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The role of trust in the relationship between consumers, producers and retailers of organic food: a sector-based approach

Abstract

Given current environmental concerns, the organic food market is an important issue in terms of sustainability. The consolidation of this market is based on trust. Many consumers rely on partial information to assess the quality of organic food and cannot determine its authenticity with certainty. They are led to trust the actors of the organic food chain and the government. In addition, numerous industrial and sanitary scandals have highlighted the need for the actors of the sector to establish relationships based on trust and transparency in order to guarantee the traceability of products and to protect the health of consumers. This research examines the impact of trust and confidence in producers and retailers on the intention to purchase organic food. To address this research issue, we conducted an online questionnaire survey of 316 organic food consumers in France. The results show the central role of quality as a strategy for building and maintaining trust with producers and retailers. They show for the first time the positive impact of trust in producers on trust in retailers. The results of this research allow us to provide advice to growers and retailers to maintain trust and promote purchase intent.

Key words: trust; organic food; quality; retailers; producers; sustainability

1. Introduction

Food production and consumption have a significant impact on the environment, human health and the global economy (United Nations, n.d.). In this context, there is an urgent need for transformations towards greater sustainability in the food sector (Muller et al., 2017). Organic food refers to food that holds organic labels, awarded by each country and by the European Union, and whose production methods respect the environment, biodiversity and animal welfare (Zander et al., 2015). Several research studies show encouraging results on the effectiveness of organic agriculture in reducing greenhouse gas emissions and carbon footprint (Chiriaco et al., 2017; Squalli & Adamkiewicz, 2018). Other work shows that organic food reduces pesticide levels and cancer risk in humans (Baudry et al., 2018; Fagan et al., 2020).

The consumption of organic food products in France grew by more than 13.5% between 2018 and 2019. It has been growing steadily for several years, as some authors had anticipated (Baker et al., 2004) and represents in 2018 a turnover of almost 12 billion euros, according to Agence BIO (2020), the French agency for the

development and promotion of organic agriculture. This is similar to what is seen in a significant number of European Union countries. This spectacular progression leads, according to the same source, to affirm that 9 out of 10 French have consumed at least one organic food product in the last month. This craze for organic food naturally leads many researchers to adopt this research theme. As we have just seen, the economic stakes are important. Consequently, the stakes related to marketing and consumer behavior are also important. For example, problems related to the labeling of organic food products are directly related to credibility (Janssen & Hamm, 2012). Generally speaking, it is the issue of mental representation but also the perception of organic food products that is mobilized (Schleenbecker & Hamm, 2013).

We chose to work on organic food products because this is the most representative product category. While much research has focused on the perception of organic foods, the perceived quality of the products is frequently mobilized because it is valued by consumers (Hidalgo-Baz et al., 2017; Husic-Mehmedovic et al., 2017; Janssen, 2018; Lee & Hwang, 2016; Lee & Yun, 2015; Loebnitz & Aschemann-Witzel, 2016; Prada et al., 2017; Rana & Paul, 2017; Vega-Zamora et al., 2013). It is mainly values, especially well-being and quality of life that hold the attention of consumers. However, such approaches do not take into account the role of trust and do not explain how consumers' perception of the quality of organic food products influences their relationship of trust with actors in the supply chain. In order to shed light on this issue, this research examines the impact of the perceived quality of organic food products on trust towards producers and retailers.

Numerous scandals that have affected the food industry in recent years highlight the need for close collaboration between actors in the sector to ensure traceability and authenticity of food. The organic literature agrees on the essential role of trust in establishing the market for organic food products (Annunziata et al., 2019; Nuttavuthisit & Thøgersen, 2017; von Meyer-Höfer et al., 2015). While trust can be oriented towards products, labels and actors within the chain, current work on organic food mainly addresses the first two forms of trust (Da Cunha et al., 2019; Konuk, 2018a; Krystallis & Chrysohoidis, 2005; Tung et al., 2012). This work converges on the idea that the name 'organic' is an attribute of credibility (Lee & Hwang, 2016). Even after consuming an organic product, an ordinary consumer cannot determine with certainty whether it has been produced and processed organically or whether it contains the ingredients listed on the label (Janssen & Hamm, 2012; Teng & Wang, 2015).

Research on stakeholder trust within the organic food supply chain is still in the minority and has two limitations. It rarely examines trust in multiple stakeholders simultaneously (Hamzaoui-Essoussi et al., 2013; Konuk, 2019b) and focuses on retailer trust. Several research studies highlight the positive impact of retailer trust on purchase intent and return intent (Khare & Pandey, 2017; Konuk, 2018b; Pivato et al., 2008; Steffen & Doppler, 2019; Wang & Tsai, 2014). Other research studies

highlight the role of producers in the development of the organic food market and the need for government support (Carfora et al., 2019; Hamzaoui-Essoussi et al., 2013; Lee et al., 2020). Despite their remarkable contributions, previous research does not explain the role of producer trust in the purchase of organic food products. They address either trust in retailers or trust in production or producers and for different products and situations, but these aspects are not considered simultaneously. In order to fill this gap in the literature on organic food, we study the impact of producer trust on retailer trust and purchase intent.

The objective of this article is therefore to show the role of trust in producers and retailers and the perceived quality of organic foods on purchase intent. It therefore raises the issue of trust in a product category on purchase intention and the consideration of the whole industrial chain. This article is structured as follows. First, we present the literature review and the conceptual framework. Second, we present the methodology of the study. Third, we discuss the results of the study, before presenting theoretical contributions and managerial implications of this research. Finally, we outline the limitations of the study and propose avenues for future research.

2. Literature review and conceptual framework

2.1. Trust in organic food

Trust in food is shaped by the continuous interactions between the different actors and institutions involved in food production, distribution, monitoring and consumption (Zhang et al., 2016). As a result of scandals in the food industry, changes in food production technologies and increasing obesity in many developed countries, consumers want to know the origin and composition of products (Montecchi et al., 2019; Rampl et al., 2012). As a result, they are demanding greater transparency from manufacturers, retailers and governments. Trust plays a major role in the purchase of food products (Hobbs & Goddard, 2015), especially organic foods whose authenticity cannot be verified by an ordinary consumer (Janssen & Hamm, 2012; Teng & Wang, 2015). According to Morgan & Hunt (1994: 23), trust is demonstrated when one of the stakeholders has confidence in the reliability and integrity of the other party.

In the case of organic food products, the relationship of trust with consumers is largely based on the authenticity and functionality of the products (Vega-Zamora et al., 2019). Indeed, the organic logo or certification is reserved for products that are produced in a way that respects the environment, biodiversity and animal welfare (Zander et al., 2015). Moreover, unlike other products, which mainly provide utilitarian benefits, organic foods respond to the desire to preserve one's health. Recent research shows that the most influential drivers of attitude and purchase of organic food products are 'healthiness' and 'naturalness' (Hansmann et al., 2020;

Kushwah, Dhir, Sagar, et al., 2019; Massey et al., 2018; Rana & Paul, 2020). These findings are in accordance with previous literature (Baker et al., 2004; Janssen, 2018; Lusk, 2011; Padel & Foster, 2005; Zanolli & Naspetti, 2002). Consumers attribute the health benefits of organic foods to the fact that the products are assumed to be natural, i.e., they do not contain substances, pesticides or components that may produce adverse health effects (Padel & Foster, 2005).

2.2. The role of organic food perceived quality on trust building

Perceived quality is one of the main factors explaining the purchase and consumption of organic foods (Rana & Paul, 2020). It can be defined as the consumers' judgement of the excellence or superiority of a product (Zeithaml, 1988: 3). It has three main characteristics. First, it is subjective since it is the result of a judgment and is thus opposed to objective quality (Gallarza & Gil Saura, 2006; Olson & Jacoby, 1972; Steenkamp, 1990; Zeithaml, 1988). Second, it is relative because it is inferred by the consumer based on various factors such as the intrinsic and extrinsic attributes of the product, individual expectations and available information (Olshavsky & Miller, 1972; Olson & Jacoby, 1972; Shapiro, 1982). For example, fruits and vegetables promoted as organic are perceived to be more nutritious than those produced by conventional agriculture (Da Cunha et al., 2019; Ellison et al., 2016; Gassler et al., 2019; Loebnitz & Aschemann-Witzel, 2016). Finally, similarly to attitude, perceived quality results from a judgment based on cognition or affect (Zeithaml, 1988).

Judgement of the quality of a product can be considered before or after purchase (Bredahl, 2004; Steenkamp & van Trijp, 1996). At the point of sale, consumers' expectations about the quality of a product will depend on the evaluation of available information that is considered reliable indicators of quality. These indicators can be intrinsic as brand name or country of origin or extrinsic as taste or texture (Gassler et al., 2019; Olson & Jacoby, 1972). After purchase, at the time of consumption, the perception of quality will depend on the performance of the product (Bredahl, 2004; Steenkamp & van Trijp, 1996). The consumer will therefore be able to judge quality based on his or her experience. The literature on organic foods shows that consumers mainly use extrinsic indicators to judge product quality. Labels, logo, packaging, price and health effects help consumers to appreciate the quality of an organic product (Botonaki et al., 2006; Gassler et al., 2019; Hidalgo-Baz et al., 2017; Lee et al., 2013; Loebnitz & Aschemann-Witzel, 2016; Prentice et al., 2019).

Hamzaoui-Essoussi et al. (2013) and Rana & Paul (2017) agree on the primordial role of perceived quality in the relationship of trust between consumers and the different actors within the sector. Trust can be defined as "a psychological state characterised by the acceptance of vulnerability based on positive expectations about the intentions or behaviour of others" (Rousseau et al., 1998: 395). The function of trust is to reduce uncertainty and ambiguity in situations where individuals

do not have adequate cues to guide their behaviour and choices (Hobbs & Goddard, 2015; Khare & Pandey, 2017).

Consumers' trust is an essential prerequisite for the establishment of the organic food market (Nuttavuthisit & Thøgersen, 2017). In several countries, organic food producers agree that ensuring consistent product quality is an essential strategy to gain or maintain consumer confidence (Hamzaoui-Essoussi et al., 2013). According to signal theory, individuals interpret reality based on perceived signals (Spence, 1973). For example, consumers intuitively associate organic ingredients with better nutritional quality. Therefore, they rate restaurants that offer dishes with organic ingredients more favourably than those that offer dishes with conventional ingredients (Lu & Gursoy, 2017). In light of this theory, it seems logical that ensuring consistent product quality allows producers to send a positive signal to consumers, which in turn will serve as an indicator to judge the reliability and integrity of these intermediaries. The more consumers feel that an organic product meets their needs, the more confidence they place in producers, since they have proof that the reliability and integrity of these intermediaries is guaranteed. Based on the results of the research of Hamzaoui-Essoussi et al. (2013) and the signal theory, we formulate the following hypothesis:

H1: Perceived quality has a direct positive effect on trust in producers.

In an indirect distribution channel, retailers are the first intermediaries in direct contact with consumers. Trust in retailers could help reduce the complexity and uncertainty of food choices and ultimately influence brand loyalty (Khare & Pandey, 2017). By ensuring consistent product quality, organic food retailers also send a positive signal to consumers, who will use it as an indicator of the reliability of these intermediaries. Several research studies point in this direction. They show that the perceived quality of organic food has a positive impact on retailer confidence (Khare & Pandey, 2017; Konuk, 2018b; Wang & Tsai, 2014). On the basis of this research and signal theory, we formulate the following hypothesis:

H2: Perceived quality has a direct positive effect on trust in retailers.

Perceived quality is one of the main factors motivating the purchase of organic foods (Rana & Paul, 2020). Several organic research studies show the positive effect of perceived product quality on purchase intent (Husic-Mehmedovic et al., 2017; Konuk, 2018b; Kushwah, Dhir, & Sagar, 2019; Prentice et al., 2019; Wang & Tsai, 2014; J. Wang et al. 2020). The purchase of organic food is a response to the need to improve quality of life (Rana & Paul, 2020). An organic product contributes to improving consumers' quality of life through its superior performance. The better the product performs for a consumer, the more likely it is that she or he will continue to buy it. Based on research that shows the positive impact of the perceived quality of

organic foods on purchase intent (Konuk, 2018b; Kushwah, Dhir, & Sagar, 2019; Prentice et al., 2019; Wang & Tsai, 2014), we formulate the following hypothesis:

H3: Perceived quality has a direct positive effect on purchase intention.

According to the transfer of trust theory (Zhao et al., 2019), trust in one person or entity can be transferred to another person or entity when there is a relationship between them. This process typically involves three distinct but related persons or entities or persons: a principal, a source of initial trust and a third party to whom the trust is transferred (Zhao et al., 2019). This theory has a very natural application in the field of the client-seller relationship. It explains, for example, how trust towards an entity in the commercial sphere (a website, an O2O platform, online payment) favours trust towards another entity that also belongs to it (a partner website, a merchant registered on an O2O platform to offer its services offline, mobile payment (Gong et al., 2020; Stewart, 2003; Xiao et al., 2018).

This theory has been applied in the retailing literature to explain the positive impact of the trust relationship towards a manufacturer's brand on the trust relationship towards a private label. Indeed, as Konuk (2019b) shows, the more consumers are convinced of the reliability of the manufacturer's brand, the more they will trust the other brand. The theory of trust transfer (Zhao et al., 2019) would allow to understand how trust operates towards the different actors within the organic food chain. Consumers' previous experience with an organic producer would allow them to infer the extent to which they can trust the retailer. The more consumers are convinced of a producer's reliability, the more they will trust the distributor since he has succeeded, thanks to his business partner, in showing his ability to choose and offer quality organic food. Based on the theory of trust transfer and the results of Konuk's (2019b) research, we propose the following hypothesis:

H4: Trust in producers has a direct positive effect on trust in retailers.

2.3. The impact of trust in producers and retailers on purchase intention

Trust plays a central role in the purchase of food products and even more so in the purchase of organic food, which is characterized by a high degree of complexity (Hobbs & Goddard, 2015; Khare & Pandey, 2017). Even after consuming an organic product, an ordinary consumer cannot determine with certainty whether it has been produced and processed organically or whether it contains the ingredients mentioned on the label (Janssen & Hamm, 2012; Teng & Wang, 2015). It has to rely on producers and retailers to produce and manufacture food and on government to crack down on fraud in the sector (Macready et al., 2020; Yin et al., 2016). Trust determines the choice not only of organic foods but also of the distribution channel (Hamzaoui-Essoussi et al., 2013).

Several studies on organic products investigate the role of product or brand trust in the organic food purchasing process and focus on product characteristics and performance (Da Cunha et al., 2019; Konuk, 2018a; Krystallis & Chryssohoidis, 2005; Tung et al., 2012). Conversely, trust in producers has received less attention in this literature (Carfora et al., 2019; Hamzaoui-Essoussi et al., 2013; Lee et al. 2020). Trust in other individuals reduces day-to-day complexity and promotes cooperative behaviours (Zhang et al., 2016), hence the importance of studying trust in producers. While organic food consumption varies greatly from country to country, direct marketing is still a common way to obtain products (Hamzaoui-Essoussi et al., 2013; Zhang et al., 2016). Direct sales allow producers to reduce distribution costs and thus defend margins, and customers to purchase local, environmentally friendly and high-quality products (Gilg & Battershill, 2000).

The development of information and communication technologies has fostered the emergence of initiatives allowing producers to sell their products directly (Wills & Arundel, 2017). As such, a Colombian farming family has emerged from anonymity thanks to social networks. Faced with the difficulty of selling their products at the right price because of the many intermediaries, the family created a Youtube channel. It took only a few days for their community to surpass 100,000 subscribers and their order book to be filled. They seem to have gained the sympathy and trust of thousands of Internet users, ready to buy their products. As shown by Vega-Zamora et al. (2019), consumers respond positively to messages from producers attesting to the authenticity of their organic products. Other initiatives, such as the creation of associations for the maintenance of peasant agriculture in France, aim to promote local and organic agriculture and thus ensure a stable source of income for producers. Given the potential impact of trust in organic producers on purchase intent, we put forward the following hypothesis:

H5: Trust in producers has a direct positive effect on purchase intention.

Trust is a key factor in developing customer relationships and customer loyalty (Rampl et al., 2012). This is especially true in the organic food distribution sector, which is characterized by increased competition due to the arrival of large chains previously specialized in conventional food distribution (Hwang & Chung, 2019; Romero et al., 2020). Trust in retailers simplifies the organic food purchasing process (Hobbs & Goddard, 2015; Khare & Pandey, 2017). Once a trust relationship is established, consumers tend to buy regular products from their regular retailer to prepare their regular meals (Zhang et al., 2016), and as several research studies show, this phenomenon also applies to the field of organic food consumption. Indeed, the more consumers are confident that a retailer acts honestly, the more satisfied they are with the retailer and the more willing they are to return to the store (Steffen & Doppler, 2019; Wang & Tsai, 2014) since they have some certainty that the outcome of the shopping experience will be positive. On the other hand, trust in the organic

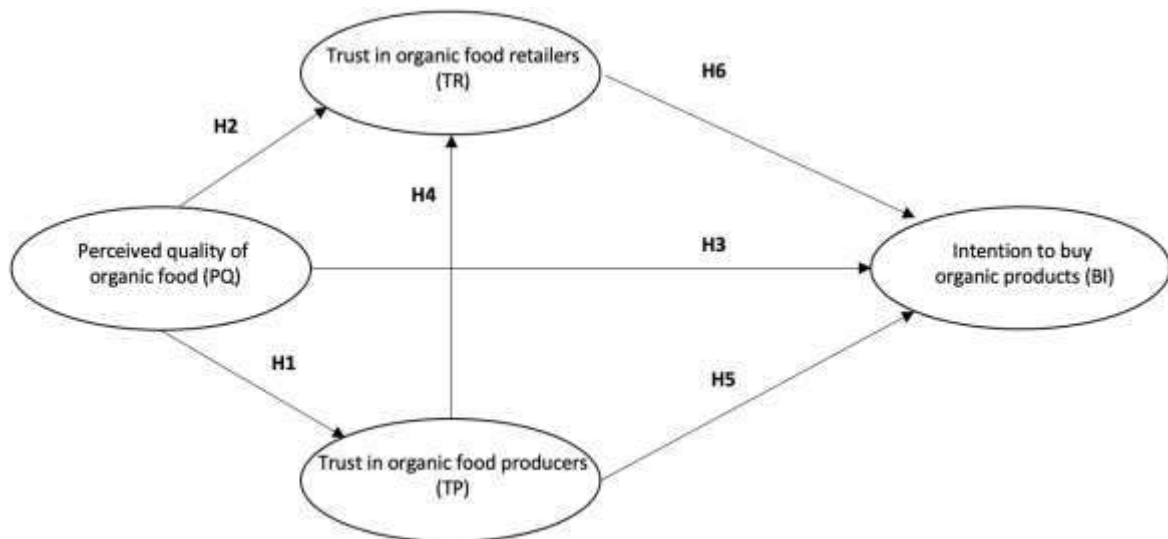
food sold at a retailer or trust in an organic private label promotes purchase intent (Khare & Pandey, 2017; Konuk, 2018b; Pivato et al., 2008; Yu et al., 2020). Given the positive impact of trust in organic specialty retailers on purchase intent, we formulate the following hypothesis:

H6: Trust in retailers has a direct positive effect on purchase intention.

2.4. The conceptual model

In general, the conceptual model postulates that perceived quality determines both trust in producers and retailers and purchase intent.

Figure 1 - Conceptual Model



3. Methodology

3.1. Information gathering and the sample

The data was collected via an online questionnaire from French consumers. The final sample consisted of 316 individuals. The sample is not representative of the French population. However, it is very diverse (Table 1). The participants in the survey are 79.1% to consume organic food products at least once a month and 79.7% to shop for food themselves.

Table 1 - Sample structure

		Population (%)	Sample (%)	Sample (n)
Sex	Women	52.5%	60.1%	190
	Men	47.5%	39.9%	126
Age	20-39 years old	33.6%	43.4%	137
	40-54 years old	27.3%	37.0%	117
	55 years old and over	39.1%	19.6%	62
Activity	Contractors	4.6%	6.6%	21
	Managers and intermediate professions	24.6%	30.7%	97
	Employees and workers	31.1%	38.9%	123
	Retired and inactive	39.7%	23.8%	75
n = 316				

3.2 Measurement scales

In order to test our hypotheses, we have previously selected our measuring instruments. They are composed of multi-item measurements, based on Likert scales with 5 points (1 = strongly disagree to 5 = strongly agree). Before conducting the main research, four persons, including a bilingual one, evaluated the quality of the translation. The results converged between the four translators.

Trust in organic food producers has been slightly adapted from Touré-Tillery & McGill (2015) The scale has 4 items, all of which have been retained. The retailer confidence scale is the Konuk (2019a). It has 3 items, like the original scale. The perceived quality scale is that of Gleim et al. (2013) and has 4 items. The scale of intention to buy organic food is that of Konuk (2018a) consists of 3 items (Table 3).

3.3. Data Analysis

Before testing our model, we evaluated the psychometric characteristics of the measures we used. We performed a confirmatory factorial analysis under Lavaan (Rosseel, 2012), in order to estimate the convergent and discriminant validity of the constructs mobilized on the basis of the recommendations of (Fornell & Larcker, 1981). Following this analysis, we developed a model of structural equations in order to test the model, which is already theoretically well structured (Hair Jr et al., 2010), which justifies the use of a covariance-based model to the detriment of a PLS model, despite the problems of data normality (Hair et al., 2012).

4. Results

4.1. Validity and reliability assessment

Convergent validity and discriminant validity was demonstrated for all constructs. For this we used the approach of Fornell and Larcker (1981). Concerning convergent validity, we can say that it is assured. The loadings are all well above 0.50 and are significant at the 1% risk (Hair Jr et al., 2010). The AVE of each construct is also above the threshold of 0.50 (Table 2). Regarding the reliability of the measurements, it can be observed that the Jöreskog rho is very satisfactory for each of the measurements and above 0.70 for all the constructs. It is the same for Cronbach's alpha, whose minimum is 0.81 (for an overview of all measurements see Table 3).

After assessing the validity and reliability of the measures, we concluded that there is no need to delete any item. The scales used have therefore been kept in their original form. These results from the validity and reliability analysis now allow us to examine the overall quality of the proposed model as well as the hypotheses we have formulated.

Table 2 - Discriminating validity

Discriminant validity: $R^2 < \text{Average Variance Extracted (AVE)}$					
	TP	TR	PQ	BI	AVE
Trust in organic food producers (TP)	1	0.453	0.402	0.294	0.830
Trust in organic food retailers (TR)		1	0.361	0.425	0.772
Perceived quality of organic food (PQ)			1	0.379	0.790
Intention to buy organic food (BI)				1	0.896

Table 3 - Factors, items, loadings, means, standard deviations and reliabilities

Items	Loadings	Means	Standard deviations	Cronbach's α	Jöreskog's ρ
TP. Trust in organic food producers (Touré-Tillery & McGill, 2015)					
TP1. The producers of organic food are honest	0.883	3.70	0.809	0.900	0.912
TP2. The producers of organic food are ethical	0.788	3.76	0.787		
TP3. The producers of organic food are genuine	0.779	3.60	0.828		
TP4. The producers of organic food are trustworthy	0.867	3.64	0.782		
TR. Trust in organic food retailers (Konuk, 2019a)					
TR1. I trust in organic food retailer	0.790	3.48	0.871	0.806	0.81
TR2. I rely on organic food retailer	0.794	3.11	1.044		
TR3. This is an honest organic retailer	0.714	3.21	0.824		
PQ. Perceived quality of organic food (Gleim et al., 2013)					
PQ1. Organic food is of excellent quality	0.723	3.47	0.770	0.862	0.868
PQ2. Organic food is of very high quality	0.842	3.34	0.822		
PQ3. Organic food is of superior quality	0.844	3.57	0.921		
PQ4. Organic food is the best	0.74	3.27	0.979		
BI. Intention to buy organic food (Konuk, 2018a)					
BI1. I am willing to buy organic food in the future	0.926	3.88	0.996	0.923	0.926
BI2. I plan to buy organic food	0.925	3.79	1.104		
BI3. I will make effort to buy organic food	0.841	3.65	1.115		

5. Model and Hypothesis testing

5.1. Test of the model

The model has been tested using the Satorra & Bentler's (1994) procedure as it has the advantage of limiting the non-normality biases found in our dataset). Absolute indices are generally good except for the AGFI which is a bit low. The χ^2 per degree of freedom is 2.01 (< 3). The AGFI is 0.088 (< 0.9), the RMSEA is equal to 0.066 (< 0.08) and especially the SRMR is equal to 0.044 (< 0.08). Incremental indicators are good. The CFI quotes 0.959 and the TLI is 0.948. The model is very satisfactory, although the AGFI is slightly below the acceptability threshold of 0.9.

5.2. Hypothesis testing

The overall validation of the model now allows us to examine each of the hypotheses. Testing the hypotheses leads first to the conclusion that there is a direct and positive impact of perceived quality on confidence in organic food producers ($\beta = 0.634$, $p < 0.001$). It can be concluded that hypothesis H1 is validated. This relationship is the strongest in the model. This tends to show that producers play a particularly important role in the evaluation of the organic food chain by consumers. Beyond this, the importance of the regression score shows that consumers attribute strong characteristics to organic food products, such as health or well-being. It follows that producers must respect these expectations (Hamzaoui-Essoussi et al., 2013; Rana & Paul, 2017). Our study suggests that consumers attribute these characteristics to them.

The second hypothesis concerns the impact of perceived quality on confidence in the distributor. Hypothesis H2 is thus verified ($\beta = 0.292$, $p = 0.001$). Although the hypothesis is verified, the coefficient is the lowest among those of the whole model. The intermediation role is not strongly valued by consumers. At this stage, we can see that perceived quality has an impact on both ends of the chain between production and distribution, but with an effect of varying intensity. It is rather strong with regard to confidence in the producer and rather weak with regard to the retailer. The producer assumes a much more central role than the retailer, who has only a logistical function.

The H3 hypothesis, which is also validated ($\beta = 0.334$, $p < 0.001$), logically shows that perceived quality has a positive impact on purchase intention. This result is recurrent in all research that uses intention to buy as a dependent variable, independently of the test for the role of the price variable (Konuk, 2018b; Kushwah, Dhir, & Sagar, 2019; Prentice et al., 2019; Wang & Tsai, 2014). With respect to these hypotheses on the impact of perceived quality on confidence and purchase intent, we find that they are all validated and that they impact both confidence and purchase intent. Perceived quality therefore plays a central role in the purchase of organic food.

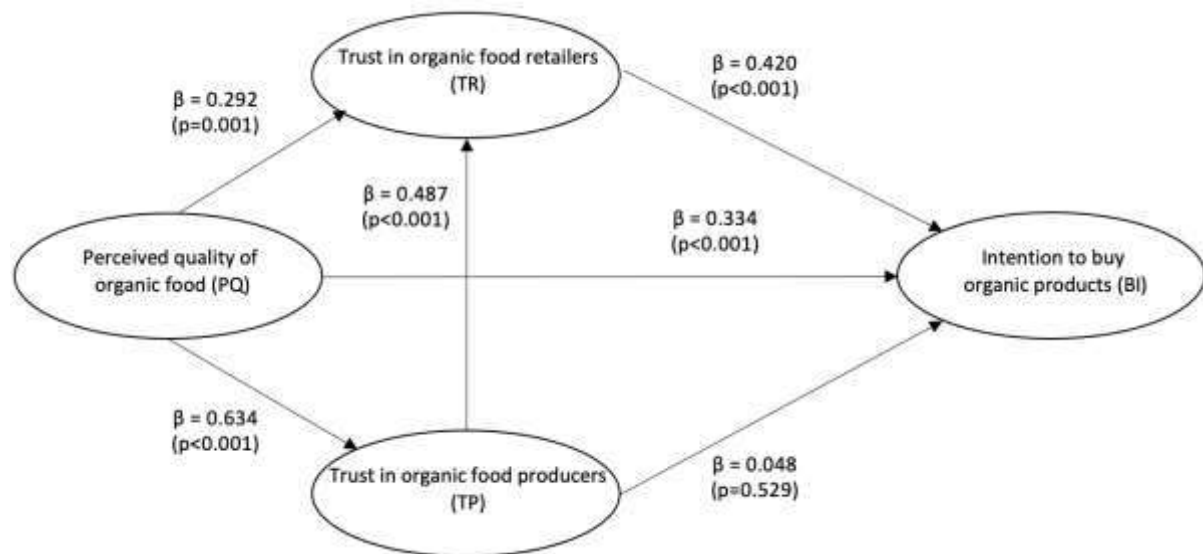
The H4 hypothesis defends the idea of a positive impact of producer confidence on retailer confidence. This hypothesis is verified ($\beta = 0.487$, $p < 0.001$). The result, by its strength, suggests that consumers do not dissociate too much the trust they place in the retailer from the trust they place in the distributor and that there is a diffusion effect of trust. This result is consistent with trust transfer theory (Zhao et al., 2019). Examination of the assumptions regarding the direct impact of confidence on purchase intent yields highly contrasting results. First of all, we observe that we cannot conclude that there is a direct effect of producer confidence on purchasing intention ($\beta = 0.048$, $p = 0.529$). The relationship is not significant and the H5 hypothesis is not validated. On the other hand, there is a relationship between

retailer confidence and purchase intention ($\beta = 0.420$, $p < 0.001$). Hypothesis H6 is therefore validated.

5.3. Mediation analysis

In order to better understand how trust in producers and retailers affects the purchase of organic food, we conducted sequential mediation tests. We used a model 6 shown in PROCESS (Hayes, 2018) with parameter estimates based on 5000 bootstrap samples. As Figure 2 shows, the predictor variable for the analysis was perceived quality (PQ). The mediators variables for the analysis were trust on producers (TP) followed by trust on retailers (TR). The outcome variable was buying intention (BI). We first examined the direct effect of perceived quality on buying intention. In accordance with the results of the structural equation model test, this effect remains significant in the presence of the mediating variables ($\beta = 0.3640$, SE 0.0601, $p < 0.001$). As for indirect effects, we first examined the partial mediation effect of producer confidence on the relationship between perceived quality and purchase intention. The mediation test shows that this effect is significant since the confidence interval does not include 0 (PQ->TP->BI, $\beta = 0.0846$, SE 0.0386, CI 95% [0.0159, 0.1660]). We then examined the partially mediating effect of retailer confidence on the relationship between perceived quality and purchase intent. The mediation test shows that this effect is significant for the same reason (PQ->TR->BI, $\beta = 0.0998$, SE 0.0307, CI 95% [0.0473, 0.1679]). Finally, we examine the sequential mediating effect of producer trust and retailer trust on the relationship between perceived quality and purchase intent. The mediation test shows that this sequential mediation effect is significant (PQ -> TP -> TR -> BI, $\beta = 0.0757$, SE 0.0216, CI 95% [0.0371, 0.1220]). The confidence interval does not include 0 either. All these results suggest that ensuring consistent quality is an essential strategy to consolidate the organic food market. As a result of the positive consumer experience of the products, consumers place their trust in the producers and secondarily in the retailers. This climate of confidence then favours their intention to purchase the products.

Figure 2 - Conceptual Model



*Simple and sequential mediator effects
PQ → TP → BI
PQ → TR → BI
PQ → TP → TR → BI

6. Discussion

6.1. Theoretical contributions

What can we learn from these results? The results obtained are mostly in line with the hypotheses, with one important exception. Firstly, the results show the positive impact of perceived quality on confidence in organic food producers. Some authors emphasize the importance of product quality in establishing a relationship of trust between producers and consumers (Hamzaoui-Essoussi et al., 2013; Rana & Paul, 2017). However, no research work has tested this relationship before. In accordance with our theoretical expectations, perceived quality functions as a positive signal from which consumers judge the reliability of producers. The more the quality of organic food meets the consumers' requirements, the more they trust the producers because they already have a proof of the honesty of the producers.

The results also show that perceived quality has a positive impact on trust in organic food retailers. As we anticipated, perceived quality functions as a positive signal from which consumers also judge the reliability of retailers. The more the quality of organic food meets consumers' requirements, the more they trust retailers because they already have proof of the honesty of the retailers. This finding is consistent with previous research on trust in the organic food chain (Khare & Pandey, 2017; Konuk, 2018b; Wang & Tsai, 2014)

We found that perceived quality has a positive impact on the intention to buy organic food. The better the quality of organic food meets consumers' requirements, the more willing they are to buy organic food. This finding is consistent with previous work on organic food purchasing (Konuk, 2018b; Kushwah, Dhir, & Sagar, 2019; Prentice et al., 2019; Wang & Tsai, 2014).

In light of the theory of trust transfer (Zhao et al., 2019), we anticipated that trust in producers has a positive impact on trust in retailers. In accordance with our theoretical expectations, this effect proved to be significant. The more consumers consider a producer to be reliable, the more they trust retailers who have demonstrated a strong ability to offer quality organic food through their partners. This finding is consistent with Konuk's research (2019b) which shows the positive impact of trust in a manufacturer's brand on trust in a national brand.

Regarding the relationship between trust and purchase intention, the results are mixed. Contrary to our theoretical expectations, trust in producers does not have a significant effect on purchasing intention. One can wonder here about a distancing effect between the producer and the consumer. Conversely, the positive impact of confidence in retailers on purchasing intention has proved to be significant. The more consumers are convinced of the reliability of retailers, the more willing they are to buy the foods marketed by these intermediaries. This latter finding is consistent with previous work on the role of trust in organic purchasing (Khare & Pandey, 2017; Konuk, 2018b; Pivato et al., 2008).

In order to better understand the impact of trust in the organic food industry on the purchase of products, we conducted additional analyses. The results of three mediation tests converge on the mediating role of trust towards actors (i.e., producers and retailers) on the relationship between perceived quality and purchase intention. Consumers seem ready to buy products when they consider that producers and, secondarily, retailers are reliable and capable of offering them products of satisfactory quality. These results are interesting because sometimes consumers purchase organic food from retailers and know little or nothing about the manufacturers of the products. They place their trust in producers based on their perception of product quality and transfer this trust to retailers. Ensuring consistent quality is a fundamental strategy to maintain trust in all actors within the supply chain and to encourage purchase intent. Pursuing such a strategy requires close collaboration between producers and distributors.

All the results cited show that consumers trust both producers and retailers when they provide organic food that meets their quality requirements. Quality functions as a signal by which consumers judge the honesty of the players in the organic food chain. These results contribute to the literature on organic food quality by showing the impact of perceived quality on both producer confidence and retailer confidence (Hidalgo-Baz et al., 2017; Husic-Mehmedovic et al., 2017; Janssen, 2018; Lee &

Hwang, 2016; Lee & Yun, 2015; Loebnitz & Aschemann-Witzel, 2016; Prada et al., 2017; Rana & Paul, 2017; Vega-Zamora et al., 2013). These results also provide insight into the role of trust in the food supply chain, a form of trust that has been neglected in the organic food trust literature (Da Cunha et al., 2019; Konuk, 2018a; Krystallis & Chryssohoidis, 2005; Tung et al., 2012). Finally, the results cited highlight the positive impact of producer confidence on retailer confidence. They contribute to the literature on stakeholder trust in the organic food chain, which rarely studies multi-stakeholder trust and focuses on retailer trust (Khare & Pandey, 2017; Konuk, 2018b; Pivato et al., 2008; Steffen & Doppler, 2019; Wang & Tsai, 2014).

In conclusion, the main contribution of our research lies in the fact that certain products or certain categories of products need to be understood in terms of the sector and not from each player independently of the others. This has important consequences in terms of marketing, which must operate in an integrated manner and no longer in isolation from each of the stakeholders serving a brand or even a product category. At this stage of the reflection, we are entitled to question the organic labels and their very specific status. These labels, like others, have an official character. They are awarded following the respect of very strict specifications that the producer must respect. It is under these conditions that the producer is awarded the precious label. The whole sector, given the constraints that weigh on it is relatively fragile. The organic food product is synonymous with a quality product and any shortcoming in the chain leading to the consumer is dangerous.

6.2. Managerial implications

The results of this research allow us to provide several recommendations for producers and retailers specializing in organic foods. The results indicate that the more the products' performance meets consumer requirements, the more trust they place in producers and retailers. In order to ensure consistent quality, stakeholders in the sector could regularly interview consumers. In the event that the perceived level of quality decreases significantly, a thorough investigation should be conducted to determine the source of the problem and to be able to remedy it quickly.

The results show that trust in producers has a strong and positive impact on trust in retailers. These results suggest that the growth of the organic food market depends largely on the relationship of trust between consumers and actors (i.e., producers and distributors) within the supply chain. It is clear that the actions of a single company remain insufficient to address the current environmental and social challenges. Cooperation between producers and retailers is essential to develop modes of production and consumption that respect the environment and living beings. Producers and retailers are encouraged to share their initiatives, tools and best practices in order to contribute to sustainable development. They could join forces to respond to calls for projects launched within the European Union to finance initiatives in favour of sustainable production and consumption.

The results highlight the mediating role of trust towards several actors (i.e., producers and retailers) on the relationship between perceived quality and purchase intention. These results are interesting because sometimes consumers purchase organic food from retailers with little information about the producers (e.g., company name, brand, place of manufacture). Because of the satisfactory performance of the products, they place their trust in the producers and transfer their confidence to the retailers, which favours their intention to purchase the products. In order to help consumers become more aware of organic foods and to encourage them to adopt sustainable consumption patterns (e.g., buying palm oil-free food), producers and distributors could conduct communication campaigns to inform them about their production methods and their actions in terms of sustainable development (e.g., rational management of chemicals, reduction of waste production, reduction of plastic in packaging). Communicating such information would help to reassure consumers and differentiate in an increasingly competitive market (Hwang & Chung, 2019; Romero et al., 2020).

Finally, it would be a mistake to think of organic food in general terms. It is necessary to consider the entire industrial sector. In this article we have chosen to qualify the sector simply by the two ends of the chain: production to the final retailer. This reasoning has shown us the strong interdependence of the actors in terms of the trust generated and its transfer (Zhao et al., 2019). An incident for one brand or type of product can have an impact on the chain as a whole (Ha et al., 2020). For example, fraudulent practices or incidents can be widely publicized and have an impact on the image of organic food as a whole, through a contagion effect. A close collaboration between stakeholders would make it easier to identify the origin of the problem and to choose a communication strategy to reassure customers and regain their trust (Singh et al., 2020).

6.3. Limitations and future research

As Padel and Foster (2005) discuss, there are important differences between product categories. Therefore, there is a need to further contextualize research on organic food products and to differentiate measures according to players. This requires an in-depth knowledge of the agricultural value chain and organic products in order to construct more appropriate confidence measurement scales. The measures that have been chosen are generic and give an overview of attitudes towards the different constructs measured, but there is no guarantee that we would obtain comparable results in different product categories.

It is undoubtedly necessary to go further and identify the critical points that affect confidence in organic food. One of the avenues that has begun to be explored is that of certifying bodies or third-party organizations. It might be interesting to know how

these label-awarding bodies are evaluated by consumers, in terms of integrity, technical competence, or legitimacy. These are all avenues for further research.

In addition, there is no evidence that the results that we could obtain on processed or prepared organic food products would be the same as for fresh, unprocessed products. In this article we have not considered the evaluation of industrial processing of organic agricultural products. We have just considered a value chain that goes from the producer through the distributor to the consumer. Taking into account the transformation process of the products was not part of our objectives but is a particularly interesting research avenue.

Finally, the results of this research are applicable to the organic food market in France. As highlighted by the European Union, sustainable development objectives may vary from one country to another, hence the need to conduct studies in other countries to test the generalization of the results of our study.

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