

Analysis of consumer perception as a lever for promoting local products: case of Moroccan dates

Laila BOUHID, (PhD)

*Faculty of Juridical, Economic and Social Sciences of Meknes
Moulay Ismail University of Meknes, Morocco*

Mohamed AIT HOU, (PhD, Professor)

*Polydisciplinary Faculty of Errachidia
Moulay Ismail University of Meknes, Morocco*

Abdelmajid SAIDI, (PhD, Professor)

*Faculty of Juridical, Economic and Social Sciences of Meknes
Moulay Ismail University of Meknes, Morocco
Associate Researcher at the Pact of Grenoble, France
Researcher-Collaborator at the Centre for Research on Territorial Development.
University of Quebec at Chicoutimi, Canada*

Correspondence address :	Faculty of Law, Economic and Social Sciences of Meknes. B. P. 3102 Toulal, Meknes Moulay Ismail University Meknes, 50000 0535452092
Disclosure Statement :	Authors are not aware of any findings that might be perceived as affecting the objectivity of this study
Conflict of Interest :	The authors report no conflicts of interest.
Acknowledgments :	This research was conducted in the framework of the project VALUTEAM funded through the ARIMNet2 2017 Joint Call by the following funding agencies: MESRSFC (Morocco), ANR (France), MESRS (Algeria) and MHESR (Tunisia) has received founding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 618127. Coordinated by M. AIT HOU (FPE –UMI, Morocco).
Cite this article :	BOUHID, L., AIT HOU, M., & SAIDI, A. (2023). Analysis of consumer perception as a lever for promoting local products: case of Moroccan dates. <i>International Journal of Accounting, Finance, Auditing, Management and Economics</i> , 4(3-2), 68-85. https://doi.org/10.5281/zenodo.7974105
License	This is an open access article under the CC BY-NC-ND license

Received: April 04, 2023

Accepted: May 29, 2023

Analysis of consumer perception as a lever for promoting local products: case of Moroccan dates

Abstract

In the era of trade globalisation, especially in the agri-food sector, which has led to mass consumption and industrialised products, the preservation of the territorial agri-food heritage of each country is becoming an increasingly important issue. This has aroused the interest of both researchers working on the economy of the territory and of all stakeholders, as it will not only improve the visibility and enhancement of local products, but will also achieve multidimensional objectives, both economic (competitiveness, development of the local economy, etc.), socio-territorial (economic development of the local economy, etc.), socio-territorial (territorial attachment, preservation of local knowledge, etc.) and agro-ecological (local supply, less processed consumption, etc.). In order to achieve these objectives, particularly in the Moroccan context, this article aims to analyse the perception of Moroccan consumers of Moroccan date products, from a sector which, although it has significant multidimensional potential, faces several challenges, particularly on the commercial and competitive levels. From a methodological point of view, the analysis of consumer perception was carried out with 560 respondents covering the different regions of Morocco, using a tripartite perception model (cognitive, affective, conative component), which revealed that consumer preferences were well understood, particularly in terms of variety, organoleptic characteristics (size, taste, etc.), purchase price, willingness to pay and preferred points of sale. From the responses collected and characterising the purchasing behavior and motivation in the broad sense, the priority areas on which it is necessary to act were identified, for a promotion of Moroccan dates.

Keywords: Consumer, Perception analysis, Promotion of local product, Dates, Morocco.

JEL Classification : Q01, Q18, Q5, R1, R58

Paper type: Empirical research

1. Introduction:

The evolution that the world is undergoing, especially due to the series of crises we are facing (economic, social, ecological, health, etc.), is constantly introducing changes in behavior and new trends, especially among the consumers of agri-food products (Ait Hou et al., 2015; Chen et al., 2016; Saidi & Diouri, 2017; Saidi et al., 2021).

If we take the most recent case, that of the covid-19 pandemic, we can see the emergence of new factors, which may have been almost absent or of lesser importance, became clear during the strict containment of Covid-19, and largely influenced by the purchasing decision, such as hygiene and cleanliness standards, as well as food traceability, characterised as a kind of guarantee of food safety (Saidi et al., 2022a, saidi et al., 2022b). Moreover, the cultural crisis we are experiencing also seems able to introducing new behavior in the consumer of food products, translated nowadays by the imitation effect, such as the tendency to consume semi-cooked products, or to eat in fast-food restaurants and to buy in large-scale distribution.

At this level, and in a disruptive and evolving context, the consumer is of great interest today in scientific work, because the changes he introduces, which may be caused by cultural, social, personal and psychological effects, not only have an impact on him, but also influence the strategies of several entities in the agri-food supply chain, starting with the farm, passing through processing and distribution and ending with marketing, and which need to be aware of any changes, so that the offers are in line with their needs.

In order to align with recent consumer expectations, which can be translated into a strategic positioning on the agri-food market or a marketing decision process, interest must be brought to the analysis of consumer perception, as a technique able to provide a fine understanding of how consumers perceive agri-food products, through which we can act for a promotion of local products (Aït errays & Hattabou, 2015, Bounal et al., 2019). Indeed, through the analysis of the perception, consumers can express their knowledge, their motivations and their expectations, which makes it possible to re-establish a close link with the consumption and promotion of local products, and which can be the subject of priority axes, on which the main actors of the agri-food chain as well as the stakeholders can act.

Focusing on the Moroccan context, the country is known for its great potential in terms of production of date products, especially from the southern region, such as the oases of the Draa-Tafilalet valley dominant in terms of national production to the tune of 90%, which constitutes for her an important lever not only for agriculture, but also as a source of employment and income for several households. Indeed, the production of dates in this region alone, exceeds 100 tons annually, that is 120 tons for the year 2021, with nearly 13 units of packaging and storage, respectively with a capacity of 10,000 tons and 4.000 tons, according to the Regional Agricultural Development Board (RADB, 2022). The Draa-Tafilalet region also has more than 10 production areas (Errachidia, Meski-Boudnib, Erfoud, Aoufous etc..) recognized for their high quality at the national and international levels. However, despite the great potential that characterize this region, especially in terms of production of dates, except that it does not benefit, especially because of the lack of promotion of dates, and particularly in the absence of a clear understanding of purchasing perception and a marketing strategy able to evolve in parallel with recent expectations and requirements of consumers.

Aware then of the positive effects that can be achieved through the analysis of consumer perception, especially in terms of identifying the main areas that deserve urgent intervention, this article focuses on the analysis of the perception of 560 Moroccan consumers. To do this, we will present in the following sections, four elements that seem important to achieve the expected results, namely, the presentation of a theoretical background (2), the presentation of the methodological framework adopted for this study (3), the presentation and discussion of the

main results revealed (4), and finally a conclusion including a summary as well as the limits of the study and the future research avenues that we can propose (5).

2. Theoretical Background

Local agricultural products are nowadays of great importance, both academically (Houssni et al, 2022; El Filali, 2022) and institutionally (Lin, et al., 2022), especially due to the dominance of large-scale distribution in supply chains, which often hinder their promotion by favouring standardised products from very long circuits and therefore limiting their access to consumers (Kimbatsa et al., 2018; Blockmans, et al, 2021; Girard & Rebaï, 2022, Lamrabet & Benkaraache, 2022). Before going further, it is important to understand what is meant by “local products”, focusing on their key concept, their main characteristics, and thus shedding light on the issues involved in promoting local products.

2.1. Local Products: Main Characteristics and the Current Challenge

Looking at the review literature, especially that which has taken local agricultural products as a fundamental object of study, it is clear that there is no uniform definition of "*local products*" that can be valid for all territories and communities, but rather definitions that agree on certain aspects. As a result, researchers have most often focused on the notion of "*local*" to give an overview of what a "*local product*" can be (Fernandez et al., 2018).

Starting from the ***geographical aspect***, which is mainly based on geographical proximity, which is the fundamental characteristic of local products for almost all researchers (Baralla et al., 2019; Butu et al., 2020), local products are seen as the ability to produce while bringing production, processing and distribution activities closer to a specific geographical area (Elgozmir & Chouhbi, 2021; Porumb, 20121). In the strict sense of the term, this rapprochement appears clearly in the geographical distance between the place of production and the place of consumption, i.e. the distribution chain through which the agri-food product is derived, and which may be of a short or direct nature, particularly in terms of food miles (Ghali-Zinoubi, 2021; Stein & Santini, 2022). At this level, it is true that there is no single standard that determines the number of miles for a product to be local, which makes it necessary to take into account political-administrative boundaries at different scales, national, regional or local (Abid et al., 2020). However, several researchers have given their views at this level taking into account the specificity of their territory and the typology of agri-food products, so that the number of food miles is 10 to 100 km as an optimal distance (Shahid Rasool et al., 2021; Kumar et al, 2021); or a slightly larger distance of 200-250 km (Abid, 2021), but more often than not, the 100 km standard remains widely used by both the scientific community and by actors and practitioners in the field (Striebig et al., 2019; Stein & Santini, 2022).

In addition to the geographical aspect, the ***relational aspect*** is also an essential feature of the definition of local products. Korzun M. (2020), sees local products as a kind of closer relationship between farmers and consumers, which builds trust and connections, provides greater financial stability for farmers and strengthens rural areas (Korzun, 2020). Adding that, several researchers, consider local products, thanks to the exchange devices they provide, as accelerators of rural-urban dependency development, preservation of a cultural tradition, strengthening of a sense of pride and identity, as well as a promoter of a sense of ownership (Rachão et al., 2019; Fusté-Forné & Jamal, 2020; Zoma et al., 2022).

The ***promotional aspect*** is the third characteristic that can be mentioned at this level, given that exchanges between local producers and consumers, or between urban and rural areas, are largely able of reintegrat small farmers into supply chains, promoting solidarity, strengthening the development of the local economy, reinforcing culinary tourism and perpetuating traditional local knowledge (Linebou & Lacoeyllhe, 2021; Pamukçu et al., 2021; Rossi, et al., 2021; Tarra

et al.) As Baldi et al. (2019) point out, the purchase and consumption of local agri-food products not only benefits the producers, but also the local population, who benefit from the creation of local jobs, the promotion of collaboration, cooperation, and partnership.

From these characteristics, which are in no way an exhaustive list, countries, especially those with a strong agricultural and culinary vocation, are making more efforts to promote local products from a national, regional or local territory, so that they can face the fierce competition of other products in the market and generate multidimensional benefits (Blockmans, et al., 2021; Girard & Rebaï, 2022, Kimbatsa et al., 2018). Indeed, whether it is an actor (producer, transformer, distributor, trader, etc.) or a stakeholder in the field (ministerial departments, planners, NGOs, etc.) the promotion of local products has taken several forms, intervening from the production to the consumption phase (Lin et al., 2019; Carimentrand, et al., 2019 ; Zhang et al., 2019; Shew et al., 2022), notably by:

- Face increased competition from imported food products;
- Ensuring good production practices;
- Maintaining the nutritional value and freshness of the product;
- Ensuring traceability and product tracking;
- Taking up the challenge of the quality-price ratio;
- Using quality recognition bodies;
- Meeting the challenges of obtaining certification and labelling.
- Recognising local product varieties;
- Meeting the expectations of packing and sales points.

Although local agri-food products can be promoted in many ways, it is important to focus on the variables that are most decisive for consumers. Indeed, successful promotion needs to be based on a fine-tuned response to consumer preferences, which should be taken into account, particularly in the context of their social, economic and cultural background (Figure I), which is the fundamental challenge of promoting local agri-food products. For this reason, it is important to conduct a consumer perception analysis to identify the most relevant and priority variables for consumers in choosing and consuming local agri-food products.

2.2. Perception promotion: what does the theory say about this duality?

After presenting a conceptual overview of local products and their main characteristics, thanks to which we have been able to understand that their promotion is closely linked to the analysis of consumer perception, at the level of this axis, the complementarity and articulation with the theory be highlighted, since they appear important to better understand our analytical phenomenon. In order to better understand this duality that links both the analysis of the perception and the promotion of local products, we can refer to the theoretical anchors that have focused on consumer behavior.

Indeed, for a long time, consumer behavior has been an object of reflection and analysis in several disciplines, such as economics, psychology and sociology. At this level, we can say that consumer behavior has been the subject of several theories, including the theory of marginal utility, the theory of partial equilibrium, and theory of social identity, which were able to explain how complex human behavior is, and must be the subject of a careful analysis before making any decision.

⇒ Theory of Marginal Utility

Starting with the theory of marginal utility and focusing on the main contributions of classical economists, such as Carl Menger (1840-1921), Stanley Jevons (1835-1882) and Léon Walras (1834-1910), we can say that the consumer is governed mainly by his level of optimal satisfaction, which is called the "marginal utility", that he can derive from the consumption of a certain quantity of good (Alvino et al., 2018; Deleplace, 2018). Indeed, the explanation that

this theory provides is still largely useful for better understanding the consumer, especially in terms of his criteria for choice and decision to consume, which essentially concern the optimal combination of products that will give him the greatest satisfaction, while taking into account his budgetary constraints.

Aware of this relation between the marginal utility and the decision of purchase or consumption, able to promote the offered products, the producers act by different ways in order to guarantee an optimal satisfaction to the consumer, by reducing the sales prices (following a reduction of the costs), by offering promotions and special offers.

⇒ **The theory of partial equilibrium**

Staying always in the aim of promoting products, while being interested by the behavior of the consumer, the theory of partial equilibrium of the neoclassical economist Alfred Marshall (1842-1924), is also able to shed light on our phenomenon. Indeed, this theory offers a key framework to show that the interaction between the consumer's behavior translated into quantity demanded and the producer's supply, strongly conditions the market equilibrium, and consequently this equilibrium is reached at a lower or higher price for which the producer must provide efficient responses to the different conjunctures to ensure its continuity in the market (Delfaud, 1997 ; Blanchard, 2017). From this theoretical explanation, it becomes clear that understanding behavior is not only able to identify marketing strategies, but also responsible for the survival of a production unit.

⇒ **Theory of Social Identity**

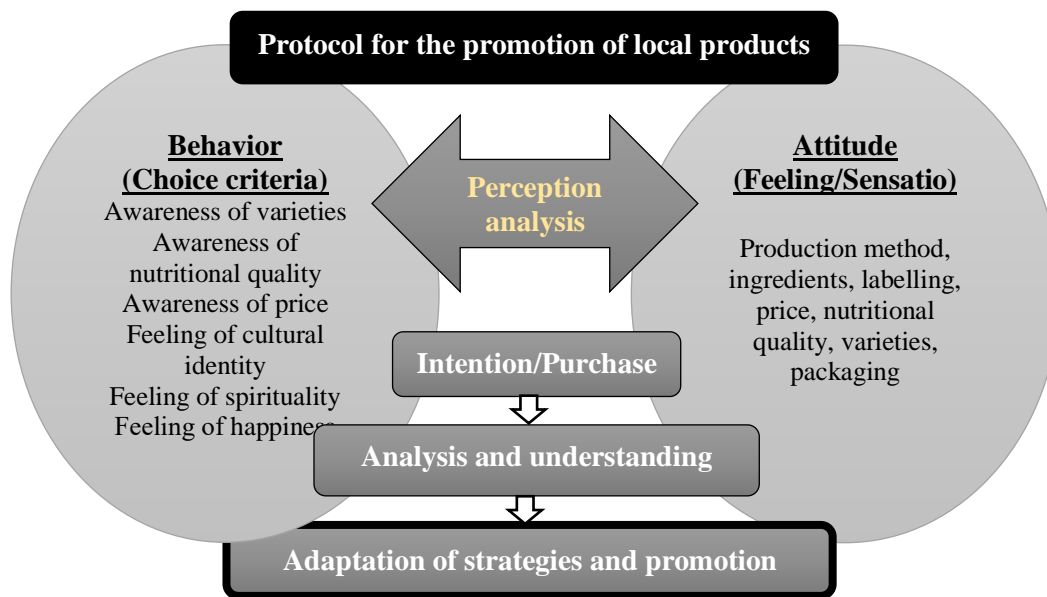
Taking also the social identity theory developed in the 1970s by the psychologist Henri Tajfel (Tajfel & Turner, 1979), we can say that it is one of the explanations that have combined both behavior and supply-side valuation. By mobilising three main components to understand individual behavior (social categorisation; self-evaluation and intergroup social comparison), this theory shows how choices of any kind, particularly in terms of procurement and consumption, are governed mainly by the social identity that the individual wishes to construct and the affiliation to the groups to which teys belongs (Salmivaara et al., 2022).

At this level, it appears that the criteria of choice that can be described as classical, such as price, quality and satisfaction, may not be the only determinants of a purchase or an act of consumption, which shows once again that the consumer is governed by a set of variables of different nature, only the analysis of its perception able to provide clarification to promote local products (Dubois, 2008; Kitchen & Tourky, 2022, sun et al., 2022).

To do this, we will mobilize an analysis protocol (Figure I) that can provide elements of response to promote local products, or dates in our case by mobilizing two components, namely:

- **Analysis of the behavior**, allows to analyse the interaction consumer-product, by focusing on the habits of purchase, the criteria of choice, the preferences and the expectations.
- **Attitude and opinion analysis**, allows us to understand the perception-product duality, focusing on feelings, beliefs and motivations.

Figure. I. Causal relationship between the different analysis variables on the promotion of local products



Source: authors.

From this protocol, research hypotheses have been formulated which could help to better understand the factors influencing consumer perception, namely:

- **H.1.** Consumers in small towns and villages tend to have less demanding consumption criteria.
- **H.2.** Consumers in big cities tend to be more demanding when buying dates, which makes them willing to pay more for quality dates.
- **H.3.** Older people are increasingly interested in quality, nutritional value and knowledge of varieties because of their long experience in buying and eating dates.

By testing these hypotheses in this work, several facts can be understood and the perception of Moroccan consumers can be highlighted, which can help determine possible improvements for the promotion of Moroccan dates.

3. Research method or methodology

The research method chosen for this study will be presented focusing on three fundamental axes: the identification of the variables characterizing the studied phenomenon, the design of the survey and the presentation of the adopted statistical methods.

3.1. Variable identification and survey design

The ultimate objective that we seek to achieve through this scientific study is to understand the behavior of the Moroccan consumer in terms of factors influencing their decision to buy and consume local date products. In order to achieve this objective, on the methodological level, we first focused on a literature review of 43 scientific works on the perception of purchase and consumption of agri-food products (Ellison et al., 2016; Ahmed et al., 2019; Bouhid et al., 2019; Costanigro et al., 2019; Eldesouky et al., 2020), which allowed us to better understand the basis of the study of the analysis of the perception and behavior of consumers and the main steps through which we must pass.

Then, we were interested in identifying the main variables of our survey, which we organised into three components, based on the classic tripartite model of attitude, proposed by Rosenberg and Hovland in 1960 (Rosenberg et al., 1960), but which has been widely known up to now thanks to its application to recent scientific work (Testa et al., 2019 ; Agyeiwaah et al., 2021 ; Raghunathan & Chandrasekaran, 2021) (Table I).

TABLE I. Main factors influencing consumer perceptions

Components	Main characteristics
Cognitive	Variables related to knowledge and beliefs about dates Varieties, nutritional value, taste quality, etc.
Affective	Variables characterising the feeling and emotion towards dates Presence of cultural, spiritual, happiness attachment to dates, etc.
Conative	Variables relating to purchase and consumption intentions Willingness to pay, motivations, etc.

Source: authors.

Once the variables were determined, they were organised in a survey administered online and containing 4 parts (Table II), characterised by both single choice and multiple-choice questions of a quantitative and qualitative nature. The answers to the questions in the different parts of the survey made it possible to generate a database based on 560 answers distributed in almost all the regions of the Moroccan kingdom.

TABLE II. Main parts of the survey

Parts of the survey	Worded
1	Related to purchasing and consumption behavior
2	Related to disappointing buying and/or consumption experiences
3	Related to consumer willingness to pay
4	Related to demographic characteristics of respondents

Source: authors.

3.2. Statistical methods

In order to proceed with the production of the results and the discussion that we can carry out in the framework of this work, two statistical methods were mobilised. Firstly, descriptive statistics as an initial technique to be implemented, and this to obtain a synthetic view of the characteristics of the respondents, notably in terms of socio-demographic variables and certain purchasing and consumption behavior. Secondly, and given the large number of variables mobilised, we opted for Principal Component Analysis (PCA), as a method able of projecting consumer behavior with the minimum of dimensions, the thing that will allow the reading of several facts.

4. Results and discussion

In order to explore the general characteristics of our sample as well as their behavior towards dates, and to test the hypotheses initially defined, descriptive statistics were first adopted (4.1), followed by a PCA (4.2).

4.1. Respondent characteristics and purchasing behavior : presentation of descriptive statistics

The 560 Moroccan consumers who responded to the survey are divided into 229 women and 331 men, i.e. respectively 40.89% and 59.11% of the population, of which 33.57% are public servants, 28.57% are students, 20.18 are senior executives, and the others are distributed between workers, liberal professionals, retirees and the unemployed, which is 17.68%, with an average monthly salary of 7,515.30 MAD.

- Regarding the frequency of purchase of dates, the results show that 60% buy dates several times a year, while a minority, i.e. 8.93%, do not buy dates on a permanent basis, i.e. 2-3 times a month. Moreover, even the quantity purchased, which is primarily intended for self-

consumption, is also low, ranging from 1 to 3 kg for half of the sample interviewed, i.e. 50.2%. In this respect, it can be seen that the purchase of dates is generally reserved for the Ramadan period (57.32%) and certain traditional festivals. We can see that dates represent more a spiritual culture for the consumer than a consumption related to the health benefits, especially with the absence of a communication strategy and awareness of the benefits of dates on health.

- As regards purchasing behavior, 60.9% of consumers resort to traditional purchasing practices, particularly at local markets and grocery shops, followed by 10.9% who turn to grocery shops specialising in dates, 10.4% to large and medium-sized supermarkets, 7.1% through a personal network, while 9.6% are divided between those who buy directly from the producer, from street vendors or in shops specialising in organic products. This fact, can clearly show that the preliminary and preferred direction to buy dates, remain the traditional markets and not other places of sale, which places the traders of this place before a major challenge is that of contributing to the development of dates. Indeed, they must be equipped with good knowledge, especially regarding the origin of production, variety and nutritional quality. They must also be aware of the importance of sourcing quality dates which must be packaged as an example and subject to a system of control and traceability (origin, weight, date of production, etc..) and this to align with not only the expectations but also the requirements of consumers who are constantly evolving.
- During the purchase experience, more than half, 64.3%, said they had a disappointing experience when buying dates and 86.8% of them changed their behavior as a result of this experience, although a minority (4.4%) only had this experience a few times. The most cited case of this disappointing, at 46.4%, is related to the fact that the packaging hides the mixture of poor-quality dates. At this level, such an experience, which negatively impacts the buying behavior of dates, requires an establishment of confidence that can be strengthened through direct supplies, i.e. directly from the producer who can guarantee the quality of products, since the intervention of a large number of intermediaries, can introduce some food fraud.

It is also important to raise consumer awareness of the importance of certified and labelled products, which guarantee consumers quality dates with the size mentioned on the packaging of dates, as well as the absence of worming dates.

4.2. Main results of consumer perception: presentation of PCA findings

Before proceeding to the presentation of the main results of PCA, it was important for us to ensure the quality of the database we constructed, by testing its validity and reliability as has long been strongly recommended by practitioners in the field (Freudenthal, 1982, Carricano et al, 2010).

The validity test, which aims to ensure the correct measurement of the study phenomenon, i.e. the perception of purchase of dates, also revealed a satisfactory result. Indeed, the Kaiser - Mayer - Olkin (KMO) index, which indicates the extent to which the variables selected are able to better analyze consumer perception, revealed a result of 0.895 which exceeds the norm of 0.7 (Table IV).

TABLE.IV. Validity test

KMO index		,895
Bartlett Sphericity Test	Khi-carré approx.	6676,942
	ddl	406
	Signification	,000

Source: authors.

The reliability test, as a test of internal consistency, aims to verify to what extent the measurement scales are homogeneous and able of producing consistent results. At this level, we proceeded with the Cronbach's alpha index (measure of consistency), which revealed a largely satisfactory result of 0.9 that exceeds the norm of 0.7 (Table III).

TABLE.III. Reliability test

Reliability statistics	
Cronbach's alpha index	Number of items
,900	29

Source: authors.

On the basis of this main date purchase criteria (behavior), the PCA revealed two principal components (Table V), with a total variance of 63.86%, of which the first principal component explains 45.97% of the total variance and the second 17.89%. First, the first component includes interest in organic dates, brand, Protected Designation of Origin (PDO) or Protected Geographical Indication (PGI) labelling, nutritional quality, as well as date typology, which we can call "*deep requirements*". Indeed, since this component captures the maximum variance, these 5 elements constitute a strong influence on the variation of the data, and therefore are considered as important criteria for consumers when they buy dates. Then the second component comes in, displaying three criteria, date price, variety, and packaging presence, which appear to be shallower requirements and which we can describe as "*moderate requirements*".

TABLE.V. Rotation in pca (1)

Components	1	2
Organic product choice criterion	0,817	0,149
Dates brand criterion	0,722	-0,054
Criterion related to PDO/PGI labelling	0,696	0,274
Criterion related to the nutritional quality	0,621	0,419
Criterion related to the choice of dates in their branch	0,610	0,246
Price-related criterion	0,114	0,795
Variety criterion	0,106	0,787
Criterion related to the presence of packaging	0,363	0,432

Source: authors.

First, the first component includes interest in organic dates, brand, PDO or PGI labelling, nutritional quality, as well as date typology, which we can call "*deep requirements*". Indeed, since this component captures the maximum variance, these 5 elements constitute a strong influence on the variation of the data, and therefore are considered as important criteria for consumers when they buy dates. Then the second component comes in, displaying three criteria, date price, variety, and packaging presence, which appear to be shallower requirements and which we can describe as "*moderate requirements*".

On the one hand, and more precisely in a broad sense, we can see that the Moroccan consumer, are governed by a set of choice criteria, each with a particular degree of importance, but which certainly provide behavioral clarification. Taking the case of the variables of the most significant component, we can say that:

- The interest granted to the *organic dates*, can show the conscience of the consumer of well made of these dates in natural character and not transformed, as it can indicate the motivation for environmental and sanitary and societal considerations.

- The interest given to the **brand** which is also an important factor for consumers, can show the desire of the consumer for the guarantee of certain elements, such as good practices of production, harvesting, packaging, storage and distribution.
- Interest in **PDO or PGI** may show consumer sensitivity to the brand, but also to production origin, food standards, food analysis and traceability.
- Interest in **nutritional quality** is also an important factor, which may indicate that the consumer has knowledge in terms of nutrients and their health benefits, as they may also be sensitive to the origin of dates.
- Finally, the **typology of the connected dates** may also influence the consumers' purchase decision, which may show that the consumers may have specific experiences and knowledge in the field of dates.

On the other hand, and if we focus on the characteristics of our sample to better understand the choice criteria of Moroccan consumers, the dispersion in relation to age, level of education and city size reveal several findings.

• **Finding 1:**

The result of the factorial design of the PCA, revealed that or in contrast to the large cities which have demanding criteria in terms of date purchase, the medium-sized cities and villages resort to a less demanding purchase where the majority of the criteria are not taken into consideration (Graph. I). From this result, hypothesis n°1 stipulating that consumers in small towns and villages tend to have less demanding consumption criteria is valid.

We can say that consumers from small cities and villages may have less access to a varied offer of dates and therefore they become less demanding regarding organic practices, brand, labelling, nutritional quality and typology. Let us add that this category of consumers can show us to what extent they are less sensitive to sanitary and environmental considerations, which are still associated with organic, labelled and quality products.

From these observations, it appears necessary to put in place several measures:

- Make local varieties known to this category of consumers;
- Make local varieties accessible and available to consumers in small towns and villages;
- Informing about the benefits of organic products, both on human health, socio-economic and environmental well-being;
- To carry out a wide communication and awareness strategy, regarding the types of labels and their characteristics.

• **Finding 2:**

The PCA showed that also, that it is always the consumers of big city and who grant more importance to the criteria of purchase labeled, certified and organic, which are ready to pay more, that is to say most often more than 80 Dh/kg to ensure the presence of quality date products in the points of sale, while the willingness to pay remains very low for consumers of small towns and villages, between 20 and 70 Dh / kg, which largely validates hypothesis n°2 stipulating that consumers in big cities tend to be more demanding when buying dates, which makes them willing to pay more for quality dates (Graph. II).

At this level, it can be said that consumers are willing to pay a premium for good quality dates because, on the one hand, they have a higher purchasing power than consumers in small towns and rural areas. On the other hand, this category of consumers, who are often better informed about the quality of different date varieties, are often exposed to food trends and niche products, which may lead them to seek out high-quality dates.

It is certainly necessary to take a set of measures to meet the needs of this category of consumers, by highlighting organic production practices, strengthening certification and labeling, and ensuring the availability of date varieties that can be the subject of a specific

marketing strategy, given that this category is interested in supply from social networks, agricultural fairs, or supermarkets. However, it is also interesting to focus more effort on other categories of consumers, since the promotion of certified and labeled dates cannot succeed with a minority of individuals (large cities), but rather with the mobilisation of all categories, which requires a comprehensive awareness and training to be implemented by public and private actors.

• **Finding 3:**

Often the purchasing criteria known as "*deep requirements*" are aligned with the level of education, while taking the specificity of the Moroccan territory, it turned out that even those who do not attach importance to certification and quality, already have a higher level of education, and remain less familiar with these purchasing criteria (Graph. III). It is therefore important that awareness-raising and training campaigns and communication strategies target all individuals regardless of their level of education.

• **Finding 4:**

Still using PCA, but this time for the variables characterising consumer attitudes, the result identified two dimensions (Table VI), with a total variance of 54.47%, of which the first principal component explains 40.87% of the total variance and the second 13.59%. The first of which shows three attitudes that consumers consider themselves able of doing during the act of consuming dates, i.e. prior knowledge of the variety, assessment of nutritional quality and judgement of value for money; and the second shows three meanings associated with date consumption, i.e. the cultural, spiritual and happiness aspects.

TABLE.VI. Rotation in pca (2)

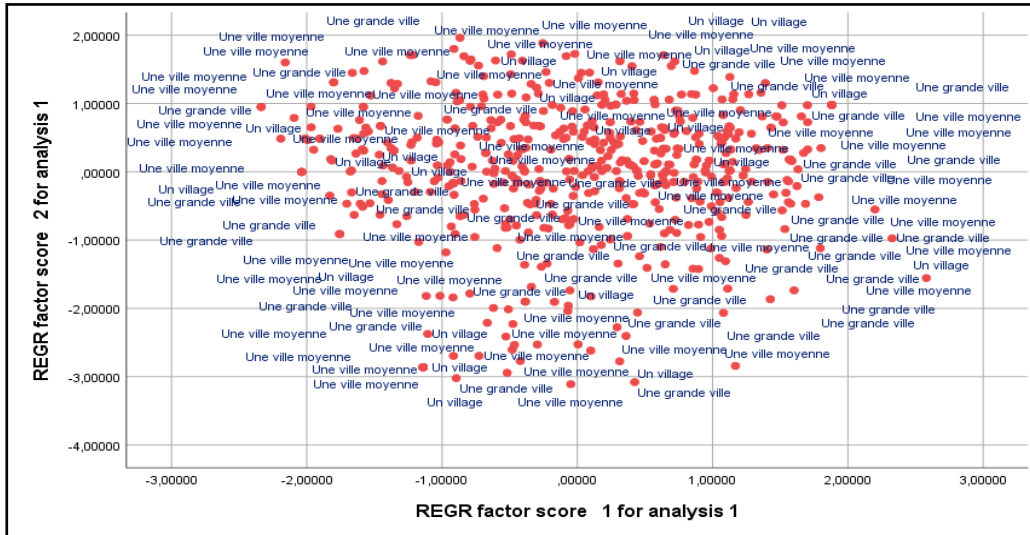
Components	1	2
Knowledge of variety	0,406	-0,079
Assessment of nutritional quality	0,454	-0,109
Judgement of the quality/price ratio	0,396	-0,060
Cultural significance	-0,045	0,409
Spiritual significance	-0,150	0,491
Source of happiness	-0,056	0,414

Source: authors.

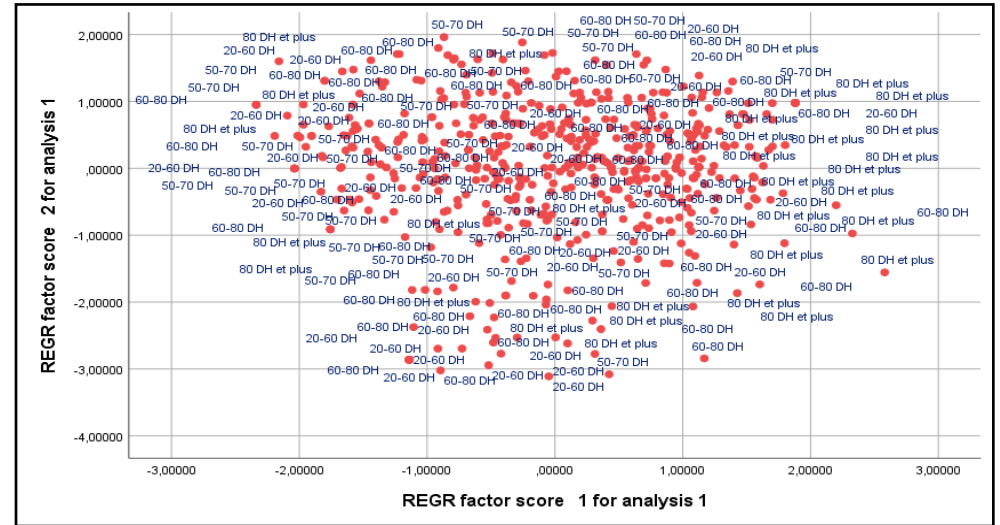
On this point, it turned out that the population is divided into two groups, those who are able to make judgments after consumption of dates and who are characterized by belonging to modern families with a moderate number of individuals; as well as those who perceive the consumption of dates as a patrimonial resource, and who belong to old families with a number of individuals greater than 10 (Graph. IV). From this we can say that **hypothesis n°3**, stipulating that older people are increasingly interested in quality, nutritional value and knowledge of varieties because of their long experience in buying and eating dates, is tested negative and is therefore invalid.

Indeed, on the one hand, the latter who bring less judgment, and see in dates their spiritual identity, cultural and happiness, are today less present in the Moroccan population, because they represent the former families of large numbers of individuals, and who have an attachment to certain food products such as dates. On the other hand, there is a category that is rather cautious about the quality of dates, hence the importance of better management of production and sourcing from suppliers who have a good reputation in the market, and this to ensure consumer satisfaction and enhancement of the dates.

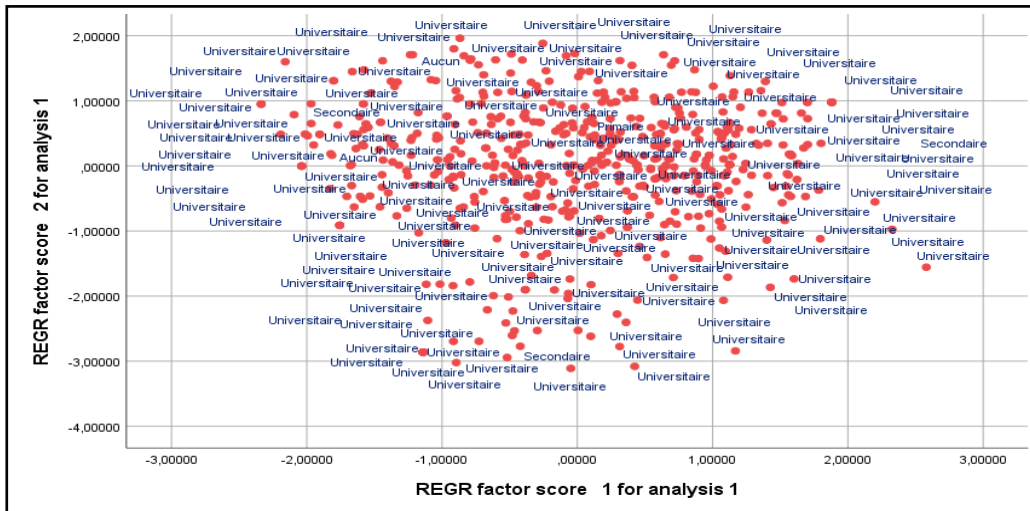
GRAPH.I. FACTORIAL PCA OF CPI BY PLACE OF RESIDENCE



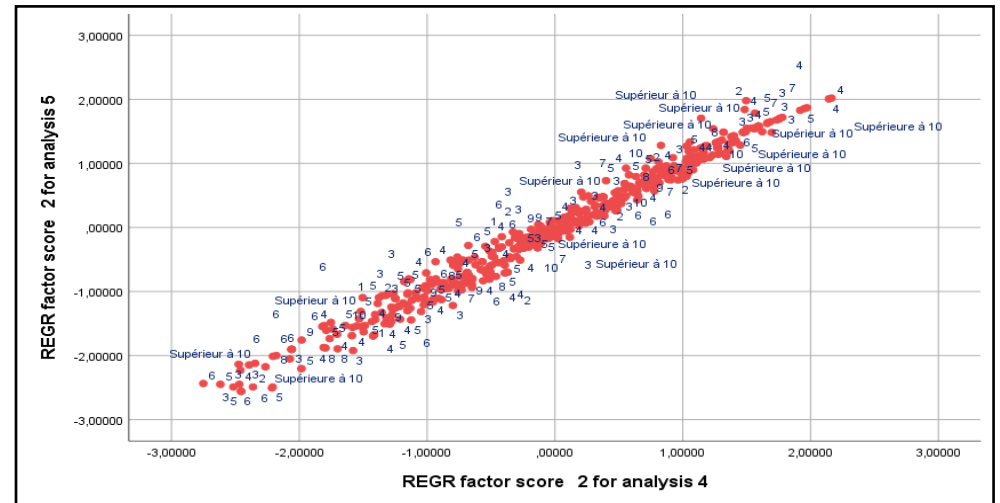
GRAPH.II. FACTORIAL MAP OF PCA BY WILLINGNESS TO PAY



GRAPH.III. FACTORIAL MAP OF PCA BY LEVEL OF EDUCATION



GRAPH.IV. FACTORIAL MAP OF PCA BY NUMBER OF INDIVIDUALS/FAMILY



Source: authors.

5. Conclusions:

With the aim of determining the priority areas for action for a strategy to enhance the value of dates in Morocco, to which the actors in the date supply chain and stakeholders can contribute, this work focused on purchasing and consumption behavior as the key to opening the door to new promotional opportunities.

The main results revealed by the study, showed several facts related to the consumer, including the place of supply, purchase criteria, willingness to pay as well as disappointing experiences they faced. Through descriptive statistics and PCA it was found that consumer behavior towards the purchase and consumption of dates is not a simple phenomenon, but rather a complex, demanding and evolving one, which shows that it requires special attention in order to put in place a strategy that takes into consideration the territorial and behavior specificity of Morocco. At this level, three axes seem to be priority points on which to act:

- **Axis I:** Accompanying and assisting producers in the production, packaging and distribution process, given that quality criteria have become a major requirement. Assistance can also be provided in order to meet quality criteria throughout the chain, with the aim of obtaining a label or certification.
- **Axis II:** Training that can be done both in favor of traders, who must acquire a great knowledge in terms of the characteristics of dates, such as variety, nutritional value, taste quality, product origin, and price, since the consumer is able to master certain knowledge and judge certain criteria. Training can also be dedicated to certain categories of consumers who are still less familiar with organic supply practices, or PDO and PGI labels, to promote the image of dates in Morocco.
- **Axis III:** Awareness raising, can also be of great importance specially to understand the positive and multidimensional impact of quality local products, which can push the consumer to give more importance to the labelled dates and to be ready to pay an additional amount covering the consumption of high-quality dates.

Whatever the nature of the intervention, the mobilisation of the actors concerned is of great importance, because the promotion of territorial resources, i.e. dates in the strict sense, can only be achieved through a participatory approach integrating energy and social-territorial links. At this level, the evaluation of public policies and strategies for the promotion of date production in Morocco seems to be an interesting way to assess the progress made, but also the factors that hinder certain actions such as support, training and awareness, the element that was not discussed in this work, and which can be the subject of another complementary work. However, it is important to say that the results revealed and the prospects for improvement do not in any way prove a given theory or hypothesis, given that they are revealed within the framework of a study that is exploratory and takes into account a particular territorial specificity.

References

- (1). Abdelmajid, S., Mukhtar, A., Baig, M. B., & Reed, M. R. (2021). Climate change, agricultural policy and food security in Morocco. *Emerging Challenges to Food Production and Security in Asia, Middle East, and Africa: Climate Risks and Resource Scarcity*, 171-196.
- (2). Abid, T., Rodier, F., & Durif, F. (2020). Produits alimentaires locaux. Les motivations d'achat en fonction des circuits de distribution. *Décision Marketing*, (2), 127-143.

- (3). Agyeiwaah, E., Adam, I., Dayour, F., & Badu Baiden, F. (2021). Perceived impacts of COVID-19 on risk perceptions, emotions, and travel intentions: evidence from Macau higher educational institutions. *Tourism Recreation Research*, 46(2), 195-211.
- (4). Ahmed, W., Najmi, A., Faizan, H. M., & Ahmed, S. (2018). Consumer behaviour towards willingness to pay for Halal products: An assessment of demand for Halal certification in a Muslim country. *British Food Journal*, 121(2), 492-504.
- (5). Aït Errays, N., & Hattabou, A. (2015). Comprendre la consommation des produits de terroir. Analyse des perceptions et motivations d'achat de l'huile d'argan dans le contexte marocain. *Revue Marocaine de Recherche en Management et Marketing*, (11).
- (6). Alvino, L., Constantinides, E., & Franco, M. (2018). Towards a better understanding of consumer behavior: marginal utility as a parameter in neuromarketing research. *International Journal of Marketing Studies*, 10(1), 90-106.
- (7). Baldi, L., Bertoni, D., Migliore, G., & Peri, M. (2019). How alternative food networks work in a metropolitan area? An analysis of Solidarity Purchase Groups in Northern Italy. *Agricultural and Food Economics*, 7(1), 1-21.
- (8). Baralla, G., Ibba, S., Marchesi, M., Tonelli, R., & Missineo, S. (2019). A blockchain based system to ensure transparency and reliability in food supply chain. In *Euro-Par 2018: Parallel Processing Workshops: Euro-Par 2018 International Workshops, Turin, Italy, August 27-28, 2018, Revised Selected Papers 24* (pp. 379-391). Springer International Publishing.
- (9). Blanchard, O. (2017). Sur les modèles macroéconomiques. *Revue de l'OFCE*, 153(4), 317-325.
- (10). Blockmans, W., De Munck, B., & Stabel, P. (2021). Durabilité et adaptabilité-Un développement spécifique pour les réseaux urbains dans les Pays-Bas. *Bibliothèque d'histoire médiévale*, 31-71.
- (11). Bonnal, L., Ferru, M., & Charles, D. (2019). Perceptions et comportements d'achat des produits alimentaires locaux. *Économie rurale*, 101-123.
- (12). Bouhid, L., Hou, M. A., & Saidi, A. (2021). The Consumer's Perception Of Labeled Agri-Food Products. *International Journal of Accounting, Finance, Auditing, Management and Economics*, 2(1), 124-150.
- (13). Butu, A., Brumă, I. S., Tanasă, L., Rodino, S., Dinu Vasiliu, C., Doboş, S., & Butu, M. (2020). The impact of COVID-19 crisis upon the consumer buying behavior of fresh vegetables directly from local producers. Case study: The quarantined area of Suceava County, Romania. *International journal of environmental research and public health*, 17(15), 5485.
- (14). Carimentrand, A., Fournier, S., Biénabe, E., Marie-Vivien, D., Sautier, D., & Cerdan, C. (2019). L'enregistrement des indications géographiques: pour une éthique du compromis. *Éthique publique. Revue internationale d'éthique sociétale et gouvernementale*, 21(1).
- (15). Carricano, M., Poujol, F., & Bertrandias, L. (2010). Analyse de données avec SPSS®. Pearson Education France.
- (16). Chen, X., Gao, Z., House, L., Ge, J., Zong, C., & Gmitter, F. (2016). Opportunities for Western food products in China: The case of orange juice demand. *Agribusiness*, 32(3), 343-362.
- (17). Costanigro, M., Scozzafava, G., & Casini, L. (2019). Vertical differentiation via multi-tier geographical indications and the consumer perception of quality: The case of Chianti wines. *Food Policy*, 83, 246-259.
- (18). Deleplace, G. (2018). Chapitre 6. La théorie marginaliste de la valeur : utilité, rareté, équilibre. Dans : , G. Deleplace, Histoire de la pensée économique (pp. 179-236). Paris: Dunod.

- (19). Delfaud, P. (1997). Approches microéconomiques par l'équilibre. Dans : Pierre Delfaud éd., *Les théories économiques* (pp. 33-64). Paris cedex 14: Presses Universitaires de France.
- (20). DUBOIS, P. (2008). Panorama des théories et outils du marketing. *Filemanagement, fondements et renouvellements. Auxerre: Sciences Humaines Editions*, 52-67.
- (21). El Filali, A. (2022). La dynamique des acteurs et son rôle dans la promotion du développement local dans le monde rural marocain. *International Journal of Accounting, Finance, Auditing, Management and Economics*, 3(5-2), 783-806.
- (22). Eldesouky, A., Mesias, F. J., & Escribano, M. (2020). Perception of Spanish consumers towards environmentally friendly labelling in food. *International Journal of Consumer Studies*, 44(1), 64-76.
- (23). ELGOZMIR, H., & CHOUHBI, A. (2021). Produits terroirs: une grande histoire qui se prononce. *Revue Economie & Kapital*, (19).
- (24). Ellison, B., Bernard, J. C., Paukett, M., & Toensmeyer, U. C. (2016). The influence of retail outlet and FSMA information on consumer perceptions of and willingness to pay for organic grape tomatoes. *Journal of Economic Psychology*, 55, 109-119.
- (25). Fernández-Ferrín, P., Calvo-Turrientes, A., Bande, B., Artaraz-Miñón, M., & Galán-Ladero, M. M. (2018). The valuation and purchase of food products that combine local, regional and traditional features: The influence of consumer ethnocentrism. *Food Quality and Preference*, 64, 138-147.
- (26). Freudenthal, H. (1982). Fiabilité, validité et pertinence-critères de la recherche sur l'enseignement de la mathématique. *Educational Studies in Mathematics*, 13, 395-408.
- (27). Fusté-Forné, F., & Jamal, T. (2020). Slow food tourism: an ethical microtrend for the Anthropocene. *Journal of Tourism Futures*, 6(3), 227-232.
- (28). Ghali-Zinoubi, Z. (2021). Local food consumption during the covid-19 pandemic. *Italian Journal of Food Science*, 33(4), 21-32.
- (29). Girard, M., & Rebaï, N. (2020). Circuits courts de commercialisation et transition territoriale dans les Andes. Une réflexion depuis le Pérou et l'Équateur. *Cybergeog: European Journal of Geography*.
- (30). Hou, M. A., Grazia, C., & Malorgio, G. (2015). Food safety standards and international supply chain organization: A case study of the Moroccan fruit and vegetable exports. *Food Control*, 55, 190-199.
- (31). Houssni, M., El Mahroussi, M., Kassout, J., Sbih, H. B., Kadiri, M., & Ater, M. (2022). Pratiques traditionnelles et valorisation des dattes par des produits de terroir: Cas du sirop de dattes dans les oasis du Sud du Maroc. *International Journal of Innovation and Applied Studies*, 36(3), 678-690.
- (32). Kimbatsa, F. G., Mahoungou, E., & Ofoueme, Y. B. (2018). L'importance de l'horticulture dans la lutte contre l'insécurité alimentaire, la pauvreté et la protection de l'environnement à Brazzaville (République du Congo). *Études caribéennes*, (39-40).
- (33). Kitchen, P. J., & Tourky, M. E. (2022). *Integrated Marketing Communications: A Global Brand-Driven Approach*. Springer Nature.
- (34). Korzun, M. (2020). *The Experience of Farmers Participating in Food Value Chains: A Phenomenological Study from Southern Ontario* (Doctoral dissertation, University of Guelph).
- (35). Kumar, S., Murphy, M., Talwar, S., Kaur, P., & Dhir, A. (2021). What drives brand love and purchase intentions toward the local food distribution system? A study of social media-based REKO (fair consumption) groups. *Journal of Retailing and Consumer Services*, 60, 102444.
- (36). Lamrabet, M., & Benkaraache, T. (2022). Phénomène d'intelligence «anti-territoriale» ou le territoire en tant que «dé-construction» d'acteurs: Problématique et critique de

- l'Intelligence Territoriale au Maroc. *Alternatives Managériales Economiques*, 4(4), 704-723.
- (37). Lin, H. H., Ling, Y., Chen, I. S., Wu, P. Y., Hsu, I. C., Hsu, C. H., & Zhang, S. F. (2022). Can Low-Carbon Tourism Awareness Promote Rural and Ecological Development, Create Safe Leisure Spaces, and Increase Public Happiness? A Discussion from the Perspective of Different Stakeholders. *Water*, 14(21), 3557.
- (38). Lin, W., Ortega, D. L., Caputo, V., & Lusk, J. L. (2019). Personality traits and consumer acceptance of controversial food technology: A cross-country investigation of genetically modified animal products. *Food quality and preference*, 76, 10-19.
- (39). Linebou, S., & Lacoeuilhe, J. (2021, September). Rapport du consommateur au territoire et au produit de terroir: exploration du sens de la relation et du rôle de l'attachement. In *Journée du Marketing Agroalimentaire*.
- (40). Pamukçu, H., Saraç, Ö., Aytuğar, S., & Sandıkçı, M. (2021). The effects of local food and local products with geographical indication on the development of tourism gastronomy. *Sustainability*, 13(12), 6692.
- (41). Pamukçu, H., Saraç, Ö., Aytuğar, S., & Sandıkçı, M. (2021). The effects of local food and local products with geographical indication on the development of tourism gastronomy. *Sustainability*, 13(12), 6692.
- (42). Porumb, A. T. (2021). La tradition-vecteur important de promotion et gage de qualité. Le cas des produits roumains du terroir (tradition-important promotion and quality guarantee vector. The case of traditional romanian products). *Annals of the University of Oradea, Economic Science Series*, 30(1), 324-335.
- (43). Rachão, S., Breda, Z., Fernandes, C., & Joukes, V. (2019). Food tourism and regional development: A systematic literature review. *European Journal of Tourism Research*, 21(1), 33-49.
- (44). Raghunathan, R., & Chandrasekaran, D. (2021). The association between the attitude of food-waste-aversion and BMI: An exploration in India and the United States. *Journal of Consumer Psychology*, 31(1), 81-90.
- (45). Rasool, S., Cerchione, R., Salo, J., Ferraris, A., & Abbate, S. (2021). Measurement of consumer awareness of food waste: construct development with a confirmatory factor analysis. *British Food Journal*, 123(13), 337-361.
- (46). Regional Agricultural Development Board (RADB,2022): <https://2m.ma/fr/news/Bonne-production-en-dattes-dans-la-r%C3%A9gion-de-Dr%C3%A2a-Tafilalet-responsable--20220411>
- (47). Rosenberg, M. J., Hovland, C. I., McGuire, W. J., Abelson, R. P., & Brehm, J. W. (1960). Attitude organization and change: An analysis of consistency among attitude components.(Yales studies in attitude and communication.), Vol. III.
- (48). Rossi, A., Coscarello, M., & Biolghini, D. (2021). (Re) commoning food and food systems. The contribution of social innovation from solidarity economy. *Agriculture*, 11(6), 548.
- (49). Saidi, A., & Diouri, M. (2017). *Food self-sufficiency under the Green-Morocco Plan [L'Autosuffisance alimentaire dans le cadre du Plan Maroc Vert]* (No. halshs-01613992).
- (50). Saidi, A., Bouhid, L., Napoleone, C., El Hadad-Gauthier, F., Moussalim, S., & Alj, A. (2022, May). The Sustainability Of The Supply Chain Of The City Of Meknes In Fruits And Vegetables Tested By The Covid-19. In *2022 14th International Colloquium of Logistics and Supply Chain Management (LOGISTIQUA)* (pp. 1-6). IEEE.
- (51). Saidi, A., Bouhid, L., Napoleone, C., Hadad-Gauthier, F. E., Moussalim, S., & Alj, A. (2022). La durabilité de la chaîne d'approvisionnement en fruits et légumes à l'épreuve

- du Covid-19: cas de la ville de Meknès au Maroc. *Développement durable et territoires. Économie, géographie, politique, droit, sociologie*, 13(2).
- (52). Salmivaara, L., Niva, M., Silfver, M., & Vainio, A. (2022). How vegans and vegetarians negotiate eating-related social norm conflicts in their social networks. *Appetite*, 175, 106081.
- (53). Shew, A. M., Snell, H. A., Nayga Jr, R. M., & Lacity, M. C. (2022). Consumer valuation of blockchain traceability for beef in the U nited S tates. *Applied Economic Perspectives and Policy*, 44(1), 299-323.
- (54). Stein, A. J., & Santini, F. (2022). The sustainability of “local” food: A review for policy-makers. *Review of Agricultural, Food and Environmental Studies*, 103(1), 77-89.
- (55). Striebig, B., Smitts, E., & Morton, S. (2019). Impact of transportation on carbon dioxide emissions from locally vs. non-locally sourced food. *Emerging Science Journal*, 3(4), 222-234.
- (56). Sun, Y., Gao, M., Li, Y., Liu, Y., Chen, W., Zhang, Z., ... & Qiu, M. (2022, December). Research on the Optimization of New Media Marketing Strategies. In *2022 4th International Conference on Economic Management and Cultural Industry (ICEMCI 2022)* (pp. 549-557). Atlantis Press.
- (57). Tarra, S., Mazzocchi, G., & Marino, D. (2021). Food system resilience during COVID-19 Pandemic: The Case of roman solidarity purchasing groups. *Agriculture*, 11(2), 156.
- (58). Testa, F., Sarti, S., & Frey, M. (2019). Are green consumers really green? Exploring the factors behind the actual consumption of organic food products. *Business Strategy and the Environment*, 28(2), 327-338.
- (59). Zhang, T., Chen, J., & Hu, B. (2019). Authenticity, quality, and loyalty: Local food and sustainable tourism experience. *Sustainability*, 11(12), 3437.
- (60). Zoma, V., Ilboudo, D., & Sangli, G. (2022). Dynamique ville-campagne au Burkina Faso: le marché rural de Kokologho. *Espace Géographique et Société Marocaine*, 1(65), 191-217.