Drivers for economic recovery: analysis of family expenditure on catering services

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Abstract

Purpose – Catering services play important role in the Spanish economy, accounting for 6.2% of GDP in 2021. To overcome the adverse economic impacts of COVID-19, catering services are considered one of the drivers to stimulate economic growth. Hence, the main aim of this paper is to analyse the sociodemographic profile of the family's main breadwinner who allocates most of his expenditure budget on different catering services before and during the pandemic caused by the COVID-19 in Spain.

Design/methodology/approach – The official Family Budget Survey in Spain was used. This offers information on expenditure by families in 2019 and 2020. CHAID multivariate analysis was employed. This has proved a valuable tool in predicting expenditure, as well as determining the cause–effect relationship of this expenditure.

Findings – Findings establish the main breadwinner's expenditure on catering services based on predictors such as "year" affected by the pandemic; "type of employment contract"; "gender"; and "age". A gender "pub-gap" in consumption in bars and cafes has been revealed, and families with a male breadwinner, on a permanent contract, between the age of 40 and 60 spent the most on catering services.

Originality/value – This research presents a new interdisciplinary approach to family breadwinners as a company whose spend on catering is shaping the economic recovery and leading to new answers for hospitality management. Identified factors can lead to improved decision-making and contextualisation of economic models for food service providers in a post-pandemic future.

Keywords Catering services, Families, Expenditure patterns, CHAID multivariate Analysis

Paper type Research paper

1. Introduction

Countries are trying to overcome the adverse economic impacts of the COVID-19 pandemic. Problem statement studied in this paper positions that catering services, as well as tourism, are one of the drivers to stimulate economic growth in a post-COVID era (Salinas Fernández *et al.*, 2022; Villi, 2021). Nowadays, the post-pandemic economy is growing and accelerating (Liu-Lastres and Wen, 2022) but whether this recovery will take the form of a U-shape, a V-shape, a K-shape and an L-shape (Sharma *et al.*, 2021) or a "swoosh", with a rapid drop followed by an excruciatingly slow recovery (Hannon and Chaudhuri, 2020).

During the last decade, many authors have analysed the economic impact of eating away from home, demonstrating the relationship between household income, frequency and expenditure as an economic contribution (Filimonau *et al.*, 2022). In the light of this, family

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expenditure on restaurants can be considered an important social indicator of the economy. To study data on the restaurant sector, it is necessary to start by defining the term HoReCa, mostly used in Europe, which is the acronym of the first two letters of Hotels, Restaurants and Cafeterias or Catering (Casolani and Del Signore, 2016). This paper focusses on the last two parts, "Restaurants" and "Cafés" or "Catering". "Hotels" have not been considered as they are more related to tourism.

In the case of Spain, the central argument and context framing the question of this research refers to catering as a highly relevant sector in the Spanish economy, accounting for 6.2% of GDP in 2021 and employing more than 1.250.000 workers (INE, 2022). Tourism and especially the catering services sector has been one of the industries most affected by the health crisis caused by COVID-19, which appeared in Spain at the beginning of 2020 (Gil-Alana and Poza, 2022). To try to minimise the effects of the pandemic, many governments around the world had to make difficult decisions. This was the case in Spain, where a total lockdown from mid-March to May 2020 meant that people could not leave their homes except for essential activities (Martín-Quintana *et al.*, 2022).

The evolution of spending on catering services in Spain is closely related to consumer expectations, so when the numbers are positive, demand in this sector increases; while when the numbers are negative, demand decreases (Martín Cerden~o, 2014). To fill the gap of insufficient information in the research literature, this paper analyses catering expenditure in Spain, as an everyday service rather than tourism spending. Data have been used from the Family Budget Survey carried out by the National Institute of Statistics (INE), which treats households as basic units. This research contributes theoretical, empirical and methodological aspects with an interdisciplinary approach to family breadwinners as a company whose catering expenditure is shaping the economic recovery and leading to new answers for hospitality management literature. Identified factors and applied CHAID technique can help to provide food service providers with improved decision-making and contextualisation for their financial modelling in a post-pandemic future. CHAID analysis is a statistical technique that is commonly used in market research. It is a valuable method in predicting expenditure, as well as determining the cause-effect relationship of this expenditure. Results of CHAID analysis are presented in an easy-to-interpret "decision tree" format.

In this context, the expenditure of private households and their members is analysed. By "household" we mean a person or group of persons. There can be a single-person household or a multi-person household with or without relationships between them (INE, 2016; Population Reference Bureau, 2020). Taking into account the concept of the household, the family is considered as the ideal basic consumption unit, and the main breadwinner is taken as a reference for the purpose of the study and the following research questions and objectives:

Research questions:

RQ1. What is Spanish household expenditure on different catering services before and during the pandemic caused by the COVID-19?

RQ2. What is the sociodemographic profile of the family's main breadwinner who allocates most of his expenditure budget on different catering services before and during the pandemic caused by the COVID-19 in Spain?

Research objectives:

RO1. To find out the expenditure of Spanish households on different catering services before and during the pandemic caused by COVID-19.

RO2. To discover the sociodemographic profile of the family's main breadwinner who allocates most of his / her expenditure budget on different catering services before and during the pandemic caused by COVID-19 in Spain.

In this study, family economics and catering services are intimately related to make GDP more explicit. The organisation of the research starts with this introduction, then Section 2 presents the theoretical framework. Section 3 develops the methodology used in the study, while Section 4 describes results on household expenditure on catering services. Section 5 contextualises the discussion comparing it with similar studies, and Section 6 states final conclusions, implications and limitations.

2. Literature review

2.1 Catering services in Spain

Catering services satisfy consumer needs connected not only with food requirements but also with filling leisure time (Piekut and Valentukevičienė, 2019), such as spending time with friends and family. In Spain, catering plays a more important role than in other countries, because of the Spanish lifestyle, where social life is deeply rooted in gatherings with family members and friends (Díaz-Méndez and García-Espejo, 2017) Hence, around 40–45% of consumption of gastronomy in Spain is linked to social activity, and it serves as a reference for sociability even in times of crisis (Ramos Truchero and Castaño Suárez, 2018). From a macroeconomic viewpoint, catering is a subsector of the hotel industry that has great weight in the Spanish economy and represents 6.2% of GDP (INE, 2022). It is also one of the sectors which, despite economic cycles, maintains its contribution without relevant variations. There are more than 270.000 catering establishments in Spain (Statista, 2022), categorised commercially as restaurants, cafés, bars and catering companies. Segmenting more specifically we can identify very different types of establishments: bars, inns, breweries, wine bars, cider houses, wineries, burger restaurants, grocery stores, pizzerias, etc. The list could be longer, as this is a sector which generates creates high profitability and is in constant innovation and change (Gallego, 2018).

2.2 Household expenditure

Household expenditure on catering services depends on household financial decisions. Various models have been defined to analyse the financial decision-making process in a household, of which two are the most common. These are the bargaining model and the unitary (utility) function, which differ according to regard the source of income which affects patterns of expenditure (Phipps and Burton, 1998). For the bargaining model financial management in the household is a reflection of bargaining power. There are two factors that can increase bargaining power amongst spouses: personal income and level of education (Becker, 1981).

Independent of the models, consumer and therefore household expenditure decision-making is affected by different micro-aspects, such as changes in value systems, changes caused by the development of new, non-standard forms of employment, growing interest in products that facilitate everyday life, and growing interest in products that facilitate everyday life (Piekut and Valentukevičienė, 2019). Other micro-factors affecting expenditure decisions in the household are demographic factors, such as the age, sex, life cycle stage or marital status (Kotler and Armstrong, 2020), of family members or the main breadwinner. In this context, people purchase and consume more food outside, rather than at home, due to the changes in the make-up of households (more elderly people, more singles) and their increasingly busy lives (Ingenbleek and Zhao, 2018). Catering services belong to higher-level needs, therefore they are more likely to be found in households with a more favourable financial situation, although it is important to note that they depend on several variables describing households (Liu *et al.*, 2013; Piekut and Gutkowska, 2013).

2.3 Household expenditure on catering services

Household expenditure on catering services depends on many different macroeconomic, political, economic and social determinants, including the following: the country's GDP, its level of unemployment, the situation of the labour market, changes in household structure, the activity of some social groups in the labour market, an ageing society, political changes, accessibility of services, price level, etc. Therefore, these determinants indirectly affect the decisions of household members (Syrjälä *et al.*, 2017; Bresciani *et al.*, 2021). In the context of this study, the COVID-19 health crisis was a major event which affected household expenditure on different catering services in Spain. The emerging appearance of the COVID-19 virus in Spaniards' lives in 2020 entailed a series of restrictions for them. Initially these limitations were some of the strictest in Europe, entailing total confinement for more than two months. During the later stages, milder restrictions were applied, depending on the virus impact waves. Consequently, tourism and leisure industries (De Esteban Curiel and Antonovica, 2022), including catering services, were one of the most affected business areas, which meant a 42% drop in sales that year (KPMG, 2021). The total number of catering establishments decreased in the two years 2020 and 2021 (Chou *et al.*, 2022), the reductions mostly affecting bars and restaurants. Additionally, although traditional catering business models remained, a new restaurant concept appeared in the years immediately before the pandemic, highly influenced by digitisation (Farrell *et al.*, 2020; Gavrila and de Lucas Ancillo, 2021) which aims to adapt catering businesses to the new needs of online consumers (Saura *et al.*, 2020; Gursoy *et al.*, 2020).

In the theoretical context in this study, we focus on household expenditure more than on restaurant consumption as an indicator of economic measurement, because spending is the consumption of goods or services in exchange for an amount of money for developing daily activities. Thus, different catering expenses in Spain are based on the Family Budget Survey done by the National Statistics Institute (INE, 2022).

3. Methodology

3.1 Participants

For this research paper the Family Budget Survey (EPF) has been used. This is one of the oldest surveys in Spain (since 1958) and is carried out by the official institution "National Institute of Statistics" (INE, official website www.ine.es).

Participants are interviewed in around 20,000 randomly selected households, who collaborate for two consecutive weeks per year and who remain in the sample for two years. Over the last two years, 20,817 households were interviewed in 2019 and 19,170 in 2020. The main breadwinner is considered to be the member of the household who is 16 years old or older, and whose regular (not occasional) contribution to the common budget is used to cover household expenses to a greater extent than the contributions of each of the other members (INE, 2022).

The Family Budget Survey is the most prominent survey on the macroeconomic situation in Spain, and it helps the government and different public and private bodies to understand family budget expenditures on an annual basis. Thus, for this paper in order to accomplish the research objectives, the official macro data from the Spanish Family Budget Survey has been used.

3.2 Instrument

The survey is made up of several forms covering family expenses and bills and converting them into coded questionnaires according to a list provided by the National Institute of Statistics. Since 2016, the INE has incorporated the new European classification of

consumption ECOICOP (European Classification of Individual Consumption by Purpose) (INE, 2016). Catering services classified in the ECOIPOP (INE, 2016) are those "provided by restaurants, cafes and the like are classified in Division 11. Services range from full service (with a waiter and seating) to limited and self-service". The classification breaks down total catering services into "menu of the day in restaurants", "lunches and dinners in restaurants", "bars and cafes", and "banquets, ceremonies, and celebrations outside of the home". Those are the variables included in the Family Budget Survey (EPF) selected to construct the model of this research to demonstrate a cause (catering services expenditure) and effect (GDP recovery) relationship back to normalcy.

3.3 Sample error and confidence level

The total national sample error of the Family Budget Survey in 2019 is 0.90% and for the catering services section it is 1.49% with a 95% confidence level. On the other hand, for the year 2020 the total national sampling error is 1.03%, and for the catering services section it is 2.38% with a 95% confidence level (INE, 2022).

3.4 Data analysis

The statistical analysis has been carried out using the IBM software SPSS version 26. The following statistical techniques and tests have been used for this study.

(1) Data description showing the mean and the standard deviation in the case of variables of a continuous numerical nature corresponding to the variables of expenditure. The descriptive analysis of the categorical variables has been carried out showing the frequency, the total of cases (N), and the proportion within the group. In this sense, univariate statistical analysis using a Student's *t*-test for the variables year of the survey, gender and type of the contract of the main breadwinner. On the other hand, for the age variable, an ANOVA analysis (p-value less than 0.05) has been carried out, where it has been verified if there are differences between the different means of expenditure. In cases where the null hypothesis of equality of means has been rejected, a *post-hoc* analysis has been employed using a Tukey test.

(2) Multivariate analysis by CHAID segmentation that helps to find different subjects due to their behaviour in relation to the response variable (in this case spending on catering services), so that the sample is segmented in groups or subsamples that are internally very homogeneous (intragroup) in terms of factors, but manifest significant differences between them (intergroup). Thus, CHAID technique is an appropriate analysis of consumer sociodemographic characteristics with service delivery patterns (Sanchez, 2018). The CHAID algorithm or "tree analysis" is used to identify segments based on the criterion variable (Kass, 1980). CHAID decision trees are excellent tools for data classification and forecasting as they provide an effective structure where one gets an opportunity to display one's options in the form of a tree where one has dependent variables related to independent or predictor variables via the branches of a tree, and all the possible options are displayed in the form of a complete tree, approximating all the relationships (Samar Ali *et al.*, 2019). Also, CHAID is "the most appropriate technique for selecting the more meaningful or important segmentation variable as an intermediate step for benefit segmentation" and "is especially useful for demographic or behavioural data" (Chung *et al.*, 2004). The technique finds the segment with the strongest relationship to the criterion of interest and the results are easy to interpret as they are represented in a segmentation tree (Legoherel and Wong, 2006; Legoherel *et al.*, 2015).

4. Results and discussion

4.1 Descriptive analysis

Firstly, we will begin by making a brief descriptive analysis of the expenditure variables in both of the years studied (Table 1). The average expenditure on catering services is 2,828.13€. This can be broken down as follows: on menu of the day in restaurants 836.92€; on lunches and dinners in restaurants 1,804.87€; consumption in bars and cafes is 1,617.56€; and finally on banquets, ceremonies and celebrations outside the home 476.83€. But in Table 2, where the average expenditures in pre-pandemic 2019 and pandemic year 2020 are summarised, it can be clearly seen that Spanish family expenditure dropped in all studied catering services in 2020 and specially on "banquets, ceremonies, and celebrations outside of the home" (in 2019, 625.26€ and in 2020, 219.60€). In this context in relation to the general economic situation in Spain, the COVID-19 health crisis had an important effect on the Spanish economy. The Bank of Spain has presented data which shows that in 2019 the gross national product (GNP) increased by 2.4% and in 2020 it reduced by 10.8%. At the same time there are forecasts that for 2024 GNP could increase to around 2.5% (Bank of Spain, 2022). Annual inflation in Spain in 2019 was 0.78%, and −0.53% in 2020. In 2022 it increased to 9.02% (Worldwide Inflation Data, 2022). Many national and international studies, and different countries' national statistical data show similar tendencies in decrease of expenditures on catering services. Examples are general studies on catering services done by Gursoy and Chi (2020), the catering industry in China studied by Guo *et al.* (2020), Zhang *et al.* (2021), catering services in the USA and Canada investigated by Unnikrishnan and Figliozzi (2020), the use of OpenTable data to study catering industry Covid-19 impacts by Dube *et al.* (2021), studies on catering services consumption by Portuguese tourists in Latin America done by Foncesa *et al.* (2021).

Table 1.
Family expenditure variables on catering services (€)

Type of the expenditure variables	Mean
Total catering services	2828.13
Menu of the day in restaurants	836.92
Lunches and dinners in restaurants	1804.87
Consumption in bars and cafes	1617.56
Banquets, ceremonies, and celebrations outside of the home	476.83

Source(s): Own elaboration, 2022

Table 2.
The average and growth household expenses (€) on different catering services per year

Catering service type	Year	Mean	Decreasing growth in 2019–2020 (%)
Total catering services	2019	3116.28	−22.55
	2020	2413.52	
Menu of the day in restaurants	2019	899.52	−18.88
	2020	729.66	
Lunches and dinners in restaurants	2019	1875.44	−10.08
	2020	1686.46	
Consumption in bars and cafes	2019	1691.40	−10.95
	2020	1506.25	
Banquets, ceremonies, and celebrations outside of the home	2019	625.26	−64.88
	2020	219.60	

Source(s): Own elaboration, 2022

In Table 3 we can see that in 2019 52.1% of Spanish families that were surveyed and in 2020 the figure was 47.9%. The main breadwinner was between 40 and 50 years old in 22.7% of the families surveyed, between 51 and 60 in 24.2% of the cases, over 60 years old in 38.4% and under 40 years old in the remaining 14.8%. As for gender, 66.7% of the main breadwinners are men and 33.3% are women. Lastly, regarding the type of contract, we can see that 13.7% of the main breadwinners have a temporary contract and 65.0% a permanent contract.

4.2 Inferential analysis of expenditure on catering: a multivariate analysis

In Figure 1, the multivariate analysis was carried out including the year of the survey, the type of contract and the gender of the main breadwinner as classification variables. The first level segmentation presents the year of the survey ($p < 0.001$). At this level we observe that node 1 corresponds to 2020 with an average expenditure of 2,413.52€, and node 2 corresponds to 2019 with an average expenditure of 3,116.28€. Thus, node 1 is segmented into two nodes, where node 3 relates to the type of permanent contract, with an average expenditure of 2,505.41€, and node 4 for temporary contracts with an average expenditure of 1,731.98€. Within node 3 a second level segmentation can be observed, where node 7 corresponds to women with an average expenditure of 224.50€ and node 8 links to men with an average expenditure of 2618.51€. In the same way, within node 4 we can see segmentation based on the gender of the main breadwinner ($p < 0.05$), where node 9 presents women with an average expenditure of 1.570.67€ and node 10 represents men with an average expenditure of 1840.93€.

On the other hand, node 2 for the year 2019 divides a segmentation based on the type of contract of the main breadwinner ($p < 0.001$), where node 5 with the permanent contract type has an average expenditure of 3258.22€ and node 6 corresponds to the temporary contract with an average expenditure of 2138.69€. Thus, node 5 undergoes a second segmentation based on the gender of the main breadwinner ($p < 0.001$), where node 11 corresponds to women with an average expenditure of 2780.62€ and node 12 relates to men with an average expenditure of 3453.17€. Node 6 does not undergo any segmentation based on the gender.

Therefore, the average expenses on catering present the highest index for men with a permanent contract in 2019, and the lowest number is found for women with a temporary contract in 2020. The results show that even during the pandemic there were gender inequalities in relation to these studied sociodemographic variables. Thus, there are studies, which show that different crises are gender specific. Consequently, expenditure by females as the main breadwinner on catering services outside the home globally were affected more negatively. These similar tendencies can be found in Austria, studies done by Christl *et al.* (2022), analyses

Variable	Value	Frequency	N	Proportion
YEAR	2019	20,817	39,987	52.1
YEAR	2020	19,170	39,987	47.9
AGE	Between 40 and 50	9,058	39,987	22.7
AGE	Between 51 and 60	9,682	39,987	24.2
AGE	More than 60	15,342	39,987	38.4
AGE	Less than 40	5,905	39,987	14.8
GENDER	Men	26,678	39,987	66.7
GENDER	Women	13,309	39,987	33.3
CONTTYPE	Eventual/temporary	5,459	39,987	13.7
CONTTYPE	Permanent	25,989	39,987	65.0
CONTTYPE	NA	8,539	39,987	21.4

Source(s): Own elaboration, 2022

Table 3.
Study classification variables

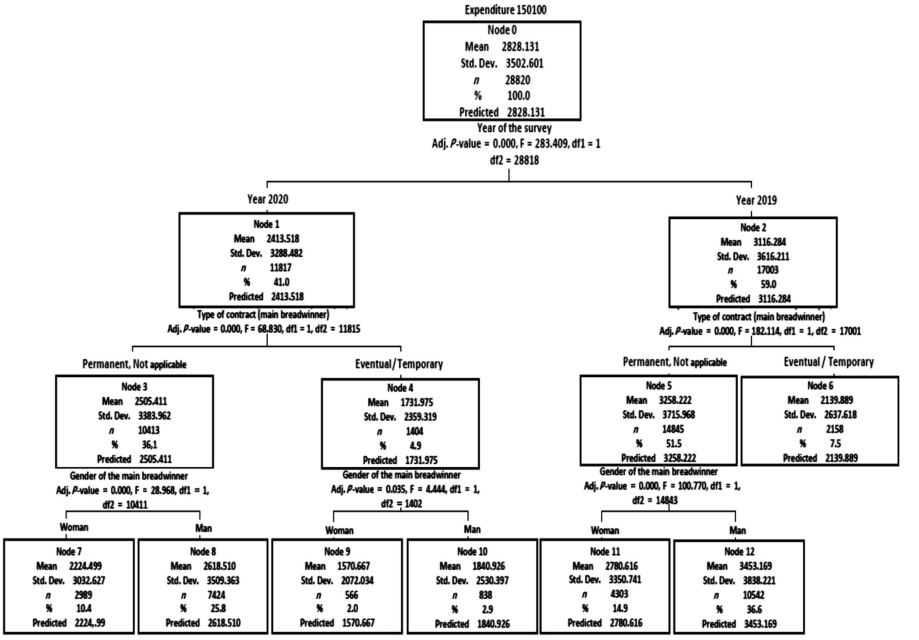


Figure 1.
CHAID segmentation of average expenditure (€) on catering

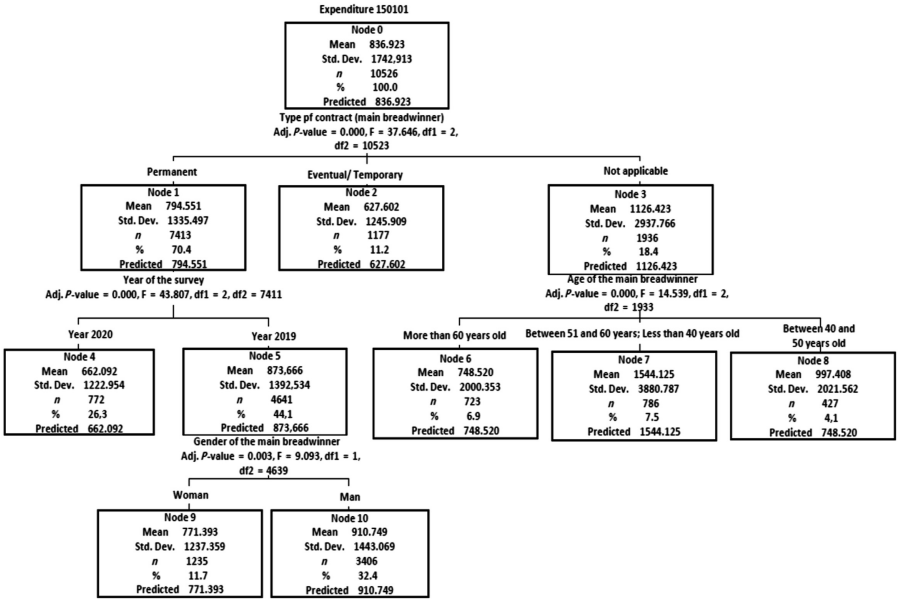
Source(s): Own elaboration, 2022

done by Prof. Paula Profeta (2020) on OECD countries; research done by Dang and Nguyen (2021) on six countries, such as China, South Korea, Japan, Italy, the United Kingdom and the USA, also in Australia where analysis was realised by Richardson and Deniss (2020).

Generally, our study shows that in families where the breadwinner was male, expenditure in restaurants reduced less in 2020. Studies done by Baker *et al.* (2020) for the USA National Bureau of Economic Research indicate the same tendency.

4.3 Inferential analysis of expenditure on menu of the day in restaurants: a multivariate analysis

The multivariate analysis of expenditure on the menu of the day in restaurants was carried out by including the type of contract, the year of the survey, the age and the gender of the main breadwinner as classification variables (see Figure 2). The first segmentation is based on the type of contract of the main breadwinner ($p < 0.001$). Node 1 corresponds to the permanent contract with an average spend of 794.55€ and node 2 relates to the temporary contract with an average expenditure of 627.60€. Hence, node 1 is segmented by year variables, where node 4 represents an average expenditure of 662.09€ in 2020 and node 5 shows an average spend of 873.67€ in 2019. Thus, node 4 does not present any additional segmentation and it can be assumed that the families that make up this group do not present any distinction in expenses between male and female main breadwinners. In contrast, node 5 (year 2019) is divided in two sub-segments, where node 9 corresponds for women with an average expenditure of 771.39€ and node 10 for men with an average expenditure of 910.75€. Differently from what had happened with node 1, node 2 of the main breadwinners with temporary contracts does not present any subdivision. In this way, it can be perceived that the expenditure on menu of the day in restaurants presents the highest values in families



Source(s): Own elaboration, 2022

Figure 2.
CHAID segmentation of average expenditure (€) on menu of the day in restaurants

with a male main breadwinner with a permanent contract in the year 2019, while the lowest value can be found in families with a temporary contract.

Additionally, in Figure 2 we can observe that node 3 (type of the contract of the main breadwinner) does not present any description. This could be interpreted that the node consists of respondents who do not have any type of employment contract, that is, students and/or workers who belong to the informal labour market. Interestingly this node demonstrates expenditure on menu of the day in restaurants of 1,126.42€, which is higher than other contract type nodes. At the same time, node 3 subdivides into three segments which are characterised by the age of the main breadwinner. Thus, node 7 presents the highest expenditures on this kind of catering services (1,544.16€) and it presents the following age groups: less than 40 and between 51 and 60 years old. One possible interpretation could be that workers in the informal economy or housewives (without a specific contract) eat the daily menu outside their home as their first option. The same thing could happen with families where students are the main breadwinners who live away from their parents and who are included in those under 40.

It is interesting to mention that the predictor "year" in Figure 2 does not appear as a significant variable, because the pandemic did not really lead to a reduction in this consumption for the year 2020 compared to 2019. This could be interpreted as the open air "terrace effect" in hospitality establishments permitted by different city councils in Spain in order to recover from the "hard lockdown effect" at the beginning of the pandemic. A positive "terrace effect" is presented in a study of the city of Madrid conducted by Pérez *et al.* (2021).

4.4 Inferential analysis of expenditure on lunches and dinners in restaurants: a multivariate analysis

In Figure 3, the multivariate analysis of expenditure on lunches and dinners in restaurants has been carried out based on the classification variables. The first and most important

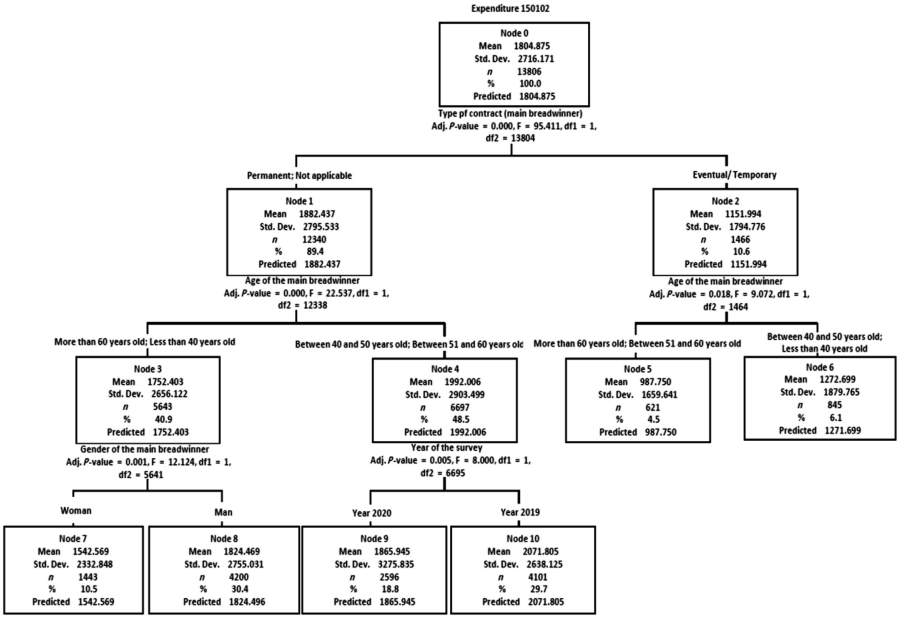


Figure 3.
CHAID segmentation of average expenditure (€) on lunches and dinners in restaurants

Source(s): Own elaboration, 2022

segmentation is performed according to the type of the contract of the main breadwinner ($p < 0.001$). Node 1 corresponds to the permanent contract with an average expenditure of 1,882.44€ and node 2 matches with to the temporary contract, where average expenditure is 1,151.99€. Thus, node 1 subdivides on the basis of age ($p < 0.001$). On the one hand, node 3 corresponds to families with main breadwinners over 60 and under 40 with an average expenditure of 1,752.40€, whereas node 4 relates to families with main breadwinners between 40 and 60 years old and an average expenditure is 1,992.01€. Consequently, node 3 has final sub-segmentation based on gender, where node 7 links to women with an average expenditure of 1,542.57€ and node 8 to men with an average expenditure of 1,824.50€. Within nodes 7 and 8 no segmentation can be observed based on the year and these nodes are terminal. Node 4 is segmented according to the year, so node 9 represents 2020 with an average expenditure of 1,865.95€ and node 10 with 2019, when average expenditure was 2,071.81€. Hence, within these two nodes we assume that the average expenses for men and women are equal.

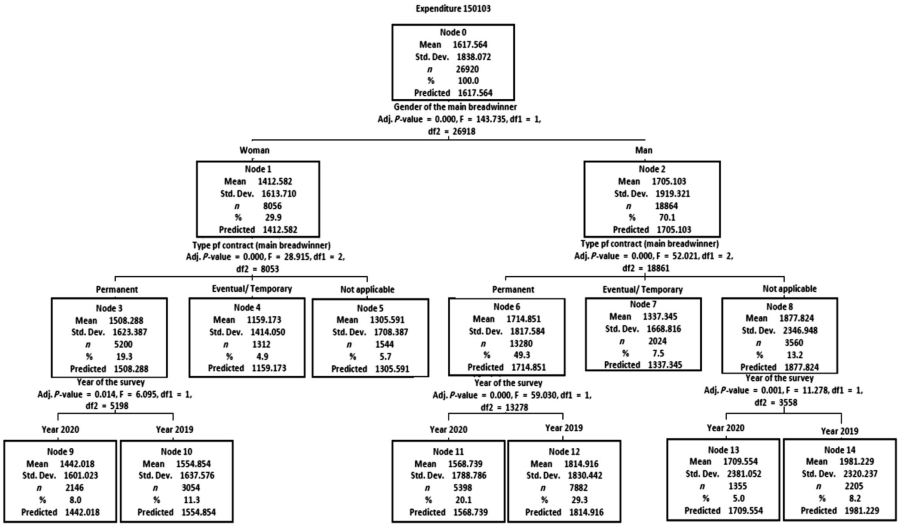
Node 2 of the temporary contract is segmented into two nodes (5 and 6), based on the age of the main breadwinner. Node 5 presents families with a main breadwinner over 51 with an average expenditure of 987.75€, and node 6 represents families with a main breadwinner who is up to 50 years old with an average expenditure of 1,272.670€. So, it can be concluded that the impact is the same for all types of temporary contracts regardless of the year of the survey and/or the gender of the main breadwinner.

Figure 3 shows that the highest expenses on lunches and dinners in restaurants occur in families with a male main breadwinner between 40 and 61 years of age with a permanent contract in 2019. On the other hand, we find the lowest expenditure in families with a main breadwinner over 51 on a temporary contract. Specific studies on reduction of expenditure on restaurant services in 2020 can be found in Gursoy *et al.* (2020).

4.5 Inferential analysis of expenditure on drinks in bars and cafeterias: a multivariate analysis

The multivariate analysis of expenditure on drinks in bars and cafes was employed based on the classification variables (see Figure 4). The first segmentation is divided in relation to the gender of the main breadwinner ($p < 0.001$). In this sense, node 1 corresponds to women, with an average expenditure of 1,412.58€, and node 2 to men, with an average expenditure of 1,705.10€. In this context, we can talk about the gender "pub-gap" and also see the influence of the cultural context in Spain where males are more likely to go to bars and cafes alone or to have a good time with friends. Similar studies in the UK have shown pubs to be male-dominated spaces (Knight, 2020). Thus, node 1 subdivides based on the type of contract of the main breadwinner ($p < 0.001$). Node 3 relates to the permanent contract type with an average expenditure of 1,508.29€ and node 4 links to the temporary contract with an average expenditure of 1,159.17€. Node 3 includes final segmentation based on the year ($p < 0.05$), where node 9 corresponds to 2020 with an average spend of 1,442.02€ and node 10 to 2019 with an average expenditure of 1,554.85€. Node 4 does not undergo any additional segmentation. Therefore, we cannot ascribe any type of influence to the year of the survey for women on temporary contracts.

Also, in Figure 4 we can see that node 2 corresponding to men has a segmentation in relation to the type of contract of the main breadwinner ($p < 0.001$). On the one hand, node 6 shows a permanent contract with an average expenditure of 1,714.85€, and on the other hand, for temporary contracts average expenditure is 1,337.35€. In addition, node 6 also subdivides based on the year of the survey, where node 11 corresponds to 2020 with an average spend of 1,568.74€ and node 12 relates to 2019 when average spend was 1,814.92€. Consequently, we observe that the highest expenditure on drinks in bars and cafes is in 2019, amongst the families where a male is a main breadwinner on a permanent contract.



Source(s): Own elaboration, 2022

Figure 4.
CHAID segmentation of average expenditure (€) on drinks in bars and cafeterias

4.6 Inferential analysis of expenditure on banquets, ceremonies and celebrations outside of the home: a multivariate analysis

In Figure 5, the multivariate analysis of expenditure on banquets, ceremonies and celebrations was carried out based on the classification variables, such as type of contract, gender, year of the survey and age of the main breadwinner. The first level segmentation constitutes the year of the survey variable ($p < 0.001$). In this sense, we observe that node 1 corresponds to 2020 and presents an average expenditure of 219.60€ and node 2 relates to 2019 with average expenditure of 625.26€. Then node 1 is segmented according to the gender of the main breadwinner ($p < 0.05$) and generates two further nodes: node 3 links to women with an average expenditure of 175.06€ and node 4 to men with an average spend of 239.99€. Consequently, these nodes behave as terminal ones and we do not observe any distinction based on the age or type of contract of the main breadwinner. Therefore, node 2 splits into two segments that are related to the age of the main breadwinner ($p < 0.001$), where node 5 corresponds to families with main breadwinners over 40 with an average expenditure of 518.99€ and node 6 with main breadwinners under 40 with an average expenditure of 1,055.94€. The interpretation of this could be that it was mostly young Spaniards such as students who were the first to return to this kind of leisure services in public with friends. Shortly after the full lockdown was over, they started to celebrate their "freedom" and life "back to normalcy". Additionally, it is worth mentioning that young parents with small children tried to organise celebrations like birthdays, first communions, etc. in order to compensate for socialisation time their children had missed during the hard lockdown. These age groups' leisure and catering services consumption activities were also very different from those of the older generations, because there were certain "beliefs" amongst young Spaniards that the COVID-19 virus did not affect them. A study by the Spanish Sociological Research Centre confirms that young Spaniards were less responsible in following COVID-19 measures during outdoor celebrations and parties (Sánchez Hidalgo, 2021).

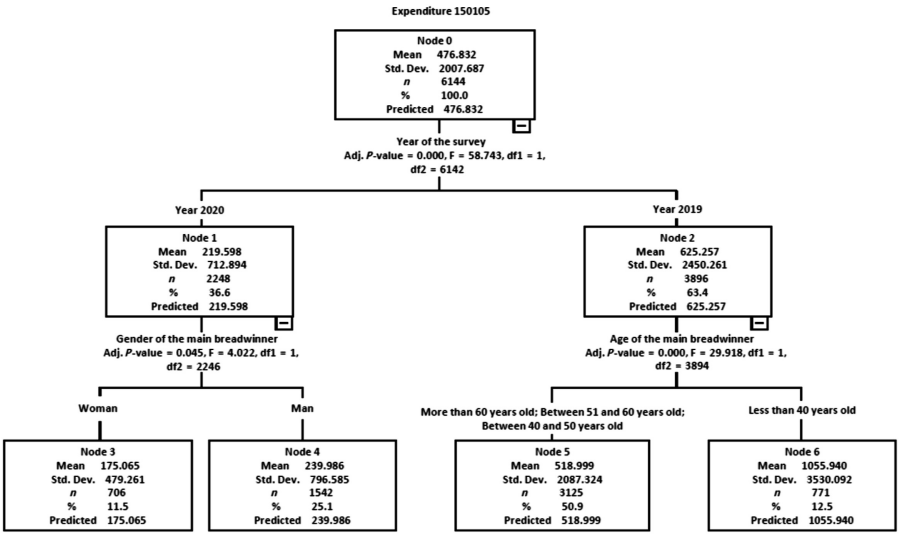


Figure 5.
CHAID segmentation of average expenditure (€) on banquets, ceremonies and celebrations outside of the home

Source(s): Own elaboration, 2022

5. Conclusions

This paper aimed to find out expenditure of Spanish households on different catering services and to discover the sociodemographic profile of the family's main breadwinner who allocates the most of his/her expenditure budget on these services before and during the pandemic caused by COVID-19 in Spain. Thus, from this study it can be concluded that family spending on catering services, such as "menu of the day in restaurants", "lunches and dinners in restaurants", "bars and cafes" and "banquets, ceremonies, and celebrations outside of the home" reduced significantly in 2020 compared to 2019. An especially important drop was for "banquets, ceremonies and celebrations outside of the home" which fell by 64.88%. This is not surprising, given the limitations on people gathering together, in comparison with other catering services studied, which could be substituted by food home-delivery services (which showed a 16% increase in 2020 (Mesa, 2021)).

Based on the results obtained from the CHAID analyses, in Table 4 we conclude and present the sociodemographic profile of the family's main breadwinner who allocates most of his/her expenditure budget on these services before and during the pandemic.

5.1 Theoretical and practical contributions and policies

Accordingly, this study pretends to give some *theoretical and practical contributions and policies*. This research presents a new interdisciplinary approach to family breadwinners as a company whose catering spending is shaping the economic recovery and leading to new answers for hospitality management. Identified factors can help to make improved decision-making and contextualisation to economic models for food service providers in a post-pandemic future.

In relation to the *theoretical contributions*, this article presents latest critical literature review and data analysis, which study concepts connected to the study objectives, such as different catering services classified by the European Classification of Individual

Catering category	Most important predictors of the main breadwinner (in family spending on catering services)	Highest expenditure pattern on catering services depending on the main breadwinner
Total in catering services	*First predictor:* Year *Second predictor:* Type of the contract *Third predictor:* Gender	In 2019, families with male as the main breadwinner and with a permanent contract (3453.17€)
Menu of the day in restaurants	*First predictor:* Type of the contract *Second predictor:* Age	Families with the main breadwinner without a specific type of the contract and aged between 51 and 60/less than 40 (1544.13€)
Lunches and dinners in restaurants	*First predictor:* Type of the contract *Second predictor:* Age *Third predictor:* Year	Families with the main breadwinner with a permanent contract or without a fixed contract, between 40 and 60 during 2019 (2071.81€)
Bars and cafes	*First predictor:* Gender *Second predictor:* Type of the contract *Third predictor:* Year	Families with male as a main breadwinner and without a specific contract during 2019 (1981.23€)
Banquets, ceremonies, and celebrations outside of the home	*First predictor:* Year *Second predictor:* Age	In 2019, families with the main breadwinner under 40 (1055.94€)

Source(s): Own elaboration, 2022

Table 4. Summary of the patterns of highest expenditure on catering services according to the characteristics of the main breadwinner of the families

Consumption by Purpose (ECOICOP) applied to the total Spanish population. Also, this paper adds significant insights from the methodological viewpoint, by applying CHAID analysis to study different sociodemographic variables for statistically significant and effectively creating a profile of the main family breadwinners who spend more on different catering services. In this way, other researchers can apply CHAID technique to create diverse sociodemographic profiles for studying food consumption patterns in order to understand consumer economic behaviour and expenditure.

With regard to the *practical contributions and policies*, these study findings can help catering service owners and managers to understand the sociodemographic profile of family main breadwinners who spend more on different catering services in a post pandemic future. This can help them to maintain their existing and most profitable customers, and also to apply different marketing communication techniques to attract and satisfy new sociodemographic profiles. Moreover, with the pandemic there has been an increase in food home-delivery services, so it is important to simplify the online order for all age groups by creating more "age adaptable" mobile apps, combining effective chatbot or human voice-call services. For central government policies, in times of different economic turbulence, it is advisable to reduce taxes for catering service providers in order to maintain and attract a more diverse sociodemographic profile of national consumers and international tourists, since "café" culture is important in Spain and Europe, facilitating socialisation with friends and family and business meetings. For the Spanish Central Government it would be advisable to apply centralised national-level policies to catering services in turbulent times and not to leave them in the hands of each autonomous community. This led to discrimination against some regions when the Madrid Autonomous Community permitted gatherings in open air terraces although COVID-19 cases were high (LaVanguardia, 2021). This stimulated the economy in Madrid, boosting national and international tourism and catering services. Laxer policies were implemented in other Spanish regions, although in some cases, the rate of COVID-19 there was lower than in Madrid.

5.2 Limitations and future research avenues

Although this research paper analysis is based on official open data from the Family Budget Survey (EPF) done by the National Institute of Statistics in Spain, this kind of national survey is done once per year and data is available for the general public almost a year after the data is obtained from the respondents. Thus, in some cases some blocks of data are not so relevant because of new situational factors. Also, the national survey only includes standardised questions, which do not permit deeper analysis of the main household breadwinner and comparison based on behaviour and attitude variables. Attitudes have become a key construct in the explanation of consumer intention, and they can provide important information for the service provider because of their direct impact on the decision to use the service (Longenecker *et al.*, 2005). In addition, Spanish Government restrictions caused by COVID-19 on catering service establishments were different across the regions of Spain during 2020. Regional authorities set their own restrictions on capacity or opening times for bars and restaurants in each of Spain's 17 autonomous communities. Thus, this study does not present data analysis relating to these specific restrictions as they increased and decreased during 2020.

Consequently, future researches could include opinion/attitude variables from other primary sources that could enrich insights on the profile of the main breadwinner in the household and their expenditure on catering services. Such research could facilitate greater understanding in this area, and lead to changes in consumers' behaviour with respect to different catering services. It could, for example lead to a reduction in the "pub-gap" between genders. The supply side perspective of food service providers on these patterns in household catering expenditure should also be examined.

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