more accurate, and the presence of men would surely increase. Using predictive methods, the company in charge of the survey offered to deduce the sex of these people, but in the end, it was chosen not to do so.

Another constraint was the fact that the survey had already been conducted. Initially, a great effort had to be made to understand why and for what purpose the questions in the survey had been chosen. The design of the survey meant that many responses were lost along the way, because if, for example, respondents indicated that they did not buy leisure products, satisfaction with that category could not be assessed. At first glance, this may not seem like a limitation, but when we tried to perform logistic regression functions, they did not give the expected results. It is true that 559 is a considerable number of individuals, but a larger participation would have helped to obtain more reliable analyses.

With a view to future research, it would be interesting to conduct a second survey after some time and once some of the recommendations made in this work have been implemented. If young people's perceptions of local commerce in Villena had improved, it would be a sign that the recommendations made by the author are accurate and correct.

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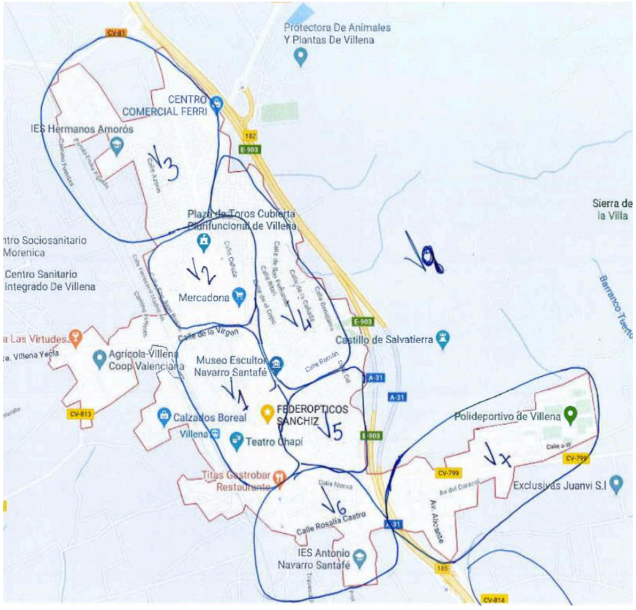
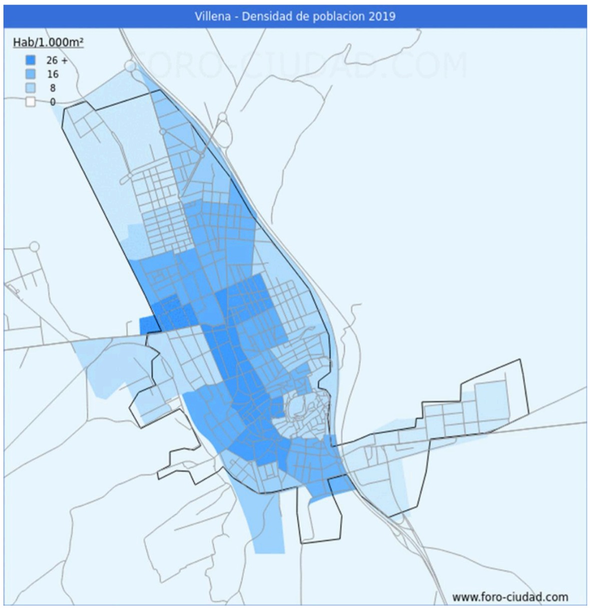
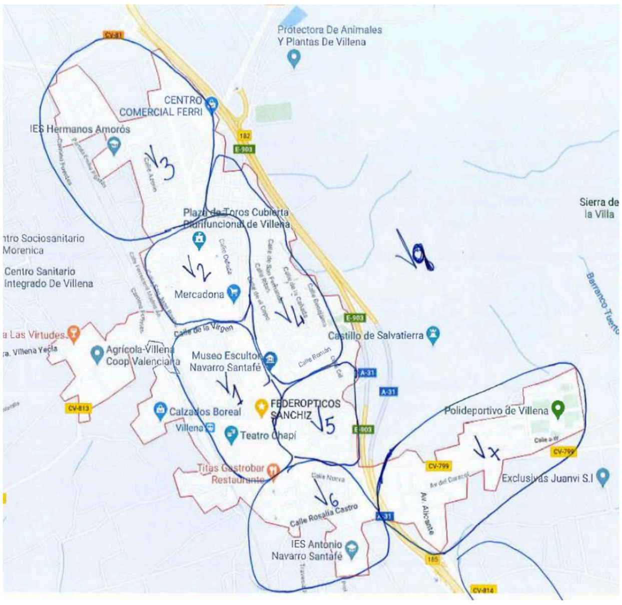
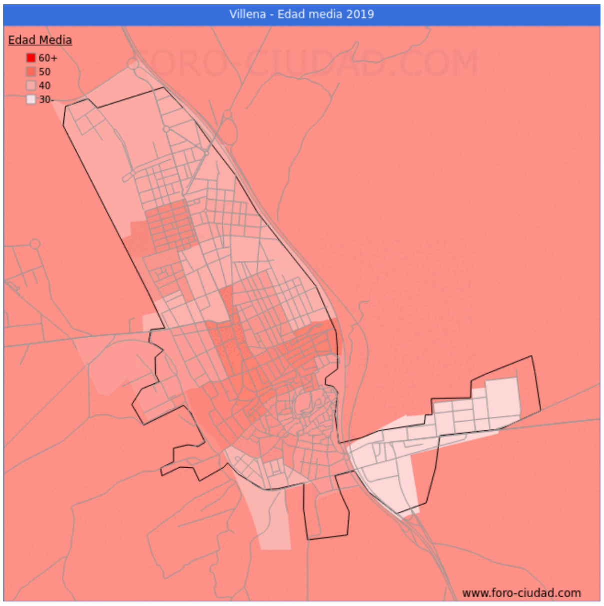
ANNEX

Annex 1: Population density and average age of population in 2019 contrasted with main affluence areas

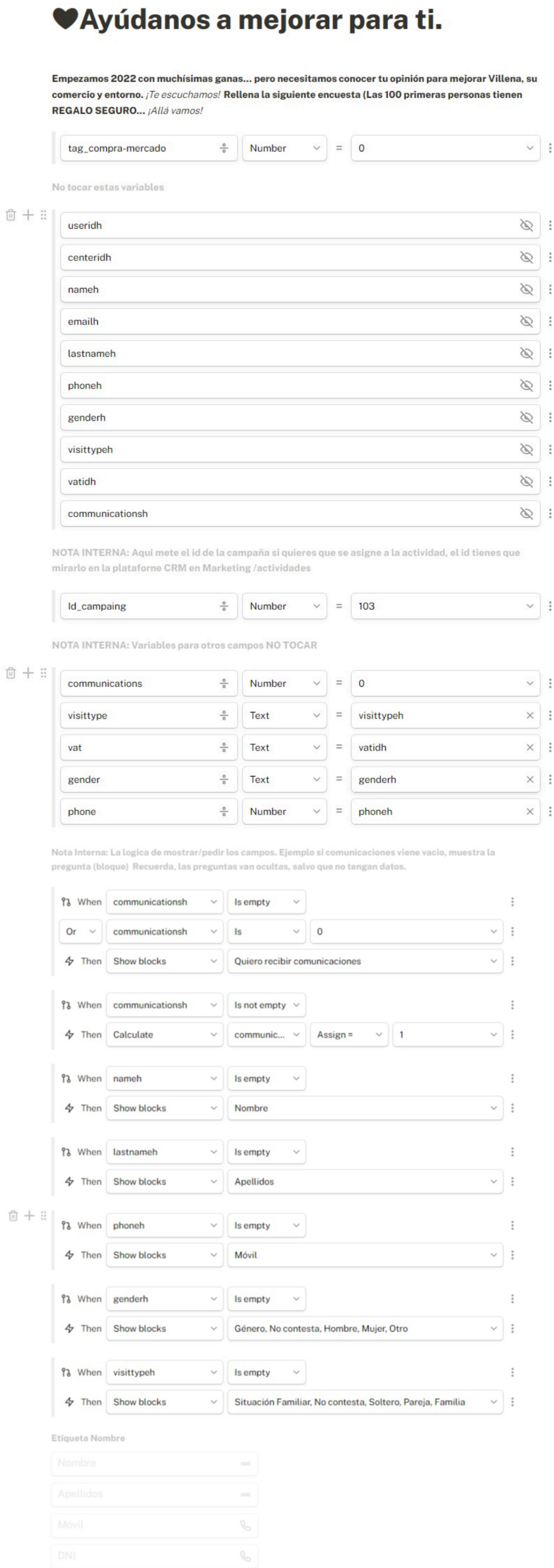








Annex 2: Questionnaire



Etiqueta Nombre

Nombre

Apellidos

Móvil

DNI

Genero

Género

- No contesta
- Hombre
- Mujer
- Otro

Tipo visita / situación familiar

Situación Familiar

- No contesta
- Soltero
- Pareja
- Familia

Preguntamos sobre las comunicaciones

Comunicaciones

- [ ] Quiero recibir comunicaciones

Siguiente →

PAGE 2

Saber un poquito de ti

¿Dónde resides? *

- A Resido en Villena
- B Resido los fines de semana y vacaciones en Villena
- C Soy de un pueblo vecino
- D Soy de la provincia
- E Turista
- F Otro

Rango de edad *

- A 18-24
- B 25-34
- C 35-44
- D 45-54
- E 55-64
- F 65 o más

Next →

Compras en Villena

¿Con qué frecuencia compras en el comercio local de Villena? *

- A Diaria
- B Semanal
- C Mensual
- D Ocasionalmente

¿Cúal es el motivo principal para realizar estas compras? *

- A Me ahorro tiempo por los desplazamientos
- B La calidad de los productos
- C El precio es mejor
- D La confianza con los comerciantes

¿En qué tipo de comercio sueles comprar? *

- [ ] Alimentación
- [ ] Belleza / Salud
- [ ] Hogar / Decoración
- [ ] Moda / Complementos
- [ ] Ocio

PAGE 4

When	¿En qué tipo de com...	Contains	Alimentación	
Then	Show blocks	Alimentación: Valora tu experiencia, Rating		
When	¿En qué tipo de com...	Contains	Belleza / Salud	
Then	Show blocks	Belleza / Salud : Valora tu experiencia, Rating		
When	¿En qué tipo de com...	Contains	Hogar / Decoración	
Then	Show blocks	Rating, Hogar / Decoración: Valora tu experiencia		
When	¿En qué tipo de com...	Contains	Moda / Complementos	
Then	Show blocks	Moda / Complementos: Valora tu experiencia, Rating		
When	¿En qué tipo de com...	Contains	Ocio	
Then	Show blocks	Ocio: Valora tu experiencia, Rating		

Valora la experiencia

1) Nada Satisfecho a 5) Totalmente satisfecho

¿Estás satisfecho con el comercio local? *

☆☆☆☆☆

Alimentación: Valora tu experiencia *

☆☆☆☆☆

Belleza / Salud : Valora tu experiencia *

☆☆☆☆☆

Moda / Complementos: Valora tu experiencia *

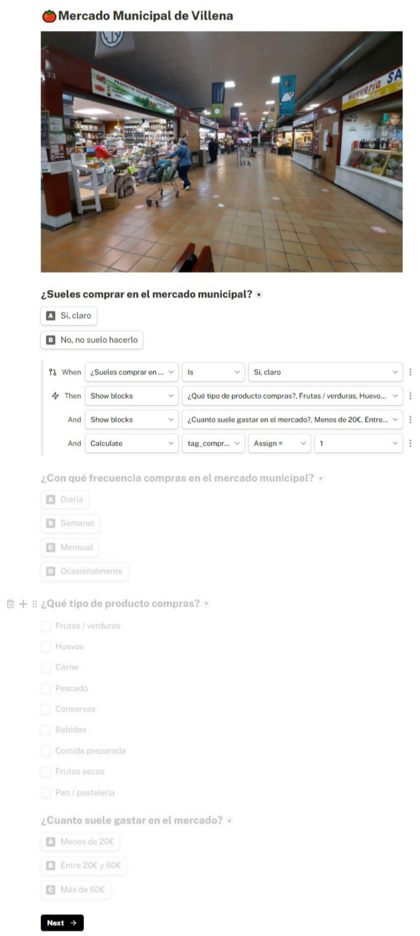
☆☆☆☆☆

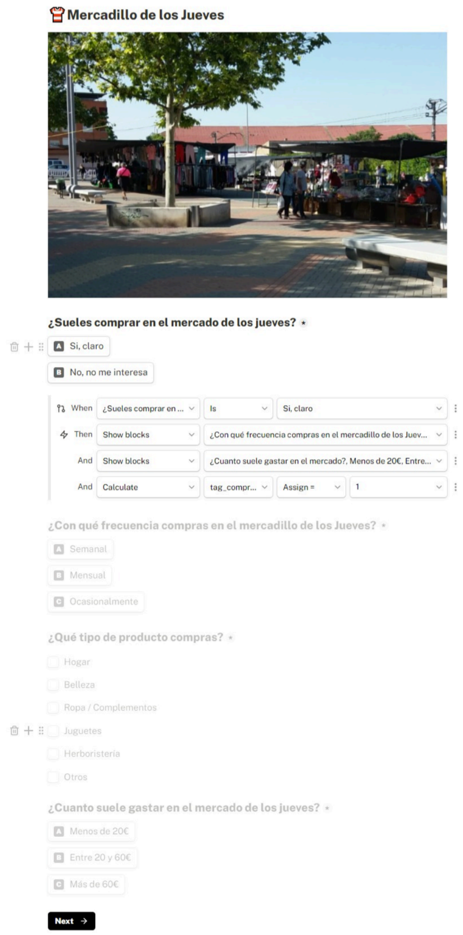
Hogar / Decoración: Valora tu experiencia *

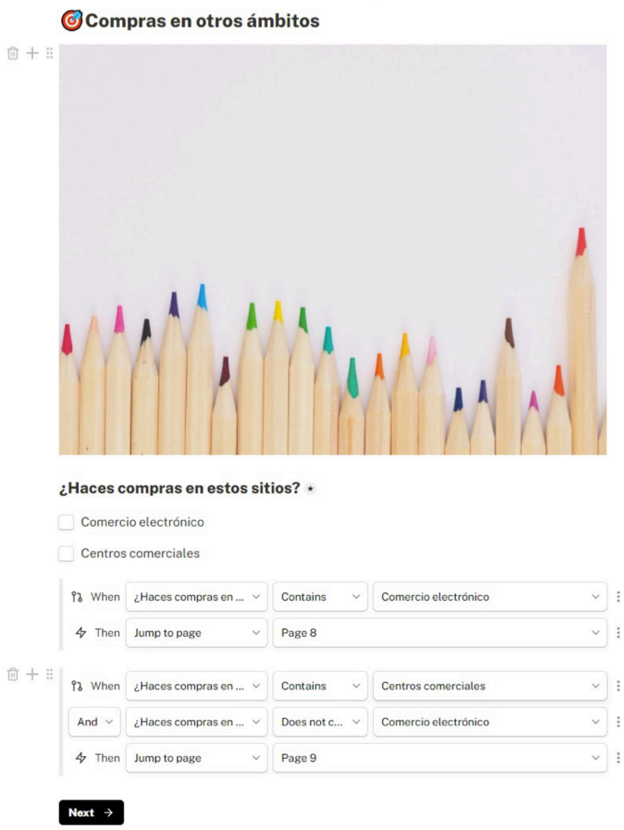
☆☆☆☆☆

Ocio: Valora tu experiencia *

☆☆☆☆☆


Mercado Municipal de Villena
¿Sueles comprar en el mercado municipal?
Si, claro
No, no suelo hacerlo
When ¿Sueles comprar en ... Is Si, claro
Then Show blocks ¿Qué tipo de producto compras?, Frutas / verduras, Huevo...
And Show blocks ¿Cuanto suele gastar en el mercado?, Menos de 20€, Entre...
And Calculate tag_compr... Assign = 1
¿Con qué frecuencia compras en el mercado municipal?
Diario
Semanal
Mensual
Ocasionalmente
¿Qué tipo de producto compras?
Frutas / verduras
Huevos
Carne
Pescado
Conservas
Bebidas
Comida preparada
Frutos secos
Pan / pastelería
¿Cuanto suele gastar en el mercado?
Menos de 20€
Entre 20€ y 60€
Más de 60€
Next


Mercadillo de los Jueves
¿Sueles comprar en el mercado de los jueves?
Si, claro
No, no me interesa
When ¿Sueles comprar en ... Is Si, claro
Then Show blocks ¿Con qué frecuencia compras en el mercadillo de los Juev...
And Show blocks ¿Cuanto suele gastar en el mercado?, Menos de 20€, Entre...
And Calculate tag_compr... Assign = 1
¿Con qué frecuencia compras en el mercadillo de los Jueves?
Semanal
Mensual
Ocasionalmente
¿Qué tipo de producto compras?
Hogar
Belleza
Ropa / Complementos
Juguetes
Herboristeria
Otros
¿Cuanto suele gastar en el mercado de los jueves?
Menos de 20€
Entre 20 y 60€
Más de 60€
Next


Compras en otros ámbitos
¿Haces compras en estos sitios?
Comercio electrónico
Centros comerciales
When ¿Haces compras en ... Contains Comercio electrónico
Then Jump to page Page 8
When ¿Haces compras en ... Contains Centros comerciales
And ¿Haces compras en ... Does not c... Comercio electrónico
Then Jump to page Page 9
Next

Comercio Electrónico

¿Con qué frecuencia compras online? *

- A Diario
- B Semanal
- C Mensual
- D Ocasionalmente

Indica el sector por favor *

- Alimentación
- Belleza / Salud
- Moda / Complementos
- Hogar / Decoración
- Ocio

When ¿Haces compras en ... | Does not c... | Centros comerciales

Then Jump to page | Page 10

Next →

Centros comerciales

¿Con qué frecuencia compras en un CC? *

- A Diaria
- B Semanal
- C Mensual
- D Ocasionalmente

¿Qué tipo de producto? *

- Alimentación
- Belleza / Salud
- Moda / Complementos
- Hogar / Decoración
- Ocio

¿A qué centro comercial sueles ir? *

- A Alicante
- B Elche
- C Elda
- D Otro

Next →

Estamos acabando

Estas preguntas son MUY importantes

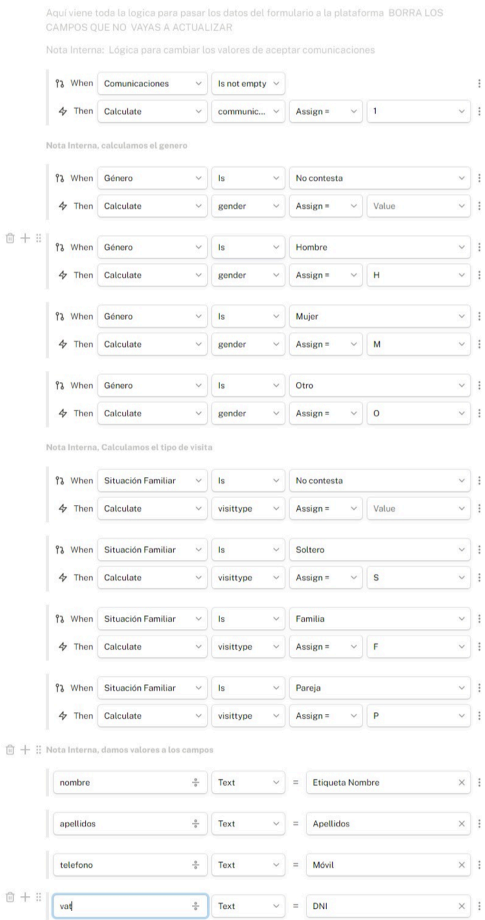
Compras en el comercio de Villena porque

- Me gusta mirar, tocar y probar los productos
- Trato cercano y de confianza
- Proximidad y ubicacion
- Precio
- Otro

Según tu opinión. Los principales problemas de nuestro comercio son: *

- No están actualizados
- El trato con el cliente no es el adecuado
- No encuentro los productos que busco
- El precio no se adecua
- No es fácil estar informado

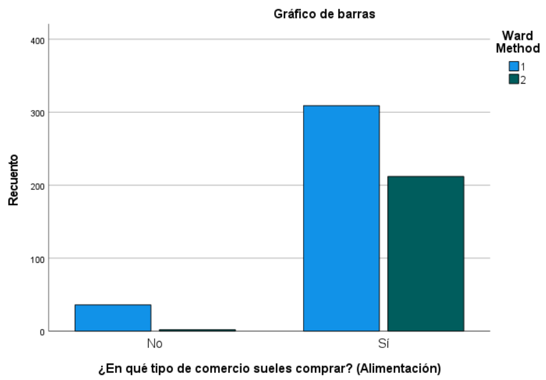
¿Qué tipo de productos o marcas echas en falta en el comercio local de Villena? *


Aquí viene toda la logica para pasar los datos del formulario a la plataforma BORRA LOS CAMPOS QUE NO VAYAS A ACTUALIZAR
Nota Interna: Lógica para cambiar los valores de aceptar comunicaciones
When Comunicaciones Is not empty
Then Calculate communic... Assign = 1
Nota Interna, calculamos el genero
When Género Is No contesta
Then Calculate gender Assign = Value
When Género Is Hombre
Then Calculate gender Assign = H
When Género Is Mujer
Then Calculate gender Assign = M
When Género Is Otro
Then Calculate gender Assign = O
Nota Interna, Calculamos el tipo de visita
When Situación Familiar Is No contesta
Then Calculate visittype Assign = Value
When Situación Familiar Is Soltero
Then Calculate visittype Assign = S
When Situación Familiar Is Familia
Then Calculate visittype Assign = F
When Situación Familiar Is Pareja
Then Calculate visittype Assign = P
Nota Interna, damos valores a los campos
nombre Text = Etiqueta Nombre
apellidos Text = Apellidos
telefono Text = Móvil
vat Text = DNI

Annex 3: Differentiating variables for classification by cluster analysis

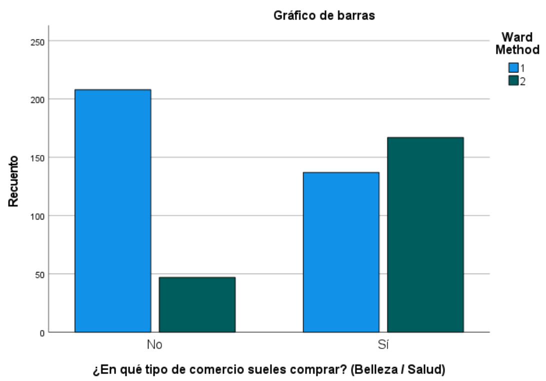
Cross table: What type of purchase do you usually make? (Groceries) * Ward Method

			Ward Method		Total
			1	2	
What type of purchase do you usually make? (Groceries)	No	Count	36	2	38
		Expected count	23,5	14,5	38,0
	Yes	Count	309	212	521
		Expected count	321,5	199,5	521,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0

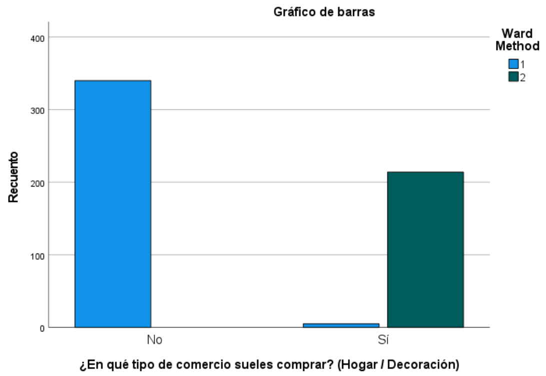


Cross table: What type of purchase do you usually make? (Beauty/ Health) * Ward Method

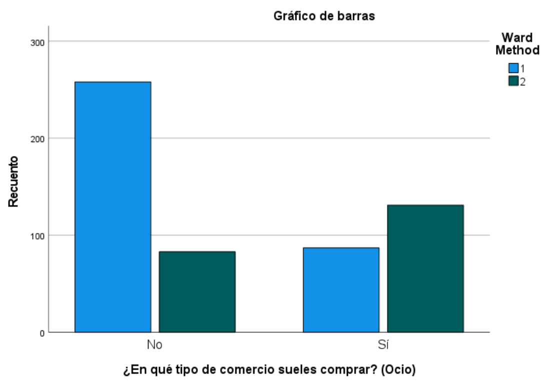
			Ward Method		Total
			1	2	
What type of purchase do you usually make? (Beauty/ Health)	No	Count	208	47	255
		Expected Count	157,4	97,6	255,0
	Yes	Count	137	167	304
		Expected count	187,6	116,4	304,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



Cross table: What type of purchase do you usually make? (Home/ Decoration) * Ward Method					
			Ward Method		Total
			1	2	
What type of purchase do you usually make? (Home/ Decoration)	No	Count	340	0	340
		Expected count	209,8	130,2	340,0
	Yes	Count	5	214	219
		Expected count	135,2	83,8	219,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0

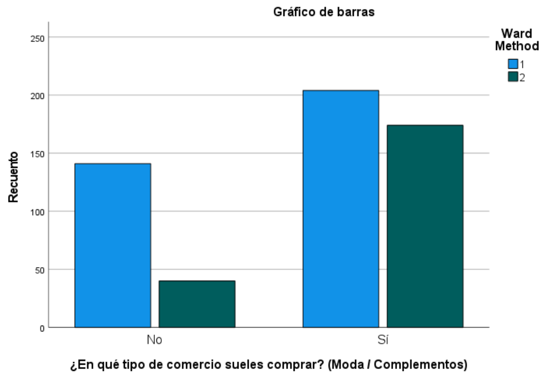


Cross table: What type of purchase do you usually make? (Leisure) * Ward Method					
			Ward Method		Total
			1	2	
What type of purchase do you usually make? (Leisure)	No	Count	258	83	341
		Expected count	210,5	130,5	341,0
	Yes	Count	87	131	218
		Expected count	134,5	83,5	218,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



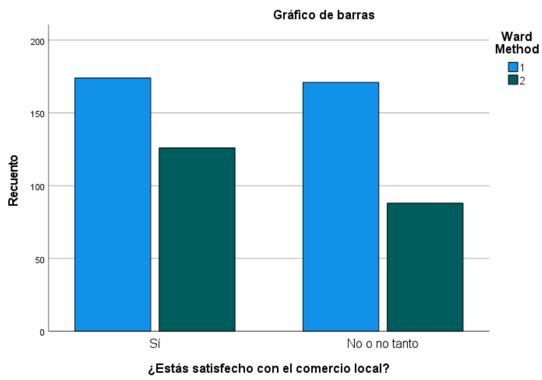
Cross table: What type of purchase do you usually make? (Fashion/ Complements) * Ward Method

			Ward Method		Total
			1	2	
What type of purchase do you usually make? (Fashion/ Complements)	No	Count	141	40	181
		Expected count	111,7	69,3	181,0
	Yes	Count	204	174	378
		Expected count	233,3	144,7	378,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



Cross table: Are you satisfied with local commerce? * Ward Method

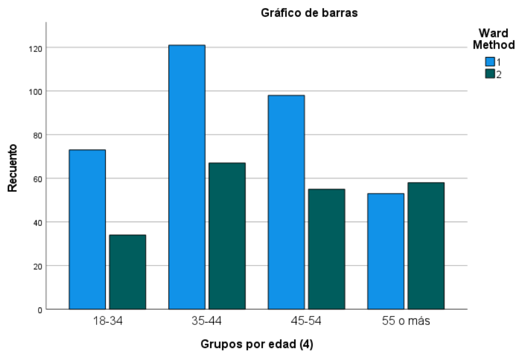
			Ward Method		Total
			1	2	
Are you satisfied with local commerce?	Yes	Count	174	126	300
		Expected count	185,2	114,8	300,0
	No or not so much	Count	171	88	259
		Expected count	159,8	99,2	259,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



Annex 4: Cross tables between clusters and socio-demographic variables

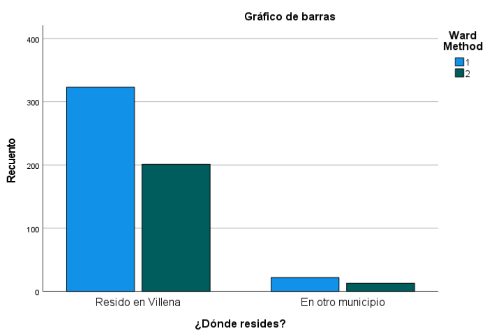
Cross table: Age groups * Ward Method

			Ward Method		Total
			1	2	
Age groups (4)	**18-34**	Count	73	34	107
		Expected count	66,0	41,0	107,0
	35-44	Count	121	67	188
		Expected count	116,0	72,0	188,0
	45-54	Count	98	55	153
		Expected count	94,4	58,6	153,0
	55 or more	Count	53	58	111
		Expected count	68,5	42,5	111,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



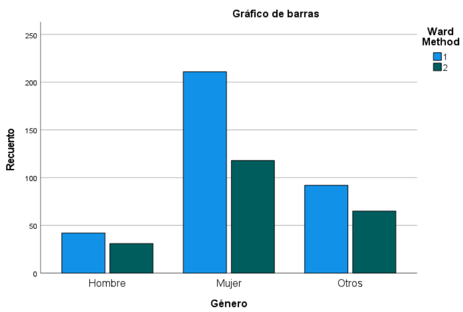
Cross table: Where do you live? * Ward Method

			Ward Method		Total
			1	2	
Where do you live?	**Villena**	Count	323	201	524
		Expected count	323,4	200,6	524,0
	Another town or city	Count	22	13	35
		Expected count	21,6	13,4	35,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



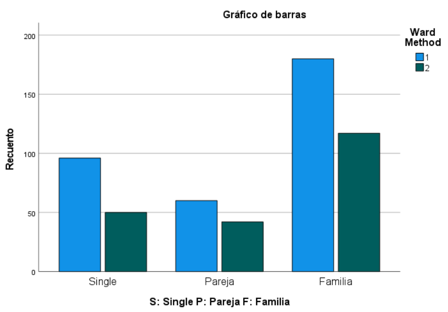
Cross table: Gender * Ward Method

			Ward Method		Total
			1	2	
Gender	Male	Count	42	31	73
		Expected count	45,1	27,9	73,0
	Female	Count	211	118	329
		Expected count	203,1	125,9	329,0
	Other	Count	92	65	157
		Expected count	96,9	60,1	157,0
Total		Count	345	214	559
		Expected count	345,0	214,0	559,0



Cross table: Familiar situation * Ward Method

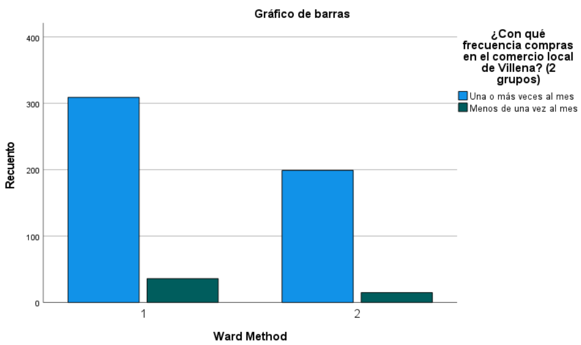
			Ward Method		Total
			1	2	
Familiar situation	Single	Count	96	50	146
		Expected count	90,0	56,0	146,0
	Couple	Count	60	42	102
		Expected count	62,9	39,1	102,0
	Family	Count	180	117	297
		Expected count	183,1	113,9	297,0
Total		Count	336	209	545
		Expected count	336,0	209,0	545,0



Annex 5: Cross tables of variables used for cluster characterization

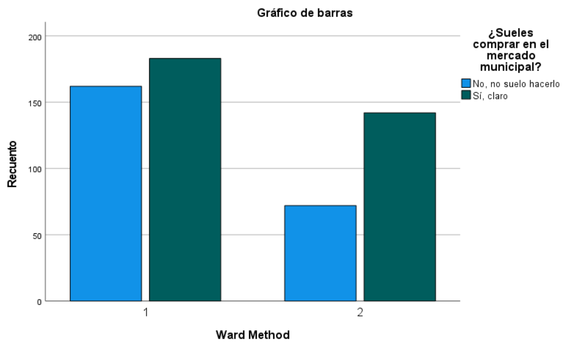
Cross table: How often do you shop at local shops in Villena?

			Once a month or more	Less than once a month	Total
Ward Method	**1**	Count	309	36	345
		% Within Ward Method	89,6%	10,4%	100,0%
		% Within How often do you shop at local shops in Villena?	60,8%	70,6%	61,7%
	2	Count	199	15	214
		% Within Ward Method	93,0%	7,0%	100,0%
		% Within How often do you shop at local shops in Villena?	39,2%	29,4%	38,3%
Total		Count	508	51	559
		% Within Ward Method	90,9%	9,1%	100,0%
		% Within How often do you shop at local shops in Villena?	100,0%	100,0%	100,0%



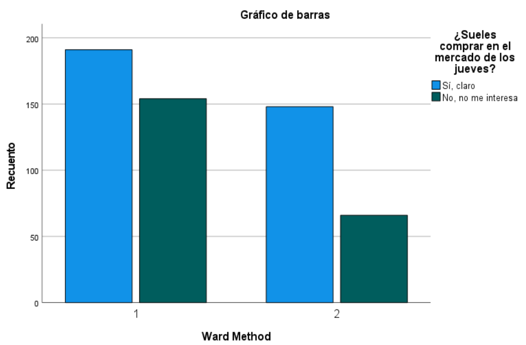
Cross table: Do you usually shop at the municipal marketplace?

			No	Yes	Total
Ward Method	**1**	Count	162	183	345
		% Within Ward Method	47,0%	53,0%	100,0%
		% Within Do you usually shop at the municipal marketplace?	69,2%	56,3%	61,7%
	2	Count	72	142	214
		% Within Ward Method	33,6%	66,4%	100,0%
		% Within Do you usually shop at the municipal marketplace?	30,8%	43,7%	38,3%
Total		Count	234	325	559
		% Within Ward Method	41,9%	58,1%	100,0%
		% Within Do you usually shop at the municipal marketplace?	100,0%	100,0%	100,0%



Cross table: Do you usually buy in Thursday's Street market?

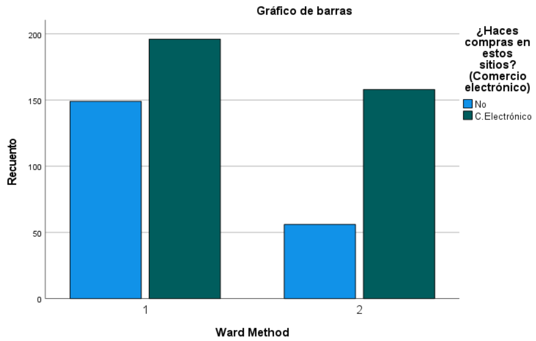
			Yes	No	Total
Ward Method	**1**	Count	191	154	345
		% Within Ward Method	55,4%	44,6%	100,0%
		% Within Do you usually buy in Thursday's Street market?	56,3%	70,0%	61,7%
	2	Count	148	66	214
		% Within Ward Method	69,2%	30,8%	100,0%
		% Within Do you usually buy in Thursday's Street market?	43,7%	30,0%	38,3%
Total		Count	339	220	559
		% Within Ward Method	60,6%	39,4%	100,0%
		% Within Do you usually buy in Thursday's Street market?	100,0%	100,0%	100,0%



Cross table: Do you shop in online commerce?

			No	Yes	Total
Ward Method	**1**	Count	149	196	345
		% Within Ward Method	43,2%	56,8%	100,0%
		% Within Do you shop in online commerce?	72,7%	55,4%	61,7%
	2	Count	56	158	214

		% Within Ward Method	26,2%	73,8%	100,0%
		% Within Do you shop in online commerce?	27,3%	44,6%	38,3%
Total		Count	205	354	559
		% Within Ward Method	36,7%	63,3%	100,0%
		% Within Do you shop in online commerce?	100,0%	100,0%	100,0%



Cross table: Do you shop in shopping malls?

			No	Yes	Total
Ward Method	**1**	Count	109	236	345
		% Within Ward Method	31,6%	68,4%	100,0%
		% Within Do you shop in shopping malls?	58,9%	63,1%	61,7%
	2	Count	76	138	214
		% Within Ward Method	35,5%	64,5%	100,0%
		% Within Do you shop in shopping malls?	41,1%	36,9%	38,3%
Total		Count	185	374	559
		% Within Ward Method	33,1%	66,9%	100,0%
		% Within Do you shop in shopping malls?	100,%	100,%	100,0%