

## THESIS / THÈSE

### MASTER IN MANAGEMENT PROFESSIONAL FOCUS

#### Examining the Impact of Psychological Factors on Consumer Spending Habits Amidst the COVID-19 Pandemic

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# Examining the Impact of Psychological Factors on Consumer Spending Habits Amidst the COVID-19 Pandemic

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## **Abstract**

Covid-19 meant an impact on the consumers' daily lives, it brought despair, fear, and other negative emotions leading to changes in shopping habits. This study investigates the different consumer internal factors that might explain the spending habits during COVID-19, especially the grocery shopping habits. An online survey was designed and sent to 591 participants. To do so, multiple regression predictive models were used to analyze the survey data. Findings show that variables such as the perceived severity of using digital services or consumer confidence (optimism) influence the changes on spending habits.

# 1. INTRODUCTION

COVID-19 has had a significant impact on individuals' daily lives. It was not solely a health crisis but also an economic one. Household spending and consumption patterns have been disrupted since the commencement of the general lockdown prompted by the COVID-19 pandemic. Several pertinent facts and data are crucial for contextual understanding. According to Statista, the household saving rate, recorded in March 2020, reached unprecedented levels. The top three countries in this regard were Switzerland with 23.1%, followed by Ireland with 21.6%, and France with 21%. Conversely, consumer spending on non-essential products experienced a decline during the initial phases of the COVID-19 pandemic. In March 2020, consumers exhibited a greater willingness to allocate their spending toward groceries than any other retail category.<sup>1</sup>

It is not the first time that the consumer faces such an unpredictable event, remember the 2008 financial crash (Dwyer & Tkak, 2009), the 2009 N1H1 pandemic (George et al., 2021) 2015 terrorist attacks in Paris (Gibert, et al., 2020). Because of these types of events, emotions (e.g., anxiety, stress, risk-perceived, and fear) overcontrol individuals' minds leading to irrational purchasing decisions, the necessity to adapt their consumption daily life habits or even making unusual purchases: fewer trips to the stores, purchasing only essential items, buying online, or changing their food practices (Vázquez-Martínez et al., 2021). Some consumer habits are likely to persist once a crisis is passed, and some of them have a short-term effect.

This study aims to verify if psychological statements such as optimism, insecurity, or risk perception influence the intention of changing consumer habits and predict if some of these consumer habits are likely to persist in the post-Covid19 era. The thesis consists of 5 parts. The first part provides a larger literature review which includes different theories explaining consumer habits during the pandemic and a theoretical approach model explaining the influence of internal emotions and cognitions on consumer responses. The second part contains the research question and a conceptual framework to introduce the independent and dependent

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<sup>1</sup><https://www.statista.com/statistics/1109776/coronavirus-expected-changes-to-consumer-spending-by-product-category-worldwide/>

variables for the analysis. The third part is dedicated to describing the empirical method and the data collection from an online survey. The fourth part is concerned with analyzing the results after executing the regression analysis method. And finally, the last part is for the discussion and conclusion of this project.



## 2. LITERATURE REVIEW

Before understanding why psychological factors such as fear caused by COVID-19 led consumers to purchase more products or services or to change some of their purchasing tendencies, we must first explain what a purchasing habit is and the factors that influence the shopping habits.

### 2.1. What is a consumer habit? Analysis of consumer spending habits through consumer behavior theories

When behavior patterns, as a result of past attitudes, through repetition become habitual and automatic (Wood & Neal, 2009), we are talking about consumer habits. Consumer practices becoming a habit are, for example, the way of purchasing a product or choosing a lunch spot, besides the consumer's explicit intentions (Ji & Wood, 2007). Consumption habits are explained by various consumer behavior theories. The theory based on the stimulus-response framework introduced by Kotler (1997) and as shown in Figure 1, describes how external and internal factors influence consumer purchasing decisions. The internal factors, "black box", include firstly **the psychological aspects** (Crosta, et al., 2021) of a consumer such as motivation (i.e., when the consumer is motivated by utilitarian and hedonic reasons), perception (i.e., attitudes of the consumer towards a certain product) learning, and beliefs (Gemina et al., 2013). Secondly, **personal aspects** are the main consumer characteristics: Age, income level, occupation, and lifestyle. On the other hand, the external factors are marketing stimuli, social environment, economic situation, and other major events.

According to Sheth (2020), consumer habits are disrupted into 4 main contexts: Social environment; The advance of technology; The regulations and precautions while consuming unhealthy products; and finally unpredictable events such as natural disasters or pandemics.

Consumer spending habits have been also studied through consumer emotions. Studies show that integral and incidental emotions have an impact on consumer decision-making. While integral emotions are those that are made by a decision or choice, incidental emotions are those not related to the decision made (Sandberg et al., 2022) (Västhjäll, et al., 2016). Sometimes it happens when incidental emotions are seen as integral emotions. Though, if the consumer makes clear that the incidental emotions are not related to the product choice, those emotions vanish (Pham, 1998) (Le et al., 2020). As suggested by Achar (2016), and shown in Figure 2, the decision-making process of a consumer is driven by integral and incidental emotions

through cognitive appraisal (i.e., how the consumer interprets an event and proceeds to make a feeling of it). In the scenario of the COVID-19 pandemic, consumer negative emotions such as fear, anxiety, depression, or anger, have played an important role in daily purchasing habits.

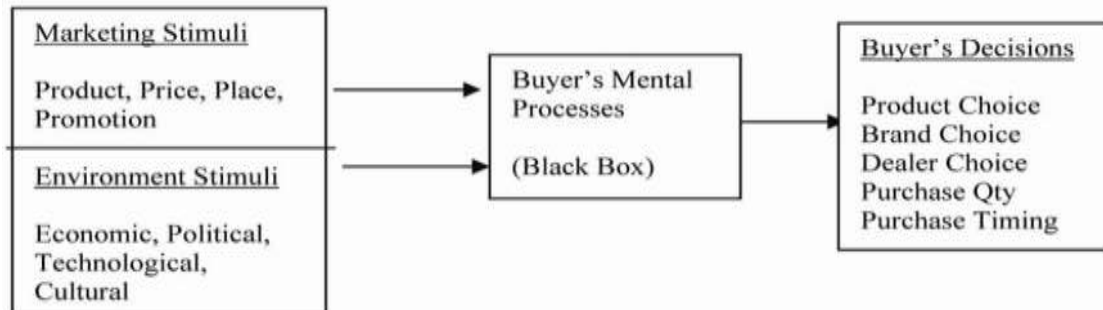


Figure 1: Stimulus-response framework (Kotler et al., 2006, p.220)

Usually, purchasing goods and services is also explained by two main drivers: utilitarian and hedonic motivations. Firstly, utilitarian goods are used to be necessities, they are indispensable to survive, and they cannot be avoided. Meanwhile, hedonic items are bought to find comfort, satisfaction, and the condition of pleasure. Findings from this research (Mainolfi et al., 2021) show that psychological engagement is the best driver for hedonic reasons and satisfaction for utilitarian reasons. Hedonic and utilitarian shopping has been considered a defense to reduce anxiety and stress. During the COVID-19 pandemic, spending habits were invested mostly in essential products such as food products, cleaning products for wellness, and other important expenditures, meaning a clear decline in non-essential items.

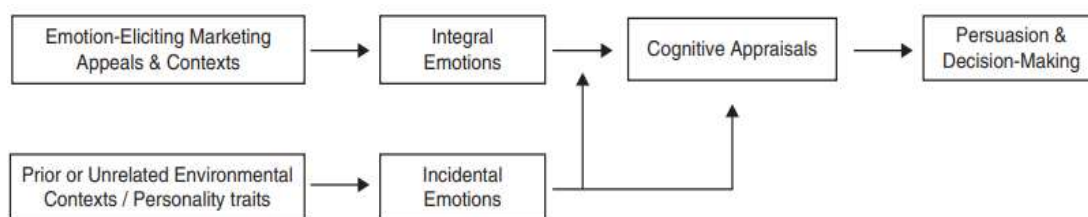


Figure 2: Integral and incidental emotions influencing purchasing behavior. (Achar et al., 2016)

### 2.1.1. Consumers' spending habits during the COVID-19

During the pandemic, consumer habits have changed: They tend to change their food practices by buying more local food, purchasing online instead of going in-store, and

preferences for small vendors more than supermarkets. In this part, we are going to explain the most common spending habits that happened during the general lockdown.

#### **2.1.1.1. The impact of COVID-19 on E-retailing. Technologies and other devices give access to all information, communication, and E-shopping**

The most common consumer practices during the COVID-19 pandemic were online shopping and other digital services. Working remotely or using contactless digital services has also become a habit after the COVID-19 pandemic.

The Covid-19 pandemic has boosted online shopping because of government measures, consumer stress, and fear of health risks. Even though nowadays the pandemic has been less present, and all the stores and retail remain open, consumers still prefer purchasing online thanks to their experience during the general lockdown. In this study (Eschenbrenner, & Baier, 2022) shows that factors such as efficiency, as well as security, and comfort, are the reasons why consumers buy on the internet, besides the fear of getting infected. Not only consumers have taken advantage of online, but also smaller vendors. The advent of the Belgian E-retailing Market due to the pandemic has motivated local-food vendors such as butchers or bakeries, to open their e-retail channel because of its efficiency and simplicity (Beckers et al., 2021). In the end, because of the pandemic, actual or new e-consumers have discovered the multiple advantages of online shopping.

According to Statista 2022<sup>2</sup>, the number of E-buyers across Europe has increased from 2020 to 2021: in the UK for example, online sales have increased 33% in 2021 compared to 2020. It is not only an advantage. Being a new e-consumer has their doubts, the feeling of insecurity by showing their credit card or by lack of confidence. Using digital services or working remotely is indeed a great advantage to avoiding physical contact. However, there are also some inconveniences. Working remotely can lead the Cyberloafing (Reizer, Galperin, Chavan, Behl, & Pereira, 2022) which is defined as using online in non-work-related activities during working hours, reducing productivity.

#### **2.1.1.2. Consumption food habits**

During the COVID-19 pandemic, many individuals have changed the way they consume food products, affecting their daily lives: Spending a lot of time looking at product labels to see their origin; Opting for local products; Consuming processed or frozen products which

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<sup>2</sup> <https://www.statista.com/statistics/1189076/covid-19-e-commerce-growth-europe-country/>

affect people's health; Going less frequently to restaurants. This study (Thompson, et al., 2022) shows the different practices or eating habits through a qualitative method. Some of these practices are resumed in consuming more than usual food products and shopping for food online, to avoid shopping trips to the supermarkets. Consumers are taking care of themselves by consuming more and more vegetables and fruits. Unhealthy food products were also consumed during the first phase of the COVID-19 pandemic (Murphy, et al., 2021).

The threat of COVID-19 to public health has increased the willingness of using online food services (Gavilan et al., 2021). Because of the government intervention, restaurants had to implement measures for the customers such as social distancing, wearing masks when providing a service, or giving more importance to online food delivery.

Local food has become an alternative to imported food because of the pandemic. Opting for local food products was important in many countries, including Belgium. According to a Federal Agency for the Safety of the Food Chain (FASFC) study, 24% of 629 consumers ate local food products. In addition, 20% of respondents in the same study bought from local shops: bakeries, and butchers rather than from supermarkets. This is also an effect of the pandemic, as many consumers paid more attention to the origin and production of food products. Choosing local products can also be an economic and ecological option. According to a research paper by Sauer (2012) comparing imported and local food products, local products are cheaper than non-local products, which can be explained by the high seasons or the short production chain.

There were also consumers switching from bigger retailers to small businesses which they are more affected by the COVID-19 spread. This support is explained by cognitive and emotional consumer responses as well as their characteristics (Childs et al., 2022)

### **2.1.1.3. Shopping no-essential products**

In the pandemic's early stages, many consumers prioritized essential commodities because of the fear of unpredictable events (Patil, et al., 2022), meaning a decrease in non-essential items. Furthermore, from an economic point of view, a decrease in non-essential items means a negative rent elasticity demand. While most of the products consumed during the early stages of the COVID-19 pandemic were primary items, the truth is that consumers have also consumed non-essential items to find comfort and satisfaction. The non-essential items<sup>3</sup> are all the goods and services not necessary to survive, such as luxury, dining out, or entertainment

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<sup>3</sup> <https://www.shipnetwork.com/post/unique-non-essential-items-online-retailers-sold-the-most-during-covid-19>

devices. For example, sales of home entertainment<sup>4</sup> have increased in Belgium during the first stage of the general lockdown, compared to the 2019 period: an increase of 50% in video games and book sales by 30%.

## **2.2. Psychological factors explaining the reasons behind the purchasing behaviors during the COVID-19 pandemic**

In this chapter, we will expose the different antecessors and the factors that explain the non-common consumer behavior during the pandemic. Using the stimulus-organism-response model, developed by Mehrabian & Russell (1974), allows us to see how the external stimuli affect, through a behavioral process, the consumer's intention of changing their consumption habits. This theoretical approach model is used to see the importance of the cognitive and emotions of a consumer and how these led to different consumer responses.

### **2.2.1. External stimuli**

The External stimuli are described as the environment that impacts consumer behavior, through an individual's cognitions and emotions (Satish et al., 2021). To reduce the spread of covid-19, governments from all countries impose measures such as self-isolation, wearing masks, and social distancing, provoking overstress, and depression in individuals. The overloading of information has been also considered one of the main reasons for negative emotions: Individuals became more and more anxious because they spend most of their time looking at the news, medical information, and social media.

### **2.2.2. Organism (consumer cognitive responses)**

The organism refers to the individual's cognitive process which includes all beliefs, emotions attitudes, or/and psychological factors. In this part we can appreciate how the individual interprets the external stimulus, and this affects their response.

#### **2.2.2.1. The Fear of pandemic**

Fear (Mobbs, et al., 2019) is a set of defensive responses (e.g., psychological, behavioral, and conscious experiences) which are stimulated by specific stimuli. Fear has been present in

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<sup>4</sup><https://www.statista.com/statistics/1109261/belgian-home-entertainment-sales-coronavirus/>

consumers during the early stages of the COVID-19 pandemic and partly explains the increase in insecurity as well as the anxiety and stress on individuals. Due to concern and fear of being infected or infecting their environment, consumers opt for other consumption alternatives: Purchasing local products or purchasing online more than usual. Changes in purchasing habits, considering the fear factor, are still being studied and researched (Siddiqi et al., 2022). One of the reasons for this fear is the time spent on the internet and media: By using the Stimulus-Organism-Response (S-O-R) method (Laato et al., 2020), emotions such as fear during the general lockdown are related to the Cyberchondria effect as well as media and Government intervention. Cyberchondria is the excessive amount of time searching for medical information about the physical risk of getting infected by the virus. Cyberchondria increases stress and depression in individuals and decreases the quality of life (Ambrosini et al., 2022). Besides fear negative emotions such as madness, worry, and depression led to bad outcomes: purchasing cart abandonment or brand switching (Wang et al., 2022).

The Protection motivation theory is used to analyze the consumer fear of the pandemic (Kim et al., 2022) (Soon, et al., 2022) The protection motivation theory first introduced by Rogers (1975) explains how individuals respond to the fear appeal in a self-protective way. PMT (Protection Motivation Theory) was (Papagiannidis et al., 2023) used to show that consumer responses to the threat of COVID-19, such as Stockpiling, increase well-being and altruism.

#### **2.2.2.2. Consumer Confidence: Optimism or pessimism?**

One of the most common responses due to the pandemic is consumer confidence, translated into a sentimental and emotional state. There are two separate groups of consumers during a period of crisis: those who are optimistic about the future and those who are likely pessimistic. Optimism is defined as ‘an individual variable that reflects the extent to which people hold expectancies for the future’ (Carver et al., 2010, p.3). Usually, during a bigger crisis, consumer confidence is a good indicator of optimism expressed by their savings or spending (Elmassah et al., 2022). Furthermore, when consumers are optimistic it means great economic growth (Teresiene , et al., 2021) Optimism and sociodemographic characteristics are also considered good indicators of consumer resilience (Milakovic, 2021). The antithesis of Optimism is Pessimism. ‘Pessimism is a personality trait characterized by an expectation of negative outcome’ (Schall & Schütz, 2018, p.1-7). Unlikely optimistic consumers, Pessimistic consumers are more willing to change their consumption habits.

According to Mckinsey & Company's survey<sup>5</sup> about European consumer pessimism due to the pandemic and the most recent inflation, from 1000 respondents nearly 43% are pessimistic about a future economic recovery. This depends on the country and its life quality in terms of income level: For example, even if the death rate was notorious in countries such as China or Brazil, they are more optimistic than most European countries with higher income stability. Figure 4 represents the optimism and pessimism concerning economic recovery.

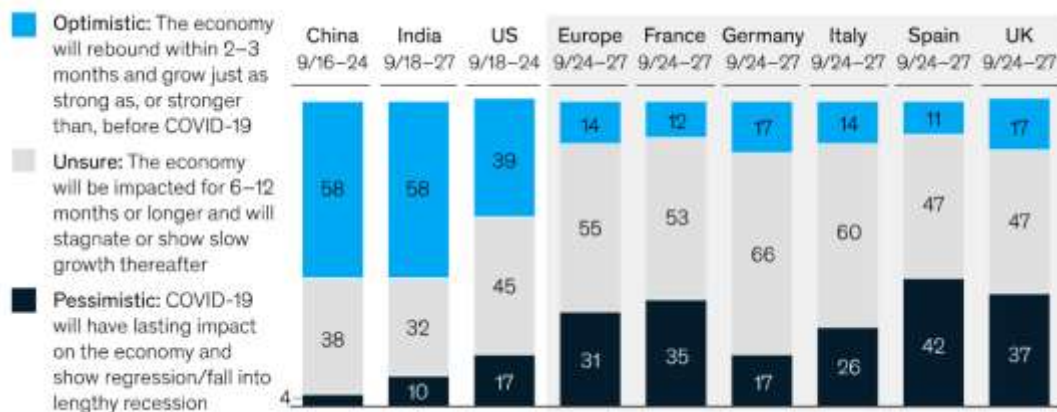


Figure 4. Source: By Mckinsey & Company 2020: Optimism and pessimism viewed by countries

### 2.2.2.3. Consumers' Risk-Perceived

Another cognitive response of individuals is consumer risk perception. Consumer risk perception is defined as an individual feeling about threats and dangers to their well-being and health (Adeola, 2007) and it is based on 4 main risks dimensions: Financial, Psychosocial, time, and physical risk, being the last one the predominant during the COVID-19 situation (Mitchell & Harris, 2005). Risk perception is a prior indicator that influences the purchasing decision as well as shopping intention (Lobb et al., 2007). It has a positive impact when it comes to the stockpiling of food (Long & Khoi, 2020). Using digital services (Esposito et al., 2022) and supporting locavorism (Palau-Saumell et al., 2021) helps to reduce consumer risk perception.

During the COVID-19 pandemic, consumer-perceived risk has been observed mostly in the Tertiary sector (i.e., restaurants, tourism, and other services). Researchers (Hakim et al., 2021) (Dedeoğlu & Boğan, 2021) show that risk perception limits consumers to do their daily purchasing or activities: Going less to the grocery store, not joining their social circle, and not

<sup>5</sup> <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/survey-european-consumer-sentiment-during-the-coronavirus-crisis>

traveling. Furthermore, individuals with higher risk perception are those who feel a higher probability to get infected if they join their social group (Farooq et al., 2022).

The consumer risk perception is a point of no return for most restaurants and other businesses: They have reconsidered their marketing strategies or added other marketing channels, such as the implementation of the e-retailing channel.

#### **2.2.2.4. Perceived Severity (Insecurity and uncertainty)**

Being concerned about their families and themselves, increases uncertainty and insecurity perception. Firstly, Uncertainty is considered by researchers (Anderson et al., 2019) as a psychological state resulting from a lack of knowledge (i.e., unconscious ignorance). Consumer uncertainty appeared during the quarantine as well as other psychological factors, limiting daily life activities, the same as the perceived risk explained previously. Uncertainty makes the consumers more impatient, wanting short-term gains in terms of Intertemporal choice. (Wu, Li, & Li, 2022).

The feeling of insecurity is highly perceived by many individuals since the beginning of covid-19 spread (Omar et al., 2021). The insecurity is known as a result of unpleasant physical and psychological risks (Greenhalgh & Rosenblatt, 1984). This feeling decreases self-control as well as satisfaction and well-being (Wen, et al., 2022).

### **2.2.3. Consumer responses**

There were other consumer responses caused by external stimuli and psychological factors. Researchers and scholars have appreciated three main consumer purchasing behaviors during COVID-19: Impulsive Buying, Panic Buying, and stockpiling.

#### **2.2.3.1. Impulse Buying**

Impulse buying is one of the consumer responses due to the effect of psychological factors exposed previously: It explains more or less 60% of the purchases (Rodrigues et al., 2021). Impulsive Buying was studied for several years: According to Rook (1987), Impulse Buying is defined as an unplanned shopping behavior, influenced by external factors and characterized by its short duration and unpredictability. This shopping behavior has been stronger in consumers with poor moderate thinking: ‘being the mediating effect weaker to anxiety and control’ (Wang et al., 2021). Negative emotions, external cues, and situational factor influence impulse buying (Tran, 2022).



Besides the fear of the pandemic covid-19 (Ahmed et al., 2020), misinformation, as well as risk perception, leads to impulsive buying (Naeem , 2021). Though, overloading information also explains impulsive buying behavior. As suggested by Xiao, Zhang, & Zhang (2022), during emergency events or bigger crises, overload information or information anxiety works as a mediator between the uncertainty on covid-19 pandemic and impulse shopping.

#### **2.2.3.2. The Panic Buying**

Panic Buying is one of the consumer responses that has been researched and studied during the covid-19 event. It is defined as a disorder of consumer behavior, which implies that the consumer purchases a large number of goods, in most cases, necessary items, for fear of a shortage of these products. The external factors (e.g., the government intervention in social media and business measures) and internal factors (i.e., mental and/or psychological disorders resulting from depression, personal social networks, and the human fear of unpredictable events) fully explain the panic buying phenomenon (Herjanto et al., 2021) (Naeem, 2021) (Prentice, et al., 2021). If we take a look at the two first-week periods of 2020, because of the panic buying phenomenon, there is an increase of 10% in grocery sales per travel, compared to the 2019 period.

Chua, Yuen, Wang, & Wong, (2021) used different theories (e.g., scarcity perceived theory) to indicate the main determinants of panic buying. Perceived scarcity anticipated regret, and perceived severity explain the consumer's fear of product unavailability.

#### **2.2.3.3. Stockpiling**

Besides Panic Buying, Stockpiling is also a consumer response due to the pandemic, caused by the fear of possible future food unavailability. It is considered that stockpile purchasing is related to obsessive-compulsive disorder (Schiller et al., 2021) which is defined as a chronic disorder that cannot be controlled, recurring in unwanted thoughts (i.e., obsessions) and repeating behaviors (i.e., compulsions)<sup>6</sup>. Consumers with a higher-threat perception of the pandemic, have more probability to stockpile (Kim, et al., 2020).

Some researchers (Papagiannidis et al., 2023) (Fischer et al., 2021) support that storing a larger amount of goods helps to regain control and face the feeling of uncertainty as well as

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<sup>6</sup><https://www.psychiatry.org/patients-families/obsessive-compulsive-disorder/what-is-obsessive-compulsive-disorder>

fear. Though, others have observed the stockpiling uniquely led to a perceived scarcity. Inducing more and more fear in individuals (Wang & Gao, 2021).

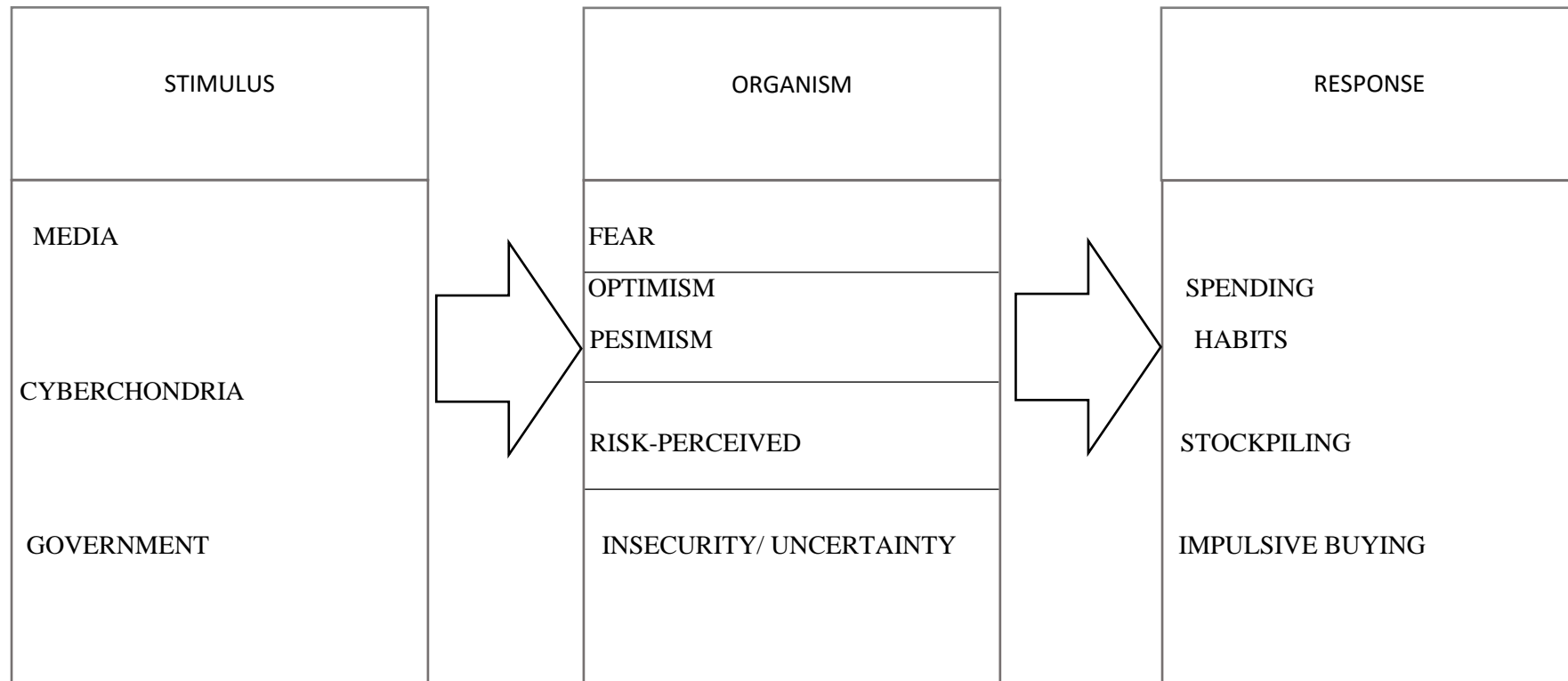


Figure 4: Stimulus-organism-response model, own elaboration

### 3. CONCEPTUAL FRAMEWORK AND RESEARCH QUESTION

This study aims to verify that once it is finished the anxiety and stressful period caused by the COVID-19 pandemic, consumers will continue with their shopping habits happened during the general lockdown. From the literature reviewed, we determine different shopping habits: The consumers' food practices; Using digital services, and purchasing non-necessary products. The way that consumers do their shopping during a sanitary crisis can vary over time. This change in consumer purchasing is explained by factors such as a consumer confidence level, perceived physical risk, and insecurity about using digital services. As we mentioned before, these psychological aspects also explain some purchasing behaviors: panic buying, stockpiling, impulsive buying, and other changes in consumer behavior.

Figure 5 shows the conceptual framework which describes the effect of the psychological factors on the consumer responses such as the food spending habits, as well as the sociodemographic aspects representing the moderating variables.

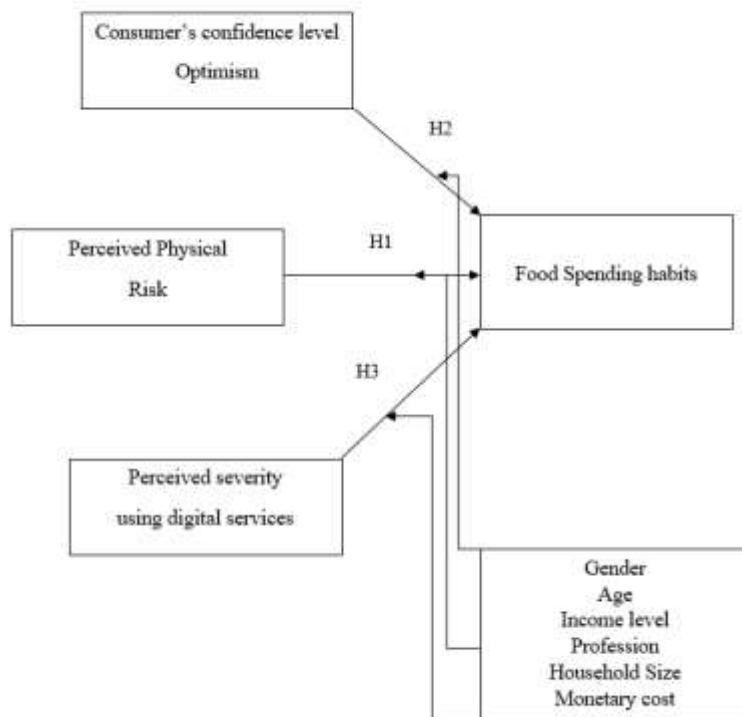


Figure 5: Conceptual framework

### **3.1. Independent variables and hypothesis development**

#### **3.1.1. Consumer physical risk perception**

Fear of getting infected is one of the major consumers' cognitive attitudes during the pandemic. Murray & Schlacter (1990) associated perceived physical risk with the goods and services provided and this risk could inflict harm or danger after the purchasing. During the pandemic, the perceived physical risk appears when a consumer decides to go or not in-store because he is concerned about their health and those of their social group. The higher the risk perception, the more probability to find a way to mitigate that risk by going less to the stores, going online, or stockpiling (Li et al., 2022). Therefore, the perception of physical risk influences the consumer's intention to choose different consumption alternatives.

H1: The physical risk perception positively influences on changes in food spending habits.

#### **3.1.2. Consumer confidence level: Optimism for the Future**

Consumers' optimism for the future economic recovery has been poorly presented. Lack of optimism is the result of the increase in anxiety, stress, and depression in individuals (Zwanka & Buff, 2020). According to Carver & Scheier (2001, p.1), 'Optimistic persons are those with positive expectancies and pessimistic persons are those with negative expectancies for the future'. In the context of Covid-19, Optimism is used as a resource to face the lockdown (Krumm et al., 2020). Affective cognition (e.g., positive attitudes like optimism or negative attitudes such as pessimism) explain consumer irrationality. Consequently, Pessimistic behaviors led to consumer intention of changing their consumption practices even in the post-pandemic period. Optimistic attitudes mean continuity of pre-pandemic habits (i.e., everything will remain equal, and all external influence is forbidden).

H2: Optimism for the future negatively influences on changes in food spending habits.

#### **3.1.3. Consumer Perceived Severity: insecurity using digital services**

Uncertainty and insecurity happen for a lack of knowledge. It was observed in online transactions: consumers may feel insecure at the time of an online transaction, either through ignorance or through fear that their personal data or bank account will be scammed. According to research carried out by Faquih (2022), the fear of buying online can be explained by several reasons: firstly, the unreliability and lack of legitimacy of certain consumers about online sellers. Secondly, the difficulty of guaranteeing the originality of products and services sold

online by unknown sellers. And finally, contactless payment is a high risk perceived by some categories of consumers. In today's society, it is important to adapt to new information and communication technologies, and for this to happen, the creation of a trust is essential. The less confidence there is in using technology, the more stress and insecurity there is in buying online.

H3: Consumer insecurity using digital services negatively influences on changes in food spending habits.

### **3.2. Moderating variables**

Moderator variables are necessary to verify that they affect the relationship between the independent and the dependent variable. They involve firstly the consumer sociodemographic characteristics: Age, education, income level, and number of persons in a household, and secondly, the monetary cost measured by the revenues and savings during the covid-19 pandemic.

### **3.3. Dependent variable**

Changes in consumer habits represent a notable response stemming from both cognitive and affective behaviors. Among the categories of online shopping, non-essential items, and food products, it was observed that food products experienced the highest consumption rate during the pandemic. To assess these shifts in spending habits, we conducted a comparative analysis of food product shopping frequencies between pre-pandemic and post-pandemic periods. This analysis served as our dependent variable.

## 4. METHODOLOGY

### 4.1. Data Collection and Sampling

Data were collected through a survey by researchers from the University of Namur and UCM Province de Namur. In the present study, from a total of 571 participants 280 were excluded because they have not finished one of the parts of the questionnaire concerning the consumption habits and the perception of the covid-19 pandemic. Therefore, 291 participants were included in this project.

The questionnaire is based on five parts: the first three are questions related to consumption habits: food habits, equipment shopping, and entertainment purchasing. Then, the perception of the covid-19 pandemic was asked. And finally, the socio-demographic information of the participants was provided: Gender, Age, income level, education, and number of persons per household. The details of the survey are given in the Annex.

### 4.2. Variables

In this part de we are going to explain the different variables, their constructs, and their scales of measure. Table 2 summarizes the variables used for the analysis.

#### 4.2.1. Perception of the COVID-19 pandemic

This part of the questionnaire measures the participants' perceptions and beliefs due to the covid-19 pandemic. The questions were made under the hypothesis of consumer confidence level (e.g., Optimism), perceived physical risk, and insecurity and uncertainty using digital services. First, consumers' optimism and pessimism were measured by adapting six items from Monzani, et al., (2015), comparing them in the pre-pandemic and post-pandemic periods. Responses were given on a Likert scale that ranges from 1 (Strongly disagree) to 7 (strongly agree).

Table 1: Items of the variable optimism

a) I was optimistic about the future
b) I was expecting that good things would be recovered
c) The future looked bright
d) I was skeptical about the future
e) I was pessimistic about the future
f) I thought that the good moments were left behind us

Table 2: Summary of variables

Factor	Variable	The measurement scale
Consumer Confidence level	Optimism and Pessimism	1(Strongly Disagree) -7 (Strongly Agree)
Perceived Physical Risk	Physical Risk (in-store)	1(Strongly Disagree)-7 (Strongly Agree)
Perceived Severity	Insecurity using digital services	1(Strongly Disagree)-7 (Strongly Agree)
	Frequency of purchasing food Products before the pandemic	1 (less frequently than during the lockdown)-7 (much more frequently than during the lockdown)
Intention of changing food Consumption habits	Frequency of purchase of food products	0(never) - 286(everyday)
	Frequency of purchasing food products after the pandemic	1 (less frequently than during the lockdown)-7 (much more frequently than during the lockdown)
Sociodemographic	Age	< 18
	Gender	1(male)-2(female)
	Profession	1(Student) 2(Homemaker) 3(unemployed) 4(worker) 5(Employee), 6(Senior) 7(Senior executive) 8(Self-employed) 9(Freelance) 10(retired)
	Household Size	1(1 person) 2(2 persons) 3(3 persons) 4(4 persons) 5(5 persons) 6 (More than 5 persons)



	Education	1(Elementary)
		2(High school)
		3(Private school (2-3 years))
		4(University short-term (3 years))
	Income Level	5 Private School long-term (4-5 years)
		6(University long-term (4-5 years))
		7(PHD)
Monetary Cost	Revenues	1(Negatively)- 7(Positively)
	Savings	1(Negatively)- 7(Positively)

The perceived physical risk was evaluated through the consumers' intention of doing their purchasing in-store or using Click&Collect services. To do so, the perceived physical risk was measured by adapting 3 items from González Mieres, Díaz-Martín, & Trespalacios (2006). Responses to these questions were given via a 7-point Likert scale, 1 (Strongly disagree) and 7 (strongly agree).

Table 3: Items of the variable Perceived Physical Risk

a) By choosing to do my shopping in-store, I could be putting myself or my family at risk
b) By choosing to do my shopping in-store, I could harm my health or my family
c) By choosing to do my shopping in-store, I could cause myself discomfort or physical discomfort

And the insecurity/uncertainty concerned the purchasing online for new e-consumers. The items were made under the assumption of insecurity during online transactions. Adopting 4 items from Wu, Chiu, & Chen (2020) measured the insecurity or uncertainty of using digital services. Responses were given through a Likert scale ranging from 1 (Strongly disagree) to 7 (strongly agree).

Table 4: Items of the variable Severity Perceived using digital services

a) I am afraid of using online sales sites, contactless payment, and so on
b) Understanding online sales sites and contactless payment seemed complicated to me
c) I avoid online sales sites and contactless payment because I am not familiarized with it
d) I fear making mistakes using digital services such as online shopping or contactless payment

#### 4.2.2. Shopping food habits (Dependent variable)

Different shopping habits were asked to evaluate the intention of changing the spending habits as consumer response due to the COVID-19 pandemic: Food habits were the one considered for the analysis. To do so, we have compared the frequency of shopping for food products in the pre-pandemic and post-pandemic periods with the frequency of purchasing grocery products during the lockdown. Firstly, the participants were asked the times they do their grocery shopping in the pre-pandemic and post-pandemic periods. The responses were given through Likert scale ranging from 1 (Much less frequently than during the lockdown) to 7 (Much more frequently than during the lockdown). Secondly, we have asked the frequency of shopping grocery products during the lockdown. The responses were given through the frequency a respondent purchased food products, from 0 (never) to 286 (every day).

#### 4.3. Participant's characteristics

To observe whether the sample represents the Belgian population, we compared our sample with the Belgian population, especially in the Walloon region. Regarding socio-demographic variables, we asked the participants of the survey their age, gender, monthly income, occupation, household size, and level of education.

In Belgium, especially Wallonia<sup>7</sup>:

- Women represent 51% of the population.
- The average wage is around 3430 euros.
- The average age is 41.
- The average household size in Wallonia, according to IWEPS<sup>8</sup>, is 2-3 persons: 36.7% are single people. 22.3% are couples without children and 27% are couples with at least one child.

We will now compare these previous data with our sample. As can be seen in Table 6, most of them are in age brackets ranging from 40 to 60. In terms of gender, men represent 53% of respondents. The average net monthly income is greater than 3500€, as the majority of respondents are either self-employed or work as employees. Household size is between 2 and 3 persons: 37.5% of couples, 20.6% of couples with children, and 26.4% of large families. And finally, regarding the level of education, the majority (33.7%) have completed a 2 to 3-year

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<sup>7</sup> <https://statbel.fgov.be/fr/themes/population/structure-de-la-population>

<sup>8</sup> <https://www.iweps.be/indicateur-statistique/nombre-et-taille-des-menages/>

course of higher education; followed by those who have graduated in longer courses (4 to 5 years), who represent 29.2%, and 14.1%, in higher but shorter courses. Although the table considers data at the national level, the Walloon region is the most representative (around 70%).

Table 5: Participants' profile

Demographics	Frequ.	%
<b>Gender</b>		
Male	155	53.26
Female	136	46.74
<b>Age</b>		
<35	38	13
35-39	28	9,6
40-44	30	10,3
45-49	39	13,4
50-54	48	16,5
55-59	38	13,1
60-64	27	9,3
65-69	24	8,2
>70	19	6,5
<b>Occupation</b>		
Self-employed	124	42,6
Employee	76	26,1
Retired	32	11
Senior	15	5,2
Executive Senior	8	2,7
Freelance	27	9,3
Student	4	1,4
Homemaker	2	0,7
Unemployed	1	0,3
Worker	2	0,7
<b>Income (€)</b>		
<1500	18	6,2
1500-3000	82	28,2
3000-4500	100	34,4
4500-6000	66	22,7
>6000	25	8,6
<b>Household Size</b>		
1 person	45	15,5
2 persons	109	37,5
3 persons	60	20,6
4 persons	53	18,2
>5 persons	24	8,2
<b>Education</b>		
Secondary education	48	16,5
Short-cycle education	98	33,7

Graduate	41	14,1
Post-graduate	85	29,2
Doctorate (Ph.D.)	19	6,5

#### 4.4. Validity and Reliability Measurement

The reliability analysis is crucial to give more accuracy and ensures that the data collected from the survey can be trusted. All the items must represent the constructs, in other words, the items must converge towards the same intensity of response. It is also necessary to check for the internal consistency of the scales, ensuring that they accurately represent the underlying concept they are meant to measure.

Firstly, the Explanatory Factor Analysis (EFA) is used to identify latent variables and underlying factors that explain the pattern of the relationships among the observed variables. Thus, three conditions must be fulfilled to verify if the measured constructs accurately represent the expected dimensions:

- The final commonalities are greater than 0.4
- The correlations between the items and factors are greater than 0.5
- The cross-loadings are less than 0.4 in the case where more than one factor is extracted.

Secondly, to verify the internal consistency of the scales, we use the alpha of Cronbach.

$$\alpha = \frac{k}{k-1} \left[ \frac{\sigma_t^2 - \sum_{i=1}^k \sigma_i^2}{\sigma_t^2} \right]$$

K = Number of items used in the measurement scale

$\sigma_i^2$  = variance of scores for item i across all respondents

$\sigma_t^2$  = variance of the total scores across all respondents

The alpha coefficient varies between 0 and 1. A Cronbach's alpha close to 0 ( $\alpha > 0$ ) indicates weakly correlated items, while a Cronbach's alpha close to 1 ( $\alpha < 1$ ) indicates very high item covariances. The majority of researchers or methodologists recommend a minimum Cronbach's alpha coefficient of 0.7 ( $\alpha > 0.7$ ). All coefficients below 0.7 are not acceptable, especially if our goal is to have our items follow the same dimension. In the appendix, we have included all the details and explanations about the factor analysis.

Table 6: Summary of the factor Analysis results

Constructs	Items	Number of items	Factor Loading	Commonalities	Alpha Cronbach
Consumer confidence level	<p>I was optimistic about the future</p> <p>I was expecting that good things would be recovered</p> <p>The future looked bright</p> <p>I was skeptical about the future</p> <p>I was pessimistic about the future</p> <p><del>I thought that the good moments were left behind us</del></p>	5	<p>0.88</p> <p>0.89</p> <p>0.88</p> <p>0.85</p> <p>0.85</p>	<p>0.79</p> <p>0.78</p> <p>0.78</p> <p>0.72</p> <p>0.72</p>	0.94
Perceived Physical risk	<p>1. By choosing to do my shopping in-store, I could be putting myself or my family at risk</p> <p>2. By choosing to do my shopping in-store, I could harm my health or my family</p> <p>3. By choosing to do my shopping in-store, I could cause myself discomfort or physical discomfort</p>	3	<p>0.98</p> <p>0.96</p> <p>0.82</p>	<p>0.92</p> <p>0.96</p> <p>0.67</p>	0.95
Perceived Severity	<p>1. I am afraid of using online sales sites, contactless payment, and so on</p> <p>2. Understanding online sales sites and contactless payment seemed complicated to me</p> <p>3. I avoid online sales sites and contactless payment because I am not familiarized with it</p> <p>4. I fear making mistakes using digital services such as online shopping or contactless payment</p>	4	<p>0.95</p> <p>0.92</p> <p>0.9</p> <p>0.88</p>	<p>0.78</p> <p>0.82</p> <p>0.85</p> <p>0.91</p>	0.96

Changing Grocery spending habits	1.Frequency of food shopping before the pandemic	2	0.42	0.64639	0.70298
	2. Frequency of food shopping after the pandemic		0.42	0.64639	

The factor analysis was developed for each construct and those that do not fulfill one of the conditions mentioned previously, are discarded. The items retained in their measurement scale are those that meet the conditions. Then, the alpha of Cronbach for each construct is greater than 0.7, the scales are therefore consistent.

We used the VARIMAX rotation method to simplify and interpret the factor obtained from the initial factor extraction. In the first variable related to the consumer confidence level (e.g., Optimism), two factors are certainly extracted, possibly due to the last item, which is slightly less correlated with the other 5 items. Condition 3 is not fulfilled because the correlations with the other factors are too big.

## 5. RESULTS

In this part recompile all the analysis and results from the variables described in the conceptual framework.

### 5.1. Descriptive statistics

The variables Optimism, Perceived Physical Risk, and Severity Perceived while using digital services were derived from the items retained after conducting factor analysis. The means and standard deviations were used to distinguish these variables, along with the dependent variable and the moderator's variables.

Table 7: Descriptive statistics

VARIABLE	N	MEAN	Std.Deviation	MIN	MAX
Frequ. Shopping food during the pandemic	125	105,95	85.290	12	286
Frequ. Shopping food before the pandemic	125	4.32	1.090	1	7
Frequ. Shopping food after the pandemic	125	4.19	0.810	1	7
Frequ. Shopping (pre-pandemic-post pandemic) /Frequ.During the pandemic	125	105,13	85.907	12	286
Optimism	294	4,75	1.445	1	7
Perceived Physical Risk	294	2.35	1.528	1	7
Perceived Severity (Technological Risk)	294	2.77	1.848	1	7
Age	291	49.82	13.092	22	75
Gender (Male=1; Female =2)	291	1.47	0.500	1	2
Household Size (From 1 to 6 persons)	291	2.68	1.222	1	6
Monetary cost	291	3.6176	1.25169	1	7

<b>Income level (from 1500€ to 10 000€)</b>	291	3896.91	1776.190	1500	10000
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The dependent variable ranges from 0 (never) to 286 (almost every day), with a mean of 105.95. This mean indicates that consumers engage in food shopping at least twice a week. To assess whether there has been a change in frequency after the pandemic, we compared the instances of respondents having done grocery shopping before and after the pandemic, in relation to the frequency of grocery shopping during the lockdown. The calculations are as follows:  $((\text{post-pandemic} - \text{pre-pandemic}) / \text{pre-pandemic}) * \text{Frequency of food shopping during the lockdown}$ . The resulting mean is 105.13, which indicates that the frequency of shopping for food remains relatively constant and no changes were observed. Regarding the independent variables, the mean optimism score of 4.75 reflects a positive outcome, indicating that the majority of respondents were optimistic. However, the Perceived physical risk has a relatively low mean of 2.35, suggesting that the risk perception during the pandemic was less pronounced than expected. On the other hand, the mean insecurity in using digital services is 2.77, slightly higher than the perceived risk.

An ANOVA test for the non-metric moderator variables using Tukey Post Hoc and correlations for the metric moderator's variables were necessary to analyze the differences in means for each category of respondents. After conducting the ANOVA test, we observed that gender, household size, and profession do have not a significant impact on the intention of changing one of the consumption habits. Concerning age as a metric moderator variable is not highly correlated with the dependent variable ( $p > 0.05$ ). However, income level has a significant impact on the dependent variable ( $p = 0.015$ ): Those with higher income levels are more likely to decide whether to change or not their consumption habits. The analysis of variance has shown differences among the income level categories of respondents, especially those who perceive a salary that ranges from 1500 to 3000€ and 4500 to 6000€ ( $108.413 > 98.379$ ).

Table 8: Summary of means considering the frequency of food shopping among the income level categories

<b>Salary Categories</b>	<b>N</b>	<b>Mean</b>	<b>St. Error</b>
<b>1500-3000</b>	23	108.413	39.128
<b>4500-6000</b>	33	98.379	32.507



## 5.2. Correlation Matrix

The main purpose of the correlation matrix is to detect multicollinearity issues among the explanatory variables. Multicollinearity occurs when two independent variables are highly correlated, and this could make the prediction model less reliable and difficult to interpret

Table 9: Correlation Matrix

Variables	Optimism	Risk physical perceived	Severity perceived Technological risk	Food spending habits
Optimism	1.000	-0.066	0.021	-0.183 (p<0.05)
Risk physical perceived	-0.066	1.000	0.170	0.083
Severity perceived Technological risk	0.021	0.170	1.000	0.190 (p<0.05)
Food spending habits	-0.183	0.083	0.190	1.000

Even though, that the perceived risk is positively correlated with the severity perceived, we accept it as a predictor variable. As for the other variables, Optimism and severity perceived are not highly correlated which means there are no collinearity problems, and we can proceed with the regression analysis.

## 5.3. Regression analysis

In this part, we are going to validate the hypothesis developed in the conceptual framework. Two multiple linear regression models are used to verify the relationships and contribution of each independent variable to the dependent variable. To compare the effect of the explanatory variables on the dependent variable is interesting to standardize the Coefficients. It helps to identify the most influential predictors. The linear regression analysis results are given in Tables 10 and 11 and in the appendix.

Table 10: Regression analysis results of Model 1

Model 1	Standardized Coefficients	R-square	Adjusted R-square
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Intercept			
Perceived severity technological risk	$\beta = 0.190$ $p < 0.05$	0.036	0.028

In the first model, the perceived severity of using digital services has a positive coefficient ( $\beta = 0.190, p < 0.05$ ). Then, Hypothesis 3 is supported: The insecurity of using digital services influences the intention of changing at least one of the consumption habits. The adjusted R-square is pretty low given the data sample and the small number of predictors.

Table 11: Regression analysis results of Model 2

Model 2	Standardized Coefficients	R-square	Adjusted R-square
Intercept			
Perceived severity technological risk	$\beta = 0.181$ $p < 0.05$	0.036	0.028
Optimism	$\beta = -0.174$ $p < 0.05$	0.066	0.051

In the second model, Optimism has a slightly significant impact on the intention of changing one of the consumption habits ( $\beta = -0.174, p < 0.05$ ). The Hypothesis 2 is supported: Optimistic consumers are not likely to change their consumption habits. The adjusted R-square is slightly higher in model 2 compared to model 1: 5.1% of the observations explain the dependent variable. Concerning the Perceived physical risk variable was removed from the predictive models because of its low statistical significance on the dependent variable ( $p > 0.05$ ). Hypothesis 1 is not supported: There is not enough evidence to support that Physical Risk perception explains the changes in consumption habits.

## 5.4. Moderators

Upon examining the impact of the independent variables on the dependent variable, our next step involves scrutinizing the influence of moderators on each independent variable. A moderator variable serves as a third independent factor that affects the intensity of the relationship between the independent variable and the dependent variable (Baron & Kenny, 1986) (Söderlund, 2023). There are three conceivable scenarios: firstly, the Strengthening effect, where the moderator variable amplifies the connection between the independent variable (x) and the dependent variable (y). Secondly, the Buffering effect, in which the moderator

variable mitigates or alleviates adverse outcomes. Lastly, the Antagonistic effect, wherein the moderator variable alters the direction of the relationship between the dependent and independent variables. In the scope of this project, we identified a total of six possible moderator variables: Gender, Age, Income level, Profession, Monetary Cost, and Household Size. By conducting a multiple regression analysis and incorporating the moderator variables (z) along with their interactions with the independent variable (xz), we obtained the outcomes detailed in Tables 12, 13, and 14.

Table 12: Results of the effect of the moderators on the Perceived Physical Risk

Variable	Moderators	Coef.	p-value	R-square after the impact of the moderator
Perceived Physical Risk	Gender	x = 0.0850 z = -0.0965 xz = 0.0397	x = 0.398 z = 0.267 xz = 0.687	0.017
	Age	x = 0.0718 z = 0.0406 xz = 0.0785	x = 0.4760 z = 0.6545 xz = 0.4132	0.08
	Income Level	x = 0.1024 z = 0.1929 xz = -0.0285	x = 0.297 z = 0.013 xz = 0.7698	0.056
	Profession	x = 0.1164 z = 0.0716 xz = -0.1199	x = 0.2468 z = 0.4649 xz = 0.2303	0.011
	Monetary Cost	x = 0.0565 z = 0.2301 xz = -0.0233	x = 0.3721 z = 0.1442 xz = 0.7152	0.0412
	Household Size	x = 0.0554 z = -0.1531 xz = 0.0381	x = 0.3885 z = 0.3534 xz = 0.5359	0.0149

The findings presented in Table 12 indicate that each moderator does not exert a significant influence on the relationship between the independent and dependent variables. Notably, only the income level (z) demonstrates a noteworthy and statistically significant impact at a confidence level of 0.10 ( $\beta = 0.1929$ ,  $p = 0.013$ ) on the intention to alter food spending habits. This suggests that individuals with substantially higher income levels are the ones more likely to decide whether to modify their shopping behaviors. It's worth mentioning that no significant moderating effects were observed with the Perceived physical risk variable.

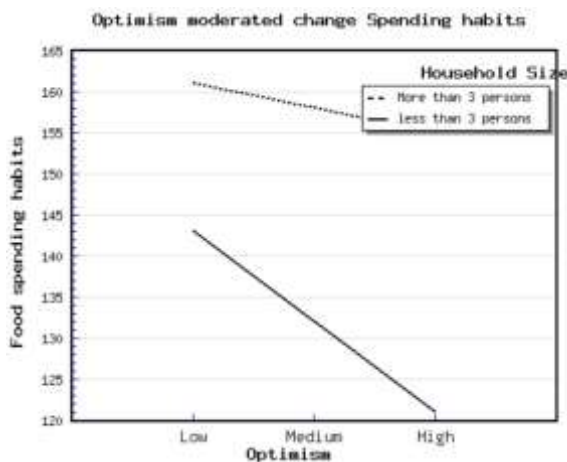
Table 13: Results of the effect of the moderators on the Optimism variable

Variable	Moderators	Coef.	p-value	R-square after the impact of the moderator
	Gender	x = -0.1972	x = 0.029	

Optimism		$z = -0.1256$ $xz = -0.1048$	$z = 0.161$ $xz = 0.2362$	0.060
	Age	$x = -0.1887$ $z = 0.0555$ $xz = 0.0220$	$x = 0.038$ $z = 0.527$ $xz = 0.8168$	0.037
	Income Level	$x = -0.1727$ $z = 0.1866$ $xz = 0.0237$	$x = 0.05$ $z = 0.019$ $xz = 0.8070$	0.076
	Profession	$x = -0.1655$ $z = 0.0744$ $xz = -0.615$	$x = 0.041$ $z = 0.474$ $xz = 0.5614$	0.042
	Monetary Cost	$x = -0.1906$ $z = 0.1923$ $xz = 0.0399$	$x = 0.032$ $z = 0.031$ $xz = 0.6716$	0.073
	Household Size	$x = -0.2016$ $z = -0.0612$ $xz = 0.1784$	$x = 0.0231$ $z = 0.4693$ $xz = 0.0564$	0.0714

The findings extracted from Table 13 reveal that household size exhibits a favorable correlation with Optimism at a significance level of 10% ( $\beta = 0.1784$ ,  $p = 0.0564$ ). This suggests that an increased number of individuals living within a household corresponds to a higher level of optimism. As it is shown in figure 6, a household size composed of more than 3 persons has more probability to not change spending habits. Thus, the moderator variable household size ( $z$ ) amplifies the connection between optimism and the intention of changing spending habits. It's plausible that, for instance, family members provide mutual support during circumstances like pandemic-related lockdowns, fostering an environment of heightened hope and optimism.

Figure 6: Interaction effects between Optimism and the household size



Shifting the focus to the moderator variable, Monetary cost manifests a noteworthy impact on the dependent variable with a significance level of 10% ( $\beta = 0.1923$ ,  $p = 0.031$ ). However,

no interactions were observed with Optimism. The decision to modify consumption habits is influenced by savings and earnings.

And finally, Income level has a positive impact on the dependent variable, at a significance level of 10% ( $\beta = 0.1866, p = 0.019$ ) without any interactions with the Optimism variable.

Table 14: Results of the moderator's effect on the Perceived Severity (Technological risk) variable

Variable	Moderators	Coeft.	p-value	R-square after the impact of the moderator
Perceived severity technological Risk	Gender	x = 0.2188 z = -0.1063 xz = 0.0072	x = 0.036 z = 0.2384 xz = 0.9443	0.0474
	Age	x = 0.1870 z = 0.0248 xz = 0.1164	x = 0.0793 z = 0.7835 xz = 0.2415	0.0472
	Income Level	x = 0.1654 z = 0.1663 xz = 0.1386	x = 0.1058 z = 0.0342 xz = 0.1117	0.0961
	Profession	x = 0.2284 z = 0.0929 xz = 0.0203	x = 0.0296 z = 0.3521 xz = 0.8714	0.0441
	Monetary Cost	x = 0.2431 z = 0.2067 xz = -0.0348	x = 0.0179 z = 0.0219 xz = 0.7391	0.0729
	Household Size	x = 0.224 z = -0.0241 xz = 0.1344	x = 0.0318 z = 0.7781 xz = 0.1958	0.0519

The findings presented in Table 14 are indifferent to the previous independent variables. First, the Monetary Cost as moderator has a significant impact at a significance level of 10% on the intention of changing consumption habits ( $\beta = 0.2067, p = 0.0219$ ). Though, no interactions with the perceived severity using digital services were observed. The R-square is slightly better (7.29%).

The income level has a positive impact, at a significance level of 10% on the intention of changing consumption habits ( $\beta = 0.1663, p = 0.031$ ), any interaction with perceived severity was observed. The R-square is 9.61%.

## **6 Implications and Conclusion**

### **6.1. Theoretical implications**

The findings of the study offer several theoretical contributions. Investigating consumer behavior during a global crisis was a central research focus. Numerous researchers and scholars have utilized the S-O-R framework to examine whether psychological factors account for the diverse consumer responses. However, none have anticipated whether these responses will endure beyond the resolution of the COVID-19 pandemic. This project places specific emphasis on consumer cognitive behavior, primarily provoked by external factors stemming from the fear of the pandemic. These factors include perceived physical risk, the consumer confidence level measured through Optimism, and the Perceived severity of using digital services. These consumer perceptions may elucidate the changes in consumer habits during and after the COVID-19 pandemic, particularly in the context of grocery shopping. However, the short-lived impact of Covid-19 has made it challenging to ascertain whether these consumption changes will endure in the long term. Future research would find it intriguing to delve beyond consumer perceptions and explore additional factors that could explain these trends.

The findings corroborate the hypothesis that consumers with elevated levels of optimism or a heightened perception of severity possess the ability to decide whether to adapt their consumption habits or uphold existing ones. If their roles were reversed (i.e., exhibiting greater pessimism, significantly elevated perceived risk perception, or diminished perceived severity in utilizing digital services), then we could discuss real changes in consumer habits. As suggested by Steth (2020) existing habits are often merely modified, creating the illusion of substantial changes in consumer behavior, such as in the case of online food shopping.

### **6.2. Practical Implications**

The proposed project can be used for examining the factors that influence consumer behavior regarding unpredictable events. Situations such as the pandemic are not easy to control, though managers must be prepared for these types of events, they must consider the consumer perception, and preserve their hope and optimism for future recovery. Making loyalty programs and trust are key to success. Nowadays it is important to adopt business strategies: Digital transformation by using IA and enhancing the customer experience; E-retailing, strengthening online sales channels. Establish Supply chain resilience by reducing dependency on individual sources and making contingency plans in disrupted environments;

Brand messaging to reflect empathy, solidarity, and wellness. These strategies will be useful for future possible macro events.

### **6.3. Limitations**

While this project offers both theoretical and practical implications, it is important to acknowledge certain limitations in this thesis. Firstly, variables like perceived risk have not demonstrated a significant impact on the dependent variable. Consequently, future research could explore the inclusion of other factors that may contribute to an understanding of changes in spending habits. Secondly, the scope of the dependent variable under study should be addressed. In this project, our focus is directed towards food shopping habits, primarily because it has been regarded as a significant subject by numerous researchers and scholars during the pandemic. Nonetheless, subjects of interest such as online streaming and other digital services could also hold essential relevance due to the progression of technology in society. Thirdly, the methodology. The utilization of multiple regression to analyze the survey data did not yield sufficient evidence to elucidate the intricacies of spending habits. Alternatives such as Structural Equation Modeling (SEM) or non-parametric tests could be contemplated for future research endeavors.

### **6.4 Conclusion**

Covid-19 has instilled insecurity and fear in individuals from the outset. Common consumer responses such as panic buying, stockpiling, and even shifts in consumption habits were prevalent during the pandemic. Negative emotions often resulted in undesirable outcomes, such as cart abandonment. However, this project yields substantial results indicating that individuals are displaying signs of hope and optimism for future recovery while maintaining their pre-pandemic habits. In the realm of digital services, it's natural for new e-consumers to have initial doubts due to their lack of knowledge and experience. Over time, however, they will become adept at navigating online shopping and utilizing digital platforms effectively. The findings of this study have not revealed significant changes in consumption habits. Consequently, it appears that old habits persist unchanged.

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# ANNEXE

## ANNEXE

### survey

**UCM indépendants & unis** **UNIVERSITÉ DE NAMUR**

Enquête UCM-Namur : Covid19 et comportements de consommation

Aspects général de la crise : Préoccupations

\* 126. Dans quelle mesure êtes-vous d'accord avec les affirmations suivantes (1=Pas du tout d'accord...7 =Tout à fait d'accord).

Avant la pandémie, comment vous sentiez-vous par rapport à l'avenir :

	1 : Pas du tout d'accord	2	3	4 : Ni en accord, ni en désaccord	5	6	7 : Tout à fait d'accord
J'étais optimiste sur l'avenir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Je pensais que les bonnes choses allaient arriver	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J'étais vraiment rassuré	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J'étais sceptique à propos de l'avenir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J'étais pessimiste à propos de l'avenir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Je pensais que les bons moments allaient derrière moi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 127. Dans quelle mesure êtes-vous d'accord avec les affirmations suivantes (1=Pas du tout d'accord...7 =Tout à fait d'accord).

Aujourd'hui, ...

	1 : Pas du tout d'accord	2	3	4 : Ni en accord, ni en désaccord	5	6	7 : Tout à fait d'accord
Je suis optimiste sur l'avenir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Je pense que de bonnes choses vont arriver	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J'étais vraiment rassuré	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Je suis sceptique à propos de l'avenir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Je suis pessimiste à propos de l'avenir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Je pense que les bons moments sont derrière moi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**UCM indépendants & unis** **UNIVERSITÉ DE NAMUR**

Enquête UCM-Namur : Covid19 et comportements de consommation

Risques perçus

\* 128. Dans quelle mesure êtes-vous d'accord avec les affirmations suivantes (1=Pas du tout d'accord...7 =Tout à fait d'accord).

En choisissant de faire mes courses en magasin, je crois que je pourrais...

	1 : Pas du tout d'accord	2	3	4 : Ni en accord, ni en désaccord	5	6	7 : Tout à fait d'accord
Me rendre en danger, moi ou un membre de ma famille	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Causer du tort à moi-même ou à un membre de ma famille	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Me rendre en mauvaise ou en détresse physique	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 129. Dans quelle mesure êtes-vous d'accord avec les affirmations suivantes (1=Pas du tout d'accord...7 =Tout à fait d'accord).

En choisissant l'enlèvement en magasin (click and collect) ou la livraison, je crois que je pourrais...

	1 : Pas du tout d'accord	2	3	4 : Ni en accord, ni en désaccord	5	6	7 : Tout à fait d'accord
Me rendre en danger, moi ou un membre de ma famille	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Causer du tort à moi-même ou à un membre de ma famille	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Me rendre en mauvaise ou en détresse physique	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**UCM indépendants & unis** **UNIVERSITÉ DE NAMUR**

Enquête UCM-Namur : Covid19 et comportements de consommation

Relation à la technologie

\* 131. Dans quelle mesure êtes-vous d'accord avec les affirmations suivantes (1=Pas du tout d'accord...7 =Tout à fait d'accord).

Avant la pandémie, ...

	1 : Pas du tout d'accord	2	3	4 : Ni en accord, ni en désaccord	5	6	7 : Tout à fait d'accord
J'avais peur d'utiliser les sites de ventes en ligne, le paiement sans contact, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comprendre les sites de ventes en ligne, le paiement sans contact et autres me semblait compliqué	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J'évitais les sites de ventes en ligne, le paiement sans contact et autres parce que cela me semblait pas facile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J'évitais à éviter les sites de ventes en ligne, le paiement sans contact et autres parce que je ne pouvais pas comprendre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 132. Dans quelle mesure êtes-vous d'accord avec les affirmations suivantes (1=Pas du tout d'accord... 7=Tout à fait d'accord) ?

Aujourd'hui, ...

	1 : Pas du tout d'accord	2	3	4 : Ni ni d'accord, ni en désaccord	5	6	7 : Tout à fait d'accord
Je pense d'utiliser les offres de services en ligne, le paiement sans contact, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compenser les sites de ventes en ligne, le paiement sans contact et autres que vous ne pouvez pas visiter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Éviter les sites de ventes en ligne, le paiement sans contact et autres que vous ne pouvez pas visiter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Éviter d'utiliser les sites de ventes en ligne, le paiement sans contact et autres que vous ne pouvez pas visiter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 133. Pouvez-vous vous indiquer à quelle fréquence vous utilisez votre smartphone pour les situations suivantes ?

Utilise mon smartphone pour...

	Jamais	Rarement	Parfois	Souvent
...surfer sur Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...télécharger des applications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...jouer à des jeux	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...afficher des paiements sans contact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...consultez mes emails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...téléphoner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...prendre des photos/vidéos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...écouter de la musique	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...regarder des vidéos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...envoyer des messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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**UCM indépendants & unis**

**UNIVERSITÉ DE NAMUR**

Enquête UCM-UNamur : Covid19 et comportements de consommation

Profil sociodémographique

\* 136. Quel est votre genre ?

☐ Homme

☐ Femme

☐ Autre (veuillez préciser) \_\_\_\_\_

\* 137. Quel âge avez-vous ?

☐ Entre 18 et 19 ans

☐ Entre 20 et 24 ans

☐ Entre 25 et 29 ans

☐ Entre 30 et 34 ans

☐ Entre 35 et 39 ans

☐ Entre 40 et 44 ans

☐ Entre 45 et 49 ans

☐ Entre 50 et 54 ans

☐ Entre 55 et 59 ans

☐ Entre 60 et 64 ans

☐ Entre 65 et 69 ans

☐ Entre 70 et 74 ans

☐ 75 ans et plus

138. De combien de personnes vivent sous le même toit que vous, y compris vous ?

☐ 1 personne

☐ 2 personnes

☐ 3 personnes

☐ 4 personnes

☐ 5 personnes

☐ 6 personnes et plus

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139. Veuillez nous indiquer le nombre d'enfants qui font partie de votre ménage selon les tranches d'âge suivantes :

	0	1	2	3	4 et plus
Moins de 5 ans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entre 5 et 9 ans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entre 10 et 14 ans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entre 15 et 19 ans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entre 20 et 24 ans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25 ans et plus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 140. Quel est votre diplôme le plus élevé ?

☐ Primaire

☐ Secondaire

☐ Haute école type long (3-5 ans)

☐ Université de type long (3-5 ans)

☐ Université de type court (1-2 ans)

☐ Autre (veuillez préciser) \_\_\_\_\_

\* 141. Quelle est votre profession ?

☐ Étudiant

☐ Personne au foyer

☐ Sans emploi

☐ Cadre

☐ Ouvrier

☐ Employé

☐ Cadre supérieur

☐ Indépendant

☐ Profession libérale

☐ Retraité

☐ Autre (veuillez préciser) \_\_\_\_\_

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\* 142. Quelle est la profession de votre conjoint ?

☐ Pas de conjoint

☐ Étudiant

☐ Personne au foyer

☐ Sans emploi

☐ Ouvrier

☐ Employé

☐ Cadre

☐ Cadre supérieur

☐ Indépendant

☐ Profession libérale

☐ Retraité

☐ Autre (veuillez préciser) \_\_\_\_\_

\* 143. Dans quelle tranche se situe le revenu mensuel net de votre ménage ?

☐ Moins de 1.000 euros

☐ Entre 1.000 et 2.000 euros

☐ Entre 2.000 et 3.000 euros

☐ Entre 3.000 et 4.000 euros

☐ Entre 4.000 et 5.000 euros

☐ Entre 5.000 et 6.000 euros

☐ Entre 6.000 et 7.000 euros

☐ Entre 7.000 et 8.000 euros

☐ Entre 8.000 et 9.000 euros

☐ Entre 9.000 et 10.000 euros

☐ Plus de 10.000 euros

\* 144. Dans quelle mesure êtes-vous que votre ménage a été impacté par la crise de la covid-19, selon les éléments suivants ?

	Très négativement	Négativement	Positivement	Très positivement
Revenus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Épargne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 145. Dans quel environnement habitez-vous ?

☐ Dans un village à la campagne

☐ Semi-urbain/urbain (entre deux villes ou à l'extérieur de la ville)

☐ Urbain (centre d'une grande ville ou périphérie proche)

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\* 6. Pendant le confinement, à quelle fréquence avez-vous fait vos achats de produits alimentaires pour les propositions suivantes ?

	Jamais	2 à 3 fois/an	1 fois/mois	1 fois/15 jours	1 fois/semaine	2 à 3 fois/semaine	Tous les jours ou presque
Achats destinés à la préparation de mes repas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Achats de plats préparés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 8. Avant le confinement, à quelle fréquence faisiez-vous vos achats de produits alimentaires ?  
(1=Beaucoup moins fréquemment ... 7=Beaucoup plus fréquemment)

	1 : Beaucoup moins fréquemment que pendant le confinement	2	3	4 : Ni moins fréquemment ni plus fréquemment que pendant le confinement	5	6	7 : Beaucoup plus fréquemment que pendant le confinement
Achats destinés à la préparation de mes repas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Achats de plats préparés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 10. Après le confinement, à quelle fréquence comptez-vous faire vos achats de produits alimentaires ?  
(1=Beaucoup moins fréquemment ... 7=Beaucoup plus fréquemment)

	1 : Beaucoup moins fréquemment que pendant le confinement	2	3	4 : Ni moins fréquemment ni plus fréquemment que pendant le confinement	5	6	7 : Beaucoup plus fréquemment que pendant le confinement
Achats destinés à la préparation de mes repas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Achats de plats préparés	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## FACTOR ANALYSIS

### The FACTOR Procedure

Input Data Type	Raw Data
Number of Records Read	294
Number of Records Used	294
N for Significance Tests	294

Means and Standard Deviations from 294 Observations		
Variable	Mean	Std Dev

<b>Question12601</b>	4.8367347	1.5480509
<b>Question12602</b>	4.7653061	1.5509615
<b>Question12603</b>	4.4523810	1.6050617
<b>Question12604</b>	4.6292517	1.6694284
<b>Question12605</b>	5.0306122	1.6572568

<b>Correlations</b>						
		<b>Question12601</b>	<b>Question12602</b>	<b>Question12603</b>	<b>Question12604</b>	<b>Question12605</b>
<b>Question12601</b>	Question12601	1.00000	0.84541	0.81002	0.69888	0.73496
<b>Question12602</b>	Question12602	0.84541	1.00000	0.81056	0.70049	0.72647
<b>Question12603</b>	Question12603	0.81002	0.81056	1.00000	0.75953	0.70816
<b>Question12604</b>	Question12604	0.69888	0.70049	0.75953	1.00000	0.81336
<b>Question12605</b>	Question12605	0.73496	0.72647	0.70816	0.81336	1.00000

**The FACTOR Procedure**  
**Initial Factor Method: Principal Factors**

<b>Partial Correlations Controlling all other Variables</b>						
		<b>Question12601</b>	<b>Question12602</b>	<b>Question12603</b>	<b>Question12604</b>	<b>Question12605</b>
<b>Question12601</b>	Question12601	1.00000	0.47463	0.32055	-0.02341	0.21209
<b>Question12602</b>	Question12602	0.47463	1.00000	0.32054	0.01294	0.15861
<b>Question12603</b>	Question12603	0.32055	0.32054	1.00000	0.35495	-0.05250
<b>Question12604</b>	Question12604	-0.02341	0.01294	0.35495	1.00000	0.56313
<b>Question12605</b>	Question12605	0.21209	0.15861	-0.05250	0.56313	1.00000

<b>Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.85988749</b>				
<b>Question12601</b>	<b>Question12602</b>	<b>Question12603</b>	<b>Question12604</b>	<b>Question12605</b>
0.86529038	0.87120776	0.87737587	0.83323546	0.85119696

**The FACTOR Procedure**  
**Initial Factor Method: Principal Factors**

<b>Prior Communality Estimates: SMC</b>				
<b>Question12601</b>	<b>Question12602</b>	<b>Question12603</b>	<b>Question12604</b>	<b>Question12605</b>
0.77413768	0.77039828	0.75708565	0.72927656	0.72290976

<b>Eigenvalues of the Reduced Correlation Matrix: Total = 3.75380792 Average = 0.75076158</b>				
	<b>Eigenvalue</b>	<b>Difference</b>	<b>Proportion</b>	<b>Cumulative</b>
<b>1</b>	3.79540213	3.63438833	1.0111	1.0111
<b>2</b>	0.16101380	0.17386844	0.0429	1.0540
<b>3</b>	-.01285464	0.06030449	-0.0034	1.0505
<b>4</b>	-.07315913	0.04343512	-0.0195	1.0311
<b>5</b>	-.11659425		-0.0311	1.0000

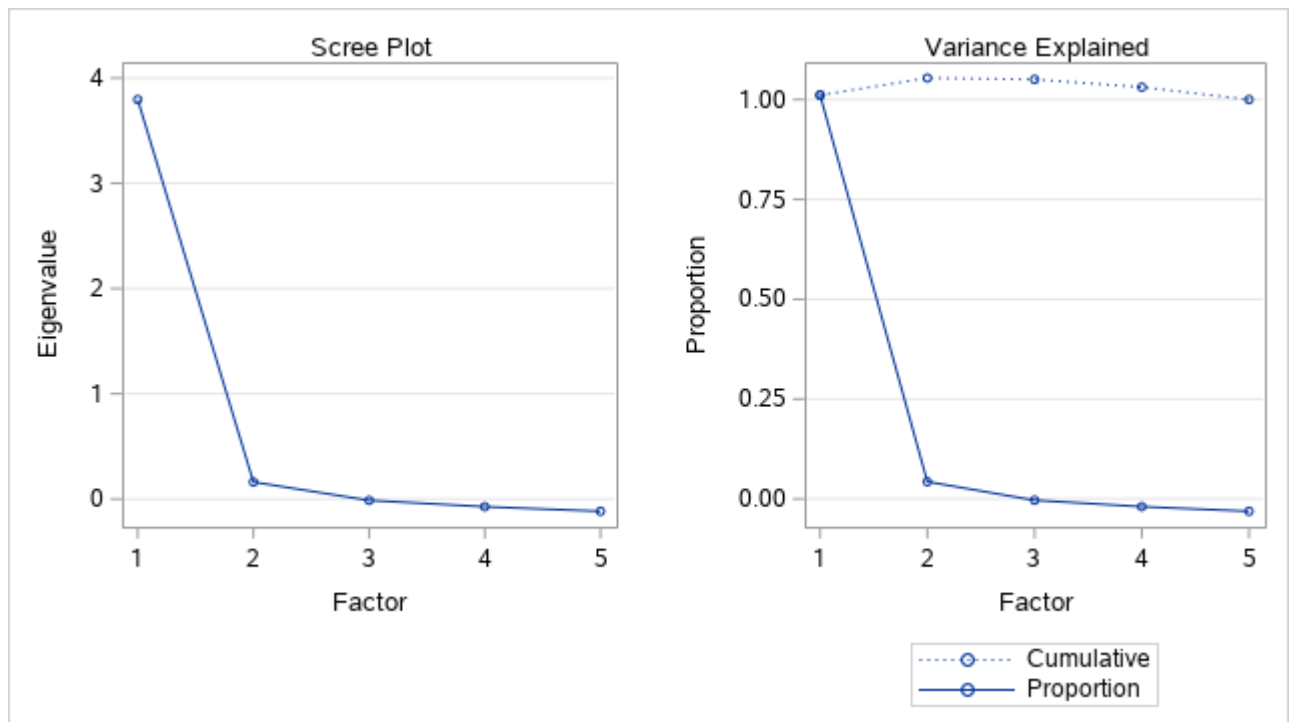
<b>Eigenvectors</b>
---------------------

		<b>1</b>
<b>Question12601</b>	Question12601	0.45567
<b>Question12602</b>	Question12602	0.45451
<b>Question12603</b>	Question12603	0.45336
<b>Question12604</b>	Question12604	0.43575
<b>Question12605</b>	Question12605	0.43631

**1 factor will be retained by the PRPORTION criterion**

<b>Factor Pattern</b>		
		<b>Factor1</b>
<b>Question12601</b>	Question12601	0.88772
<b>Question12602</b>	Question12602	0.88548
<b>Question12603</b>	Question12603	0.88323
<b>Question12605</b>	Question12605	0.85001
<b>Question12604</b>	Question12604	0.84892

<b>Variance Explained by Each Factor</b>
<b>Factor1</b>
3.7954021

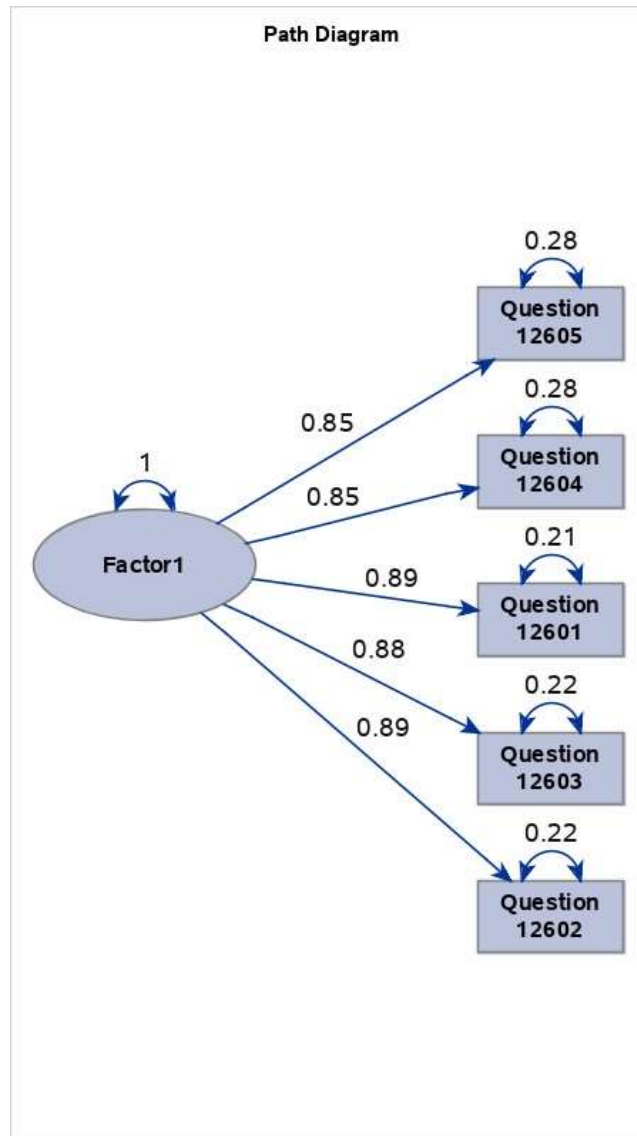


Final Communality Estimates: Total = 3.795402				
Question12601	Question12602	Question12603	Question12604	Question12605
0.78805462	0.78406866	0.78009603	0.72065858	0.72252425

The FACTOR  
Procedure Rotation  
Method: Varimax

Note: Rotation not possible with 1 factor.

Rotation Method: Varimax



<b>Input Data Type</b>	Raw Data
<b>Number of Records Read</b>	296
<b>Number of Records Used</b>	296
<b>N for Significance Tests</b>	296

<b>Means and Standard Deviations from 296 Observations</b>		
<b>Variable</b>	<b>Mean</b>	<b>Std Dev</b>
<b>Je suis optimiste sur l'avenir</b>	3.9290541	1.7187995
<b>Je pense que de bonnes choses vont arriver</b>	4.1283784	1.6945792
<b>L'avenir semble radieux</b>	3.4729730	1.6486088
<b>Je suis sceptique à propos de l'avenir</b>	3.8479730	1.7833113
<b>Je suis pessimiste à propos de l'avenir</b>	4.2229730	1.7843802

<b>Correlations</b>						
		<b>Je suis optimiste sur l'avenir</b>	<b>Je pense que de bonnes choses vont arriver</b>	<b>L'avenir semble radieux</b>	<b>Je suis sceptique à propos de l'avenir</b>	<b>Je suis pessimiste à propos de l'avenir</b>
<b>Je suis optimiste sur l'avenir</b>	Je suis optimiste sur l'avenir	1.00000	0.87369	0.82655	0.68988	0.77775
<b>Je pense que de bonnes choses vont arriver</b>	Je pense que de bonnes choses vont arriver	0.87369	1.00000	0.82028	0.64699	0.73488
<b>L'avenir semble radieux</b>	L'avenir semble radieux	0.82655	0.82028	1.00000	0.71404	0.72456
<b>Je suis sceptique à propos de l'avenir</b>	Je suis sceptique à propos de l'avenir(inv)	0.68988	0.64699	0.71404	1.00000	0.77556
<b>Je suis pessimiste à propos de l'avenir</b>	Je suis pessimiste à propos de l'avenir(inv)	0.77775	0.73488	0.72456	0.77556	1.00000

#### Initial Factor Method: Principal Factors

<b>Partial Correlations Controlling all other Variables</b>						
		<b>Je suis optimiste sur l'avenir</b>	<b>Je pense que de bonnes choses vont arriver</b>	<b>L'avenir semble radieux</b>	<b>Je suis sceptique à propos de l'avenir</b>	<b>Je suis pessimiste à propos de l'avenir</b>
<b>Je suis optimiste sur l'avenir</b>	Je suis optimiste sur l'avenir	1.00000	0.53591	0.28286	0.04021	0.26711
<b>Je pense que de bonnes choses vont arriver</b>	Je pense que de bonnes choses vont arriver	0.53591	1.00000	0.33418	-0.06190	0.12450
<b>L'avenir semble radieux</b>	L'avenir semble radieux	0.28286	0.33418	1.00000	0.28388	0.01190
<b>Je suis sceptique à propos de l'avenir</b>	Je suis sceptique à propos de l'avenir(inv)	0.04021	-0.06190	0.28388	1.00000	0.49041
<b>Je suis pessimiste à propos de l'avenir</b>	Je suis pessimiste à propos de l'avenir(inv)	0.26711	0.12450	0.01190	0.49041	1.00000

#### Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.86655645

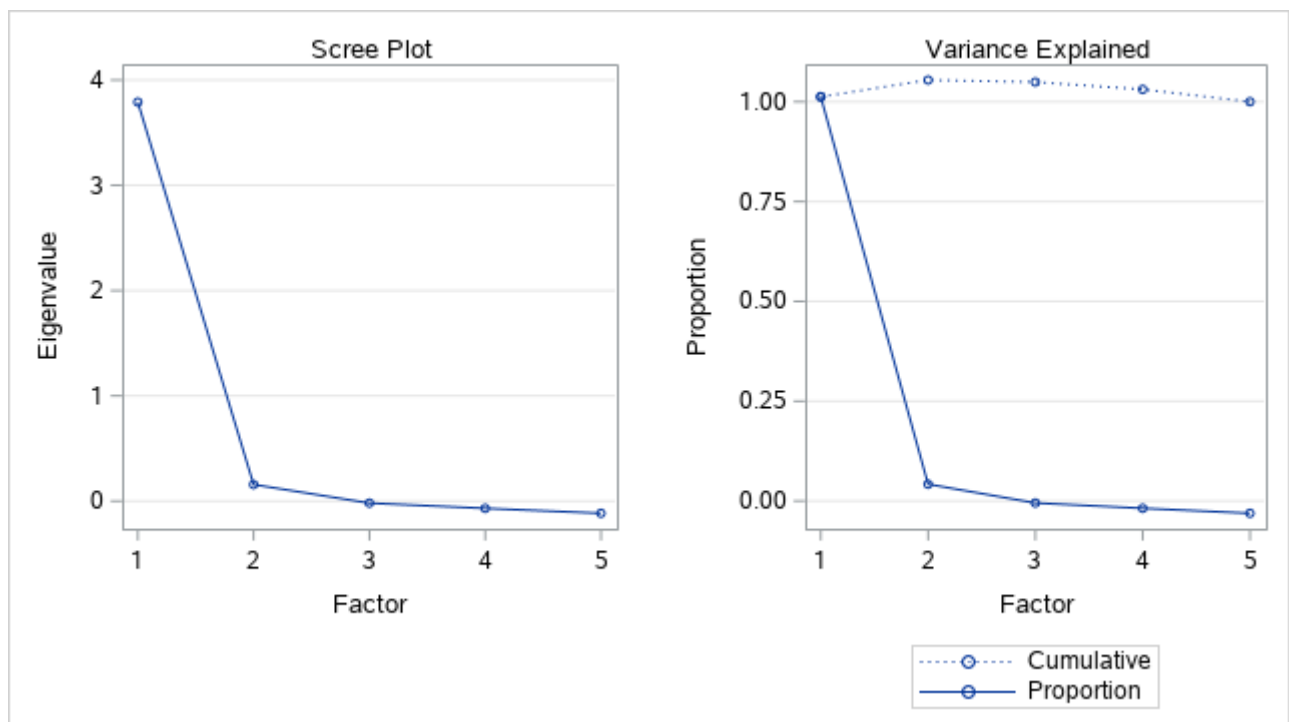
<b>Je suis optimiste sur l'avenir</b>	<b>Je pense que de bonnes choses vont arriver</b>	<b>L'avenir semble radieux</b>	<b>Je suis sceptique à propos de l'avenir</b>	<b>Je suis pessimiste à propos de l'avenir</b>
0.8516685 1	0.8513321 7	0.8977143 4	0.8599995 8	0.8739892 9

# Initial Factor Method: Principal Factors

Prior Communality Estimates: SMC				
Je suis optimiste sur l'avenir	Je pense que de bonnes choses vo	L'avenir semble radieux	Je suis sceptique à propos de l	Je suis pessimiste à propos de
0.8221992 6	0.7969209 3	0.7544353 0	0.6515603 8	0.7192543 0

Eigenvalues of the Reduced Correlation Matrix: Total = 3.74437017 Average = 0.74887403				
	Eigenvalue	Difference	Proportion	Cumulative
1	3.79069464	3.63357711	1.0124	1.0124
2	0.15711753	0.17607860	0.0420	1.0543
3	-.01896108	0.04984358	-0.0051	1.0493
4	-.06880465	0.04687162	-0.0184	1.0309
5	-.11567628		-0.0309	1.0000

1 factor will be retained by the PROPORTION criterion.



Eigenvectors		
		1
Je suis optimiste sur l'avenir	Je suis optimiste sur l'avenir	0.47175
Je pense que de bonnes choses vo	Je pense que de bonnes choses vont arriver	0.45851
L'avenir semble radieux	L'avenir semble radieux	0.45364
Je suis sceptique à propos de l	Je suis sceptique à propos de l'avenir(inv)	0.41000
Je suis pessimiste à propos de	Je suis pessimiste à propos de l'avenir(inv)	0.43970

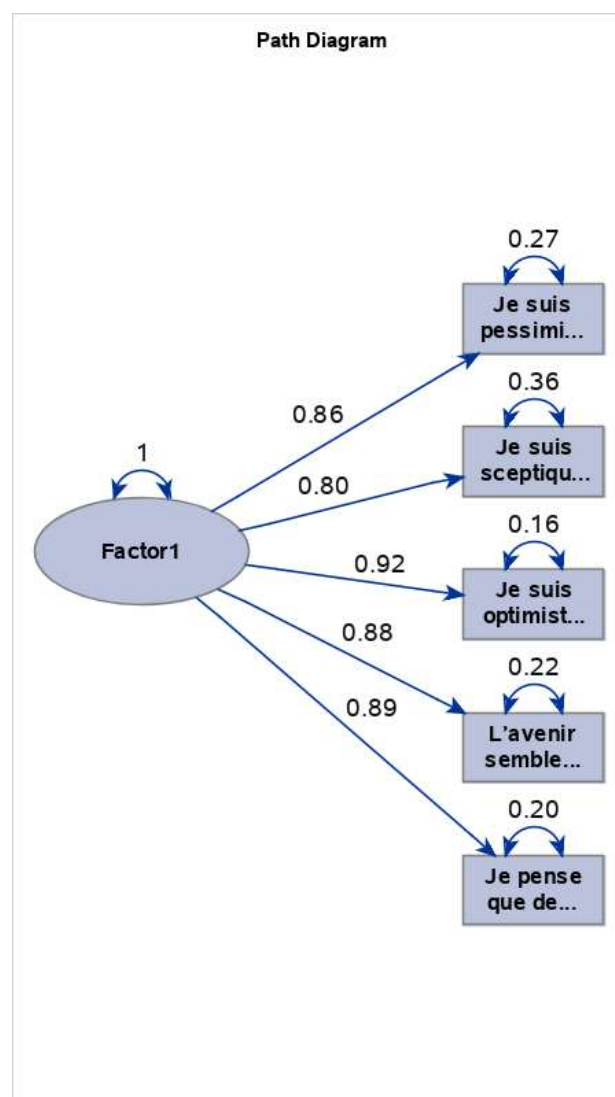
Factor Pattern		
		Factor1
Je suis optimiste sur l'avenir	Je suis optimiste sur l'avenir	0.91848
Je pense que de bonnes choses vo	Je pense que de bonnes choses vont arriver	0.89270
L'avenir semble radieux	L'avenir semble radieux	0.88323
Je suis pessimiste à propos de	Je suis pessimiste à propos de l'avenir(inv)	0.85609
Je suis sceptique à propos de l	Je suis sceptique à propos de l'avenir(inv)	0.79825

Variance Explained by Each Factor
Factor1
3.7906946

Final Communality Estimates: Total = 3.790695				
Je suis optimiste sur l'avenir	Je pense que de bonnes choses vo	L'avenir semble radieux	Je suis sceptique à propos de l	Je suis pessimiste à propos de
0.84360206	0.79691232	0.78008950	0.63720447	0.73288629

Rotation Method: Varimax

Note: Rotation not possible with 1 factor.





	Raw Data
Number of Records Read	294
Number of Records Used	294
N for Significance Tests	294

Means and Standard Deviations from 294 Observations		
Variable	Mean	Std Dev
Enchoisissantdefairemescoursesen	2.4795918	1.6517418
Enchoisissantdefairemescourses_1	2.4387755	1.6486606
Enchoisissantdefairemescourses_2	2.1156463	1.5234997

Correlations				
		Enchoisissantdefairemescoursesen	Enchoisissantdefairemescourses_1	Enchoisissantdefairemescourses_2
Enchoisissantdefairemescoursesen	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais memet	1.00000	0.96020	0.77131
Enchoisissantdefairemescourses_1	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais cause	0.96020	1.00000	0.81947
Enchoisissantdefairemescourses_2	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais mecau	0.77131	0.81947	1.00000

### Initial Factor Method: Principal Factors

Partial Correlations Controlling all other Variables				
		Enchoisissantdefairemescoursesen	Enchoisissantdefairemescourses_1	Enchoisissantdefairemescourses_2
Enchoisissantdefairemescoursesen	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais memet	1.00000	0.89958	-0.09717
Enchoisissantdefairemescourses_1	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais cause	0.89958	1.00000	0.44364
Enchoisissantdefairemescourses_2	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais mecau	-0.09717	0.44364	1.00000

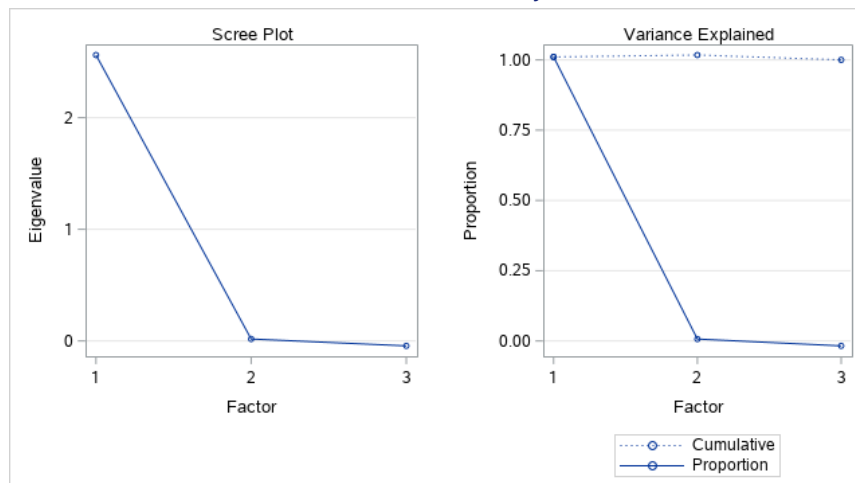
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.68304713		
Enchoisissantdefairemescoursesen	Enchoisissantdefairemescourses_1	Enchoisissantdefairemescourses_2
0.64947372	0.61299381	0.85994810

### Initial Factor Method: Principal Factors

Prior Communality Estimates: SMC		
Enchoisissantdefairemescoursesen	Enchoisissantdefairemescourses_1	Enchoisissantdefairemescourses_2
0.92272590	0.93734271	0.67463828

Eigenvalues of the Reduced Correlation Matrix: Total = 2.53470689 Average = 0.8449023				
	Eigenvalue	Difference	Proportion	Cumulative
1	2.56121210	2.54373570	1.0105	1.0105
2	0.01747639	0.06145800	0.0069	1.0174
3	-.04398160		-0.0174	1.0000

1 factor will be retained by the



PROPORTION criterion.

Eigenvectors		
		1
Enchoisissantdefairemescoursesen	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais memet	0.60079
Enchoisissantdefairemescourses_1	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais cause	0.61374
Enchoisissantdefairemescourses_2	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais mecau	0.51222

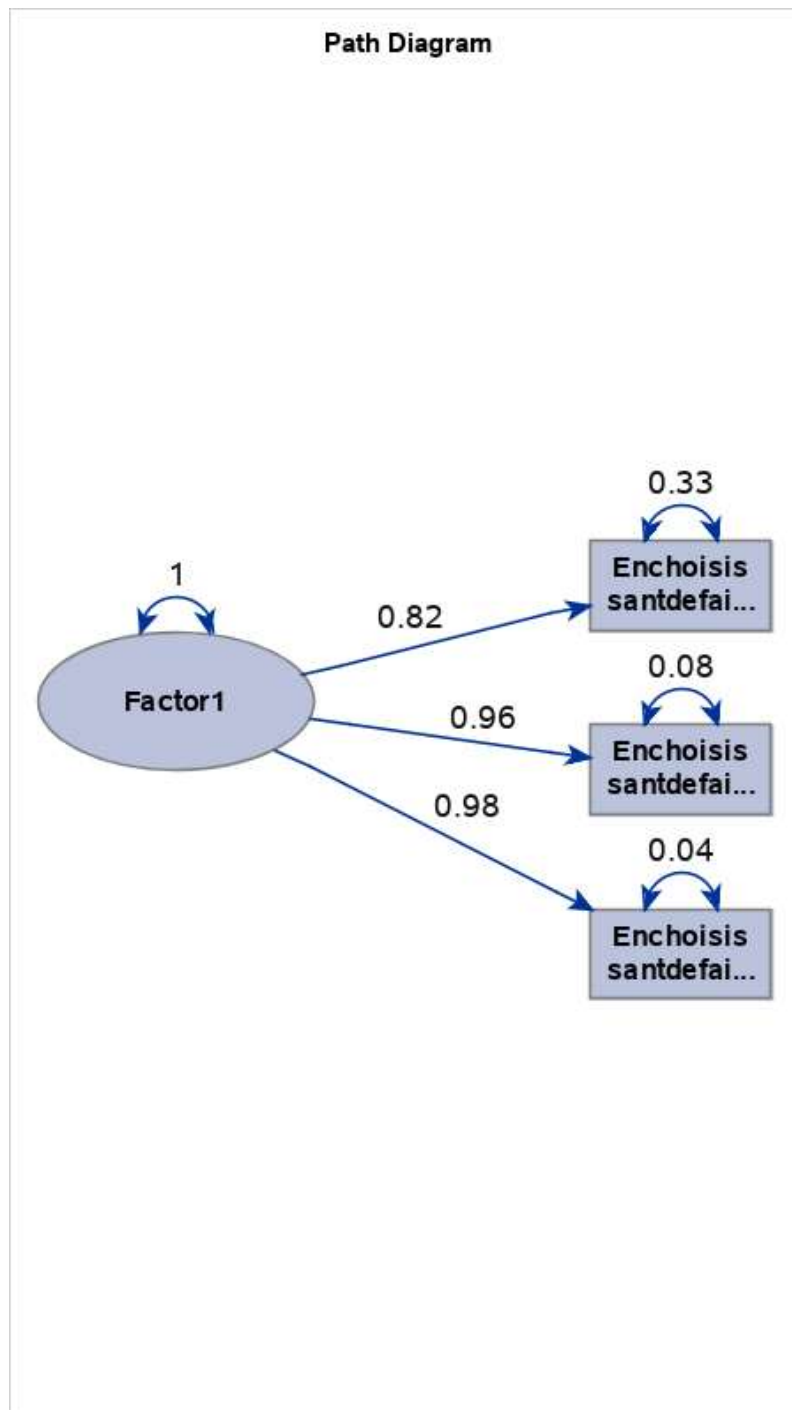
Factor Pattern		
		Factor1
Enchoisissantdefairemescourses_1	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais cause	0.98222
Enchoisissantdefairemescoursesen	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais memet	0.96150
Enchoisissantdefairemescourses_2	Enchoisissantdefairemescoursesenmagasinjecroisquejepourrais mecau	0.81975

Variance Explained by Each Factor
Factor1
2.5612121

Final Communality Estimates: Total = 2.561212		
Enchoissantdefairemescoursesen	Enchoissantdefairemescourses_1	Enchoissantdefairemescourses_2
0.92447899	0.96475090	0.67198221

#### Rotation Method: Varimax

Note: Rotation not possible with 1 factor.



Input Data Type	Raw Data
Number of Records Read	294
Number of Records Used	294
N for Significance Tests	294

Means and Standard Deviations from 294 Observations		
Variable	Mean	Std Dev
Enchoissantclickandcollectoula	2.1088435	1.4576115
Enchoissantclickandcollectou_1	2.1020408	1.4368846
Enchoissantclickandcollectou_2	1.9965986	1.4081632

Correlations				
		Enchoissantclickandcollectoula	Enchoissantclickandcollectou_1	Enchoissantclickandcollectou_2
Enchoissantclickandcollectoula	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisem	1.00000	0.98219	0.87980
Enchoissantclickandcollectou_1	Enchoissantclickandcollectoulalivraisonjecroisquejepourraiscau	0.98219	1.00000	0.90766
Enchoissantclickandcollectou_2	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisec	0.87980	0.90766	1.00000

### Initial Factor Method: Principal Factors

Partial Correlations Controlling all other Variables				
		Enchoissantclickandcollectoula	Enchoissantclickandcollectou_1	Enchoissantclickandcollectou_2
Enchoissantclickandcollectoula	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisem	1.00000	0.92043	-0.14828
Enchoissantclickandcollectou_1	Enchoissantclickandcollectoulalivraisonjecroisquejepourraiscau	0.92043	1.00000	0.48738
Enchoissantclickandcollectou_2	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisec	-0.14828	0.48738	1.00000

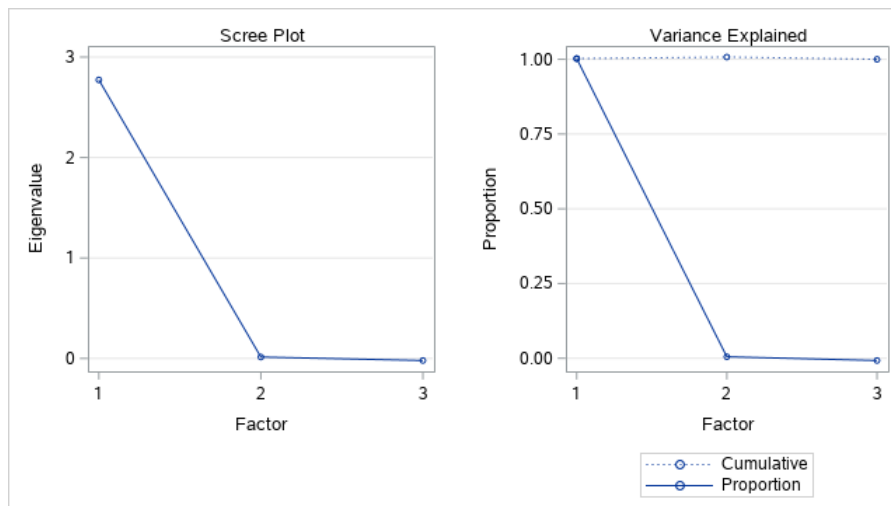
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.69838627		
Enchoissantclickandcollectoula	Enchoissantclickandcollectou_1	Enchoissantclickandcollectou_2
0.66671674	0.62247709	0.86027748

### Initial Factor Method: Principal Factors

Prior Communality Estimates: SMC		
Enchoissantclickandcollectoula	Enchoissantclickandcollectou_1	Enchoissantclickandcollectou_2
0.96547062	0.97308067	0.82771581

Eigenvalues of the Reduced Correlation Matrix: Total = 2.7662671 Average = 0.92208903				
	Eigenvalue	Difference	Proportion	Cumulative
1	2.77284449	2.75873647	1.0024	1.0024
2	0.01410802	0.03479342	0.0051	1.0075
3	-.02068540		-0.0075	1.0000

1 factor will be retained by the



PROPORTION criterion.

Eigenvectors		
		1
Enchoissantclickandcollectoula	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisem	0.58937
Enchoissantclickandcollectou_1	Enchoissantclickandcollectoulalivraisonjecroisquejepourraiscau	0.59644
Enchoissantclickandcollectou_2	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisec	0.54489

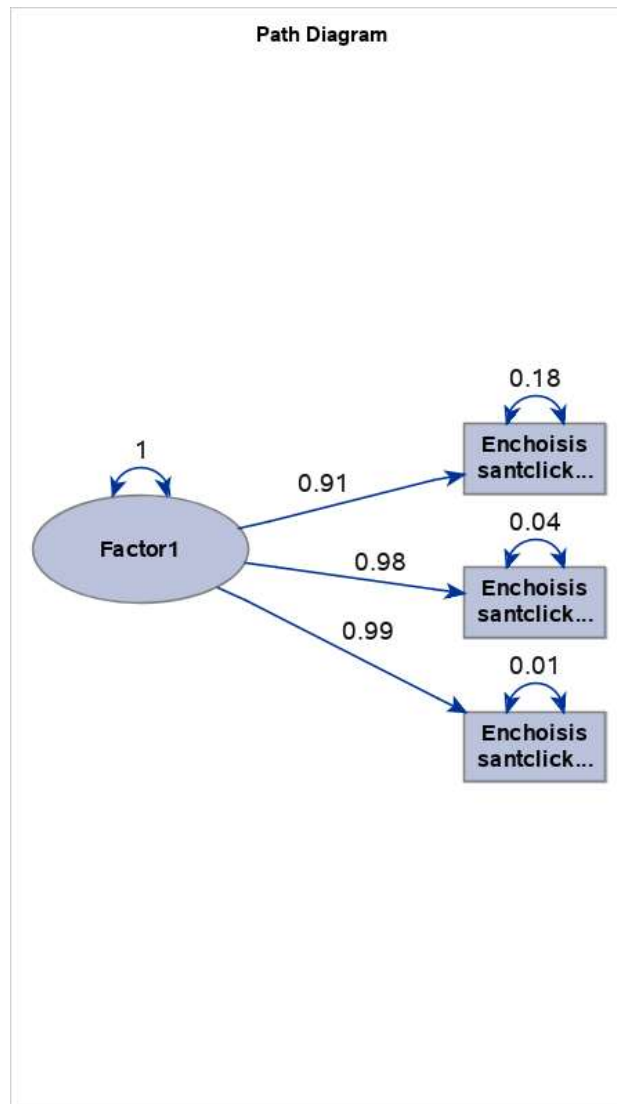
Factor Pattern		
		Factor1
Enchoissantclickandcollectou_1	Enchoissantclickandcollectoulalivraisonjecroisquejepourraiscau	0.99318
Enchoissantclickandcollectoula	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisem	0.98141
Enchoissantclickandcollectou_2	Enchoissantclickandcollectoulalivraisonjecroisquejepourraisec	0.90735

Variance Explained by Each Factor
Factor1
2.7728445

Final Communality Estimates: Total = 2.772844		
Enchoisissantclickandcollectoula	Enchoisissantclickandcollectou_1	Enchoisissantclickandcollectou_2
0.96316107	0.98640488	0.82327854

### Rotation Method: Varimax

Note: Rotation not possible with 1 factor.



Rotation Method: Varimax

Input Data Type	Raw Data
Number of Records Read	294
Number of Records Used	294
N for Significance Tests	294

Means and Standard Deviations from 294 Observations		
Variable	Mean	Std Dev
Javaispeurd'utiliserlessitesde	2.9251701	1.9848864
Comprendrelessitesdeventesenlign	2.5578231	1.8571116
Jévitailessitesdeventesenlign	2.8197279	2.0350559
Jhésitaisàutiliserlessitesdeve	2.7925170	1.9900294

Correlations				
	Javaispeurd'utiliserlessitesde	Comprendrelessitesdeventesenlign	Jévitailessitesdeventesenlign	Jhésitai
Javaispeurd'utiliserlessitesde				
Comprendrelessitesdeventesenlign				
Jévitailessitesdeventesenlign				
Jhésitaisàutiliserlessitesdeve				

Initial Factor Method: Principal Factors

Partial Correlations Controlling all other Variables				
	Javaispeurd'utiliserlessitesde	Comprendrelessitesdeventesenlign	Jévitailessitesdeventesenlign	Jhésitai
Javaispeurd'utiliserlessitesde				
Comprendrelessitesdeventesenlign				
Jévitailessitesdeventesenlign				
Jhésitaisàutiliserlessitesdeve				

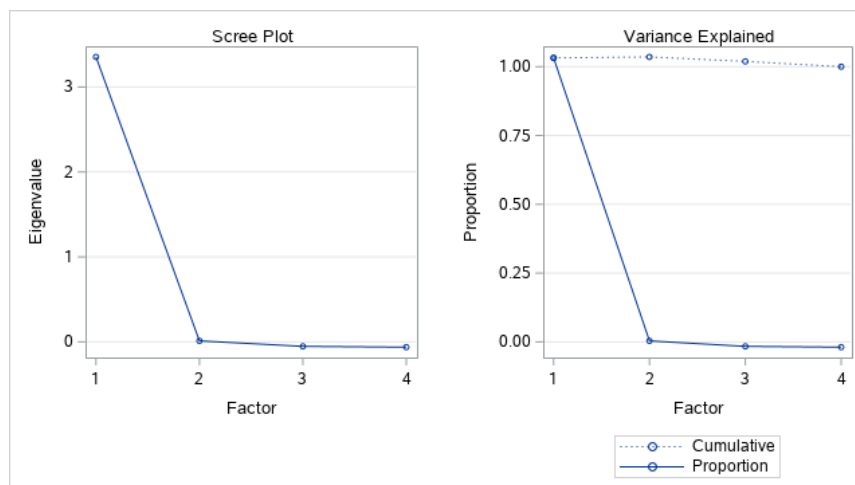
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.85463570			
Javaispeurd'utiliserlessitesde	Comprendrelessitesdeventesenlign	Jévitailessitesdeventesenlign	Jhésitaisàutiliserlessitesdeve
0.90371824	0.89505086	0.83447477	0.80045551

Initial Factor Method: Principal Factors

Prior Communality Estimates: SMC			
Javaispeurd'utiliserlessitesde	Comprendrelessitesdeventesenlign	Jévitailessitesdeventesenlign	Jhésitaisàutiliserlessitesdeve
0.75125203	0.78720590	0.83741871	0.87497424

Eigenvalues of the Reduced Correlation Matrix: Total = 3.25085088 Average = 0.81271272				
	Eigenvalue	Difference	Proportion	Cumulative
1	3.35436491	3.34267563	1.0318	1.0318
2	0.01168929	0.06459027	0.0036	1.0354
3	-.05290099	0.00940135	-0.0163	1.0192
4	-.06230234		-0.0192	1.0000

1 factor will be retained by the PROPORTION criterion.



Eigenvectors		
		1
Javaispeurd'utiliserlessitesde	Javaispeurd'utiliserlessitesdeventesenlignlepaiementsansconta	0.48084
Comprendrelessitesdeventesenlign	Comprendrelessitesdeventesenlignlepaiementsanscontactetautresme	0.49361
Jévitailessitesdeventesenlign	Jévitailessitesdeventesenlignlepaiementsanscontactetautrespar	0.50464
Jhésitaisàutiliserlessitesdeve	Jhésitaisàutiliserlessitesdeventesenlignlepaiementsanscontact	0.52009

Factor Pattern		
		Factor1
Jhésitaisàutiliserlessitesdeve	Jhésitaisàutiliserlessitesdeventesenlignlepaiementsanscontact	0.95253
Jévitailessitesdeventesenlign	Jévitailessitesdeventesenlignlepaiementsanscontactetautrespar	0.92424
Comprendrelessitesdeventesenlign	Comprendrelessitesdeventesenlignlepaiementsanscontactetautresme	0.90404
Javaispeurd'utiliserlessitesde	Javaispeurd'utiliserlessitesdeventesenlignlepaiementsansconta	0.88065

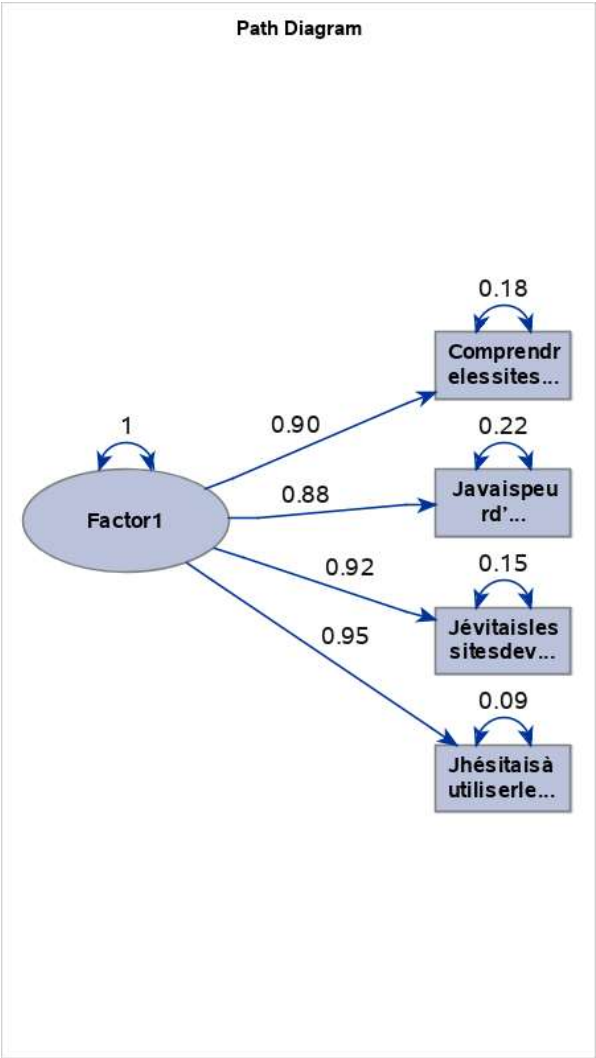
Variance Explained by Each Factor
Factor1
3.354365
Factor2
0.000000

Final Communality Estimates: Total = 3.354365				
Javaispeurd'utiliserlessitesde	Comprendrelessitesdeventesenlign	Jévitailessitesdeventesenligne	Jhésitaistàutiliserlessitesdeve	
0.77554354	0.81728823	0.85421495	0.90731820	

Rotation Method: Varimax

Note: Rotation not possible with 1 factor.

Rotation Method: Varimax



### The FACTOR Procedure

Input Data Type	Raw Data
Number of Records Read	296
Number of Records Used	295
N for Significance Tests	295

Means and Standard Deviations from 295 Observations		
Variable	Mean	Std Dev
J'ai peur d'utiliser les sites	2.3525424	1.7274648
Comprendre les sites de ventes_1	2.2779661	1.7194434
J'évite les sites de ventes en	2.3152542	1.7744227
J'hésite à utiliser les sites	2.3898305	1.7977400

Correlations					
		J'ai peur d'utiliser les sites	Comprendre les sites de ventes_1	J'évite les sites de ventes en	J'hésite à utiliser les sites
J'ai peur d'utiliser les sites	J'ai peur d'utiliser les sites de ventes en ligne, le paiement sans contact, etc..	1.00000	0.91507	0.82693	0.84166
Comprendre les sites de ventes_1	Comprendre les sites de ventes en ligne, le paiement sans contact et autres me semble compliqué.	0.91507	1.00000	0.87754	0.85612
J'évite les sites de ventes en	J'évite les sites de ventes en ligne, le paiement sans contact et autres parce que cela ne m'est pas familier.	0.82693	0.87754	1.00000	0.85062
J'hésite à utiliser les sites	J'hésite à utiliser les sites de ventes en ligne, le paiement sans contact et autres par crainte de faire des erreurs que je ne peux pas corriger.	0.84166	0.85612	0.85062	1.00000

### The FACTOR Procedure Initial Factor Method: Principal Factors

Partial Correlations Controlling all other Variables					
		J'ai peur d'utiliser les sites	Comprendre les sites de ventes_1	J'évite les sites de ventes en	J'hésite à utiliser les sites
J'ai peur d'utiliser les sites	J'ai peur d'utiliser les sites de ventes en ligne, le paiement sans contact, etc..	1.00000	0.62700	0.01327	0.25289
Comprendre les sites de ventes_1	Comprendre les sites de ventes en ligne, le paiement sans contact et autres me semble compliqué.	0.62700	1.00000	0.41971	0.16931
J'évite les sites de ventes en	J'évite les sites de ventes en ligne, le paiement sans contact et autres parce que cela ne m'est pas familier.	0.01327	0.41971	1.00000	0.38446
J'hésite à utiliser les sites	J'hésite à utiliser les sites de ventes en ligne, le paiement sans contact et autres par crainte de faire des erreurs que je ne peux pas corriger.	0.25289	0.16931	0.38446	1.00000

### Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.84620431

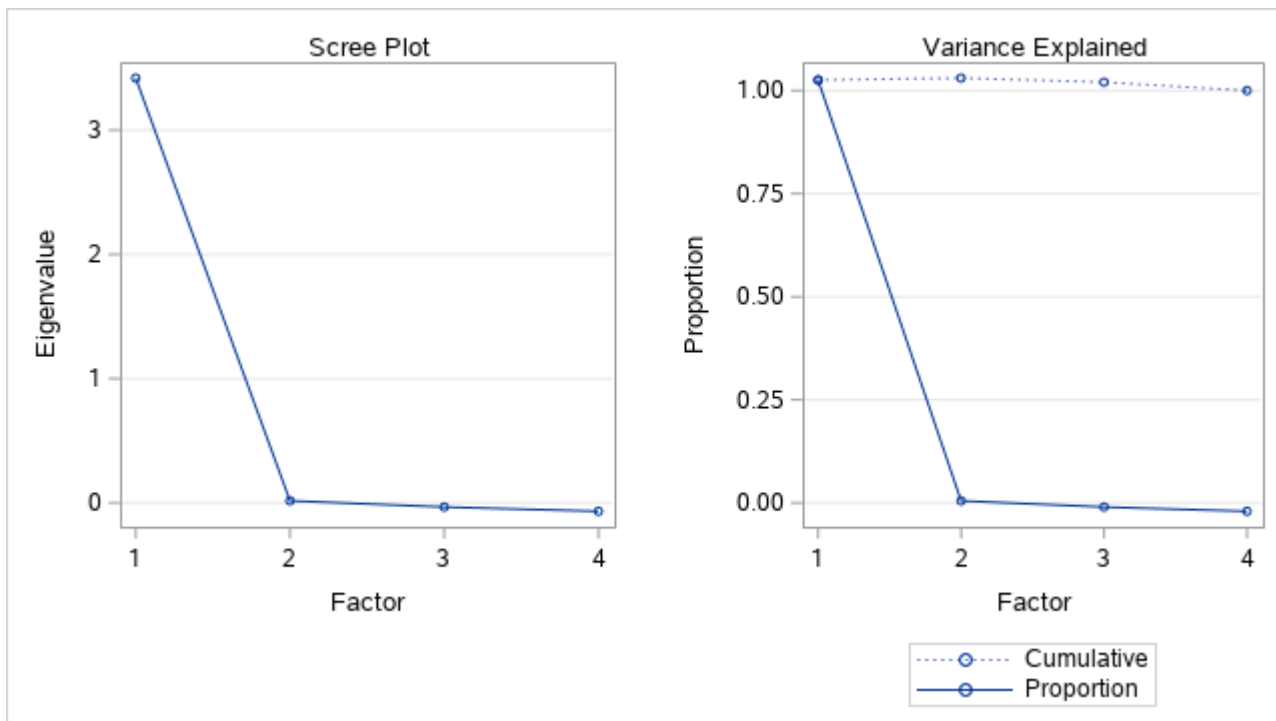
J'ai peur d'utiliser les sites	Comprendre les sites de ventes_1	J'évite les sites de ventes en	J'hésite à utiliser les sites
0.82981398	0.79649839	0.87042507	0.90004315

### The FACTOR Procedure Initial Factor Method: Principal Factors

Prior Communality Estimates: SMC			
J'ai peur d'utiliser les sites	Comprendre les sites de ventes_1	J'évite les sites de ventes en	J'hésite à utiliser les sites
0.85007685	0.88686789	0.80705318	0.79019748

Eigenvalues of the Reduced Correlation Matrix: Total = 3.3341954 Average = 0.83354885				
	Eigenvalue	Difference	Proportion	Cumulative
1	3.41922725	3.40274990	1.0255	1.0255
2	0.01647735	0.05011490	0.0049	1.0304
3	-.03363755	0.03423410	-0.0101	1.0204
4	-.06787165		-0.0204	1.0000

1 factor will be retained by the PROPORTION criterion.



Eigenvectors		
		1
J'ai peur d'utiliser les sites	J'ai peur d'utiliser les sites de ventes en ligne, le paiement sans contact, etc..	0.50240
Comprendre les sites de ventes_1	Comprendre les sites de ventes en ligne, le paiement sans contact et autres me semble compliqué.	0.51703
J'évite les sites de ventes en	J'évite les sites de ventes en ligne, le paiement sans contact et autres parce que cela ne m'est pas familier.	0.49175
J'hésite à utiliser les sites	J'hésite à utiliser les sites de ventes en ligne, le paiement sans contact et autres par crainte de faire des erreurs que je ne peux pas corriger.	0.48831

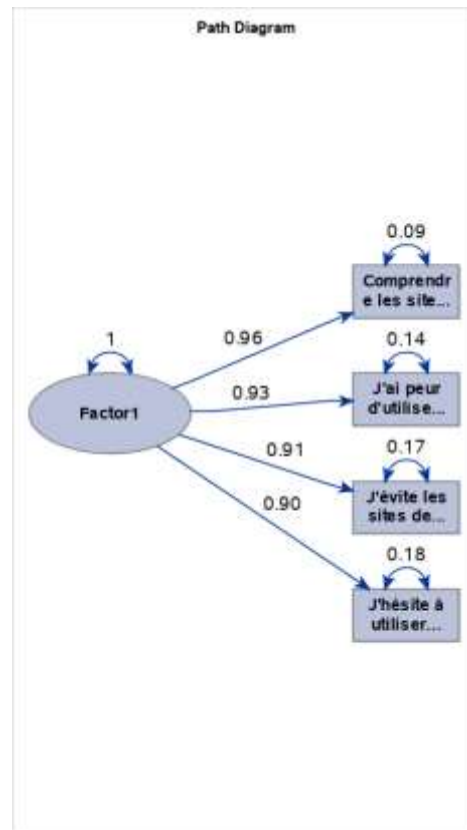
Factor Pattern		
		Factor1
Comprendre les sites de ventes_1	Comprendre les sites de ventes en ligne, le paiement sans contact et autres me semble compliqué.	0.95606
J'ai peur d'utiliser les sites	J'ai peur d'utiliser les sites de ventes en ligne, le paiement sans contact, etc..	0.92900
J'évite les sites de ventes en	J'évite les sites de ventes en ligne, le paiement sans contact et autres parce que cela ne m'est pas familier.	0.90930
J'hésite à utiliser les sites	J'hésite à utiliser les sites de ventes en ligne, le paiement sans contact et autres par crainte de faire des erreurs que je ne peux pas corriger.	0.90295

Variance Explained by Each Factor
Factor1
3.4192273

Final Communality Estimates: Total = 3.419227			
J'ai peur d'utiliser les sites	Comprendre les sites de ventes_1	J'évite les sites de ventes en	J'hésite à utiliser les sites
0.86304815	0.91404158	0.82682666	0.81531086



**Note:** Rotation not possible with 1 factor.



#### The FACTOR Procedure

Input Data Type	Raw Data
Number of Records Read	296
Number of Records Used	291
N for Significance Tests	291

#### Means and Standard Deviations from 291 Observations

Variable	Mean	Std Dev
covidrevenus	3.3161512	1.1816325
eparg	3.6597938	1.5988353

#### Correlations

		covidrevenus	eparg
covidrevenus	covidrevenus	1.00000	0.69048
eparg	eparg	0.69048	1.00000

#### The FACTOR Procedure

Initial Factor Method: Principal Factors

#### Partial Correlations Controlling all other Variables

		covidrevenus	eparg
covidrevenus	covidrevenus	1.00000	0.69048
eparg	eparg	0.69048	1.00000

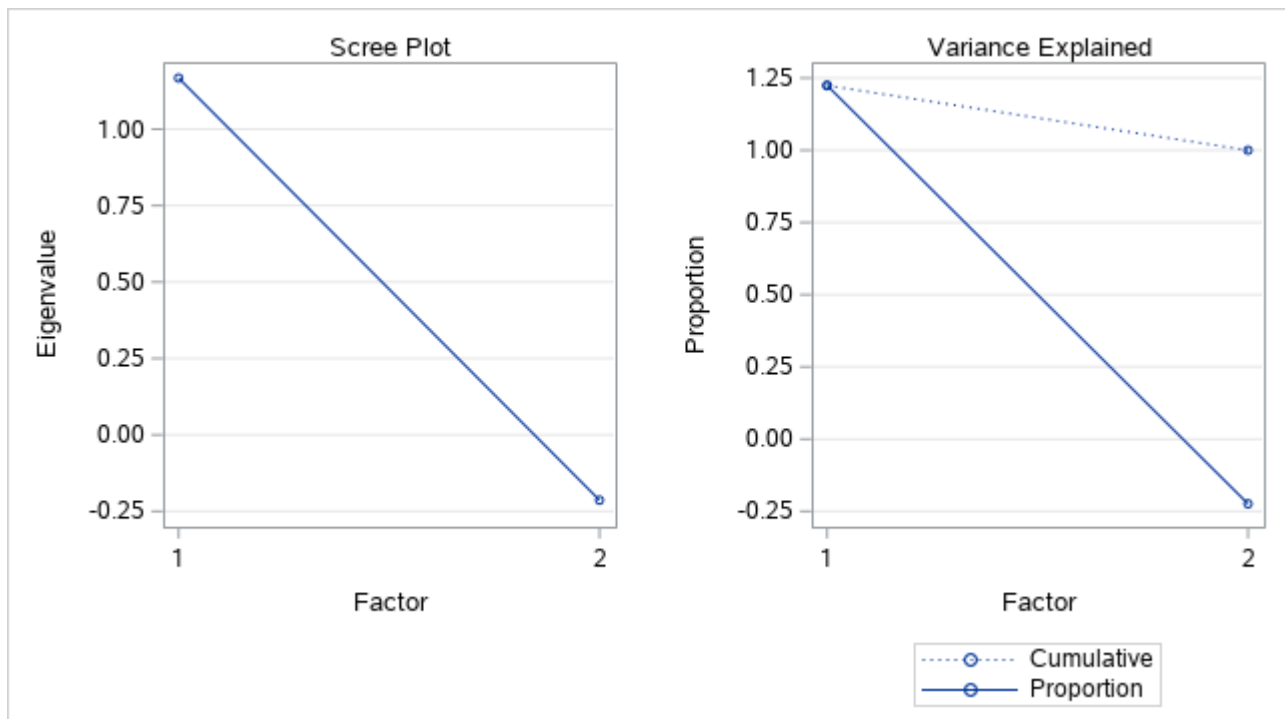
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.50000000	
covidrevenue	eparg
0.50000000	0.50000000

**The FACTOR Procedure**  
Initial Factor Method: Principal Factors

Prior Commuality Estimates: SMC	
covidrevenue	eparg
0.47676235	0.47676235

Eigenvalues of the Reduced Correlation Matrix: Total = 0.9535247 Average = 0.47676235				
	Eigenvalue	Difference	Proportion	Cumulative
1	1.16724215	1.38095959	1.2241	1.2241
2	-.21371745		-0.2241	1.0000

1 factor will be retained by the PROPORTION criterion.



Eigenvectors		
		<b>1</b>
<b>covidrevenus</b>	covidrevenus	0.70711
<b>eparg</b>	eparg	0.70711

Factor Pattern		
		<b>Factor1</b>
<b>eparg</b>	eparg	0.76395
<b>covidrevenus</b>	covidrevenus	0.76395

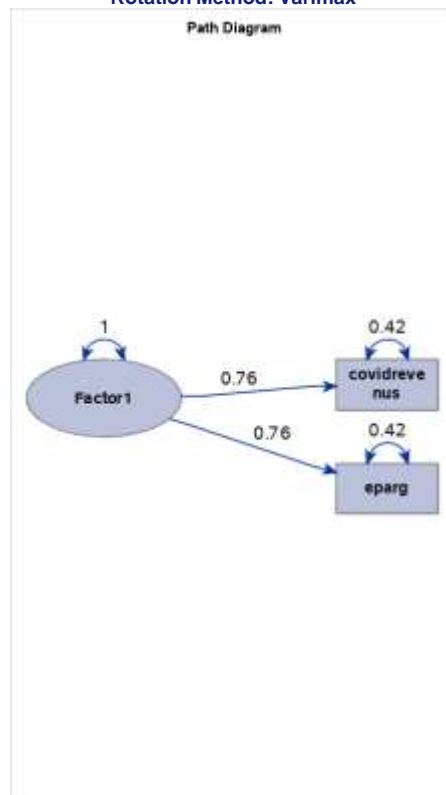
Variance Explained by Each Factor	
<b>Factor1</b>	
1.1672421	

Final Communality Estimates: Total = 1.167242	
<b>covidrevenus</b>	<b>eparg</b>
0.58362107	0.58362107

**The FACTOR Procedure**  
**Rotation Method: Varimax**

**Note:** Rotation not possible with 1 factor.

**The FACTOR Procedure**  
**Rotation Method: Varimax**



### The FACTOR Procedure

<b>Input Data Type</b>	Raw Data
<b>Number of Records Read</b>	187
<b>Number of Records Used</b>	125
<b>N for Significance Tests</b>	125

Means and Standard Deviations from 125 Observations		
Variable	Mean	Std Dev
Frequ. pre-pandemic	4.3200000	1.0895397
Frequ. post-pandemic	4.1920000	0.8101772

Correlations			
		Frequ. Pre-pandemic	Frequ.Post-pandemic
Frequ. Pre-pandemic	Question801	1.00000	0.54195
Frequ. Post-pandemic	Question1001	0.54195	1.00000

### The FACTOR Procedure Initial Factor Method: Principal Factors

Partial Correlations Controlling all other Variables			
		Frequ. Pre-pandemic	Frequ.Post-pandemic
Frequ. Pre-pandemic	Question801	1.00000	0.54195
Frequ.Post-pandemic	Question1001	0.54195	1.00000

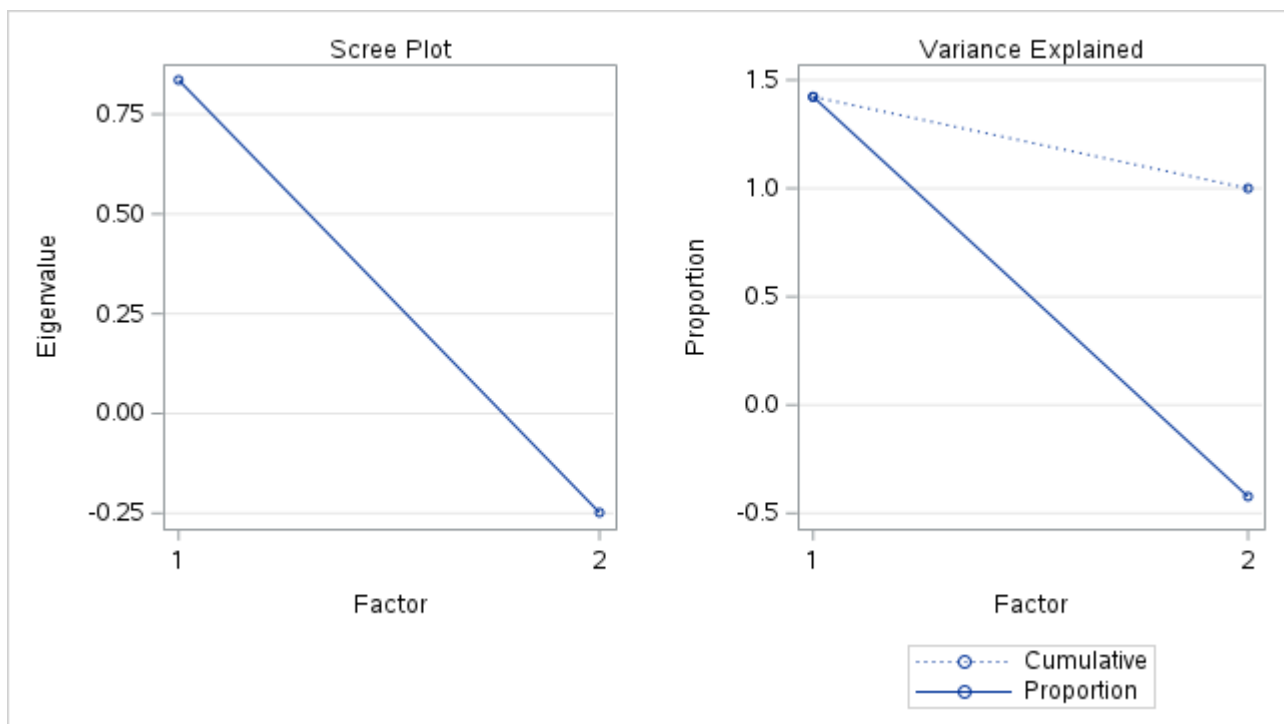
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.50000000	
Question801	Question1001
0.50000000	0.50000000

### The FACTOR Procedure Initial Factor Method: Principal Factors

Prior Commuality Estimates: SMC	
Frequ.Pre-pandemic	Frequ.Post-pandemic
0.29370596	0.29370596

Eigenvalues of the Reduced Correlation Matrix: Total = 0.58741191 Average = 0.29370596				
	Eigenvalue	Difference	Proportion	Cumulative
1	0.83565241	1.08389290	1.4226	1.4226
2	-.24824050		-0.4226	1.0000

1 factor will be retained by the PROPORTION criterion.



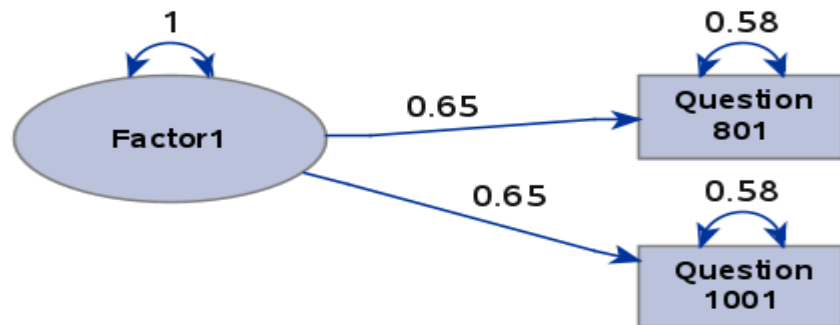
Eigenvectors		
		1
Frequ.Pre-pandemic	Frequ.Pre-pandemic	0.70711
Frequ.Post-pandemic	Frequ. Post-pandemic	0.70711

Factor Pattern		
		Factor1
Frequ.Pre-pandemic	Frequ.Pre-pandemic	0.64639
Frequ.Post-pandemic	Frequ. Post-pandemic	0.64639

Variance Explained by Each Factor	
Factor1	
0.83565241	

Final Communality Estimates: Total = 0.835652	
Frequ.Pre-pandemic	Frequ.Post-pandemic
0.41782620	0.41782620

### Path Diagram



Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
Question801	125	4.32000	1.08954	540.00000	1.00000	7.00000	Question801
Question1001	125	4.19200	0.81018	524.00000	1.00000	7.00000	Question1001

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.683347
Standardized	0.702938

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
Question801	0.541946	.	0.541946	.	Question801
Question1001	0.541946	.	0.541946	.	Question1001

# ANOVA-TEST

## ANOVA

Qu\_6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	99113,673	6	16518,946	2,428	,030
Within Groups	802914,039	118	6804,356		
Total	902027,712	124			

## Post Hoc Tests

### Multiple Comparisons

Dependent Variable: Qu\_6

Tukey HSD

(I) Revenu mensuel net	(J) Revenu mensuel net	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Moins de 1.500 euros	Entre 1.500 et 3.000 euros	6,913	31,245	1,000	-86,82	100,64
	Entre 3.001 et 4.500 euros	-26,535	28,960	,969	-113,41	60,34
	Entre 4.501 et 6.000 euros	-3,121	29,776	1,000	-92,45	86,20
	Entre 6.001 et 8.000 euros	-101,500	39,128	,137	-218,88	15,88
	Entre 8.001 et 10.000 euros	-43,000	48,801	,975	-189,39	103,39
	Plus de 10.000 euros	-75,000	48,801	,722	-221,39	71,39
Entre 1.500 et 3.000 euros	Moins de 1.500 euros	-6,913	31,245	1,000	-100,64	86,82
	Entre 3.001 et 4.500 euros	-33,448	21,309	,702	-97,37	30,48
	Entre 4.501 et 6.000 euros	-10,034	22,406	,999	-77,25	57,18
	Entre 6.001 et 8.000 euros	-108,413*	33,858	,028	-209,98	-6,84

	Entre 8.001 et 10.000 euros	-49,913	44,687	,922	-183,97	84,14
	Plus de 10.000 euros	-81,913	44,687	,529	-215,97	52,14
Entre 3.001 et 4.500 euros	Moins de 1.500 euros	26,535	28,960	,969	-60,34	113,41
	Entre 1.500 et 3.000 euros	33,448	21,309	,702	-30,48	97,37
	Entre 4.501 et 6.000 euros	23,414	19,090	,882	-33,85	80,68
	Entre 6.001 et 8.000 euros	-74,965	31,761	,225	-170,24	20,31
	Entre 8.001 et 10.000 euros	-16,465	43,120	1,000	-145,82	112,89
	Plus de 10.000 euros	-48,465	43,120	,920	-177,82	80,89
Entre 4.501 et 6.000 euros	Moins de 1.500 euros	3,121	29,776	1,000	-86,20	92,45
	Entre 1.500 et 3.000 euros	10,034	22,406	,999	-57,18	77,25
	Entre 3.001 et 4.500 euros	-23,414	19,090	,882	-80,68	33,85
	Entre 6.001 et 8.000 euros	-98,379*	32,507	,047	-195,90	-,86
	Entre 8.001 et 10.000 euros	-39,879	43,672	,970	-170,89	91,13
	Plus de 10.000 euros	-71,879	43,672	,653	-202,89	59,13
Entre 6.001 et 8.000 euros	Moins de 1.500 euros	101,500	39,128	,137	-15,88	218,88
	Entre 1.500 et 3.000 euros	108,413*	33,858	,028	6,84	209,98
	Entre 3.001 et 4.500 euros	74,965	31,761	,225	-20,31	170,24
	Entre 4.501 et 6.000 euros	98,379*	32,507	,047	,86	195,90
	Entre 8.001 et 10.000 euros	58,500	50,514	,908	-93,03	210,03
	Plus de 10.000 euros	26,500	50,514	,998	-125,03	178,03
Entre 8.001 et 10.000 euros	Moins de 1.500 euros	43,000	48,801	,975	-103,39	189,39
	Entre 1.500 et 3.000 euros	49,913	44,687	,922	-84,14	183,97
	Entre 3.001 et 4.500 euros	16,465	43,120	1,000	-112,89	145,82
	Entre 4.501 et 6.000 euros	39,879	43,672	,970	-91,13	170,89



Plus de 10.000 euros	Entre 6.001 et 8.000 euros	-58,500	50,514	,908	-210,03	93,03
	Plus de 10.000 euros	-32,000	58,328	,998	-206,97	142,97
	Moins de 1.500 euros	75,000	48,801	,722	-71,39	221,39
	Entre 1.500 et 3.000 euros	81,913	44,687	,529	-52,14	215,97
	Entre 3.001 et 4.500 euros	48,465	43,120	,920	-80,89	177,82
	Entre 4.501 et 6.000 euros	71,879	43,672	,653	-59,13	202,89
	Entre 6.001 et 8.000 euros	-26,500	50,514	,998	-178,03	125,03
	Entre 8.001 et 10.000 euros	32,000	58,328	,998	-142,97	206,97

\*. The mean difference is significant at the 0.05 level.

## Homogeneous Subsets

### Qu\_6

Tukey HSD<sup>a,b</sup>

Revenu mensuel net	N	Subset for alpha = 0.05 1
Entre 1.500 et 3.000 euros	23	80,09
Moins de 1.500 euros	10	87,00
Entre 4.501 et 6.000 euros	33	90,12
Entre 3.001 et 4.500 euros	43	113,53
Entre 8.001 et 10.000 euros	4	130,00
Plus de 10.000 euros	4	162,00
Entre 6.001 et 8.000 euros	8	188,50
Sig.		,104

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 8,515.

## Relevant Moderators

### Income level (Perceived Risk)

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2  
\*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*

Model : 1  
Y : ZQu6  
X : ZRisk  
W : ZRevenu

Sample  
Size: 125

\*\*\*\*\*  
\*

OUTCOME VARIABLE:  
ZQu6

Model Summary						
	R	R-sq	MSE	F	df1	df2
p	,2374	,0563	,9671	2,4083	3,0000	121,0000
,0704						

Model					
	coeff	se	t	p	LLCI
ULCI					
constant	-,0325	,0899	-,3612	,7186	-,2104
,1455					
ZRisk	,1024	,0966	1,0605	,2910	-,0888
,2935					
ZRevenu	,1929	,0797	2,4210	,0170	,0352
,3507					
Int_1	-,0285	,0972	-,2933	,7698	-,2210
,1640					

Product terms key:  
Int\_1 : ZRisk x ZRevenu

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0007	,0860	1,0000	121,0000	,7698

\*\*\*\*\* ANALYSIS NOTES AND ERRORS  
\*\*\*\*\*

Level of confidence for all confidence intervals in output:  
95,0000

### Income level (Optimism)

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2  
\*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*

Model : 1  
Y : ZQu6  
X : ZOpt  
W : ZRevenu

Sample  
Size: 125

\*\*\*\*\*  
\*

OUTCOME VARIABLE:  
ZQu6

Model Summary						
	R	R-sq	MSE	F	df1	df2
p	,2767	,0766	,9463	3,3437	3,0000	121,0000
,0215						

Model	coeff	se	t	p	LLCI
ULCI					
constant	-,0326	,0887	-,3679	,7136	-,2082
,1429					
ZOpt	-,1727	,0883	-1,9564	,0527	-,3475
,0021					
ZRevenu	,1866	,0786	2,3743	,0192	,0310
,3422					
Int_1	,0237	,0967	,2448	,8070	-,1677
,2150					

Product terms key:  
Int\_1 : ZOpt x ZRevenu

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0005	,0599	1,0000	121,0000	,8070

\*\*\*\*\* ANALYSIS NOTES AND ERRORS  
\*\*\*\*\*

Level of confidence for all confidence intervals in output:

95,0000

----- END MATRIX -----

## Monetary Cost (Optimism)

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2  
\*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*

Model : 1  
Y : ZQu6  
X : ZOpt  
W : ZMCost

Sample  
Size: 125

\*\*\*\*\*  
\*

OUTCOME VARIABLE:  
ZQu6

Model Summary	R	R-sq	MSE	F	df1	df2
p	,2701	,0729	,9500	3,1733	3,0000	121,0000
,0267						

Model	coeff	se	t	p	LLCI
ULCI					
constant	,0024	,0874	,0272	,9783	-,1425
,1473					
ZOpt	-,1906	,0869	-2,1933	,0302	-,3346 -
,0466					
ZMCost	,1923	,0885	2,1715	,0318	,0455
,3390					
Int_1	,0399	,0939	,4250	,6716	-,1157
,1955					

Product terms key:  
Int\_1 : ZOpt x ZMCost

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0014	,1806	1,0000	121,0000	,6716

\*\*\*\*\* ANALYSIS NOTES AND ERRORS  
\*\*\*\*\*

Level of confidence for all confidence intervals in output:  
90,0000

----- END MATRIX -----

## Household Size (Optimism)

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2  
\*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*

Model : 1  
Y : ZQu6  
X : ZOpt  
W : ZSize

Sample  
Size: 125

\*\*\*\*\*  
\*

OUTCOME VARIABLE:  
ZQu6

Model Summary						
	R	R-sq	MSE	F	df1	df2
p	,2672	,0714	,9516	3,1007	3,0000	121,0000
,0293						

Model						
	coeff	se	t	p	LLCI	
ULCI						
constant	,0348	,0883	,3938	,6944	-	,1116
,1812						
ZOpt	-,2016	,0876	-2,3018	,0231	-	,3467
,0564						
ZSize	-,0612	,0843	-,7258	,4693	-	,2009
,0786						
Int_1	,1784	,0926	1,9264	,0564		,0249
,3318						

Product terms key:  
Int\_1 : ZOpt x ZSize

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0285	3,7109	1,0000	121,0000	,0564

-----  
Focal predict: ZOpt (X)

Mod var: ZSize (W)

Conditional effects of the focal predictor at values of the moderator(s):

	ZSize	Effect	se	t	p	LLCI	
ULCI							
	-,5567	-,3009	,1035	-2,9062	,0044	-,4724	-
,1293							
	-,5567	-,3009	,1035	-2,9062	,0044	-,4724	-
,1293							
	1,0796	-,0090	,1300	-,0694	,9448	-,2245	
,2065							

\*\*\*\*\* ANALYSIS NOTES AND ERRORS  
\*\*\*\*\*

Level of confidence for all confidence intervals in output:  
90,0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

----- END MATRIX -----

## Income level (Perceived Severity)

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2  
\*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*

Model : 1  
Y : ZQu6  
X : ZTechaf  
W : ZRevenu

Sample  
Size: 125

\*\*\*\*\*  
\*

OUTCOME VARIABLE:  
ZQu6

Model Summary						
	R	R-sq	MSE	F	df1	df2
p						
,0065	,3100	,0961	,9263	4,2876	3,0000	121,0000

Model					
	coeff	se	t	p	LLCI
ULCI					

constant	-,0259	,0885	-,2923	,7706	-,1725
,1208					
ZTechaf	,1654	,1015	1,6295	,1058	-,0028
,3337					
ZRevenu	,1663	,0777	2,1419	,0342	,0376
,2951					
Int_1	,1386	,0865	1,6024	,1117	-,0048
,2820					

Product terms key:

Int\_1 : ZTechaf x ZRevenu

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0192	2,5676	1,0000	121,0000	,1117

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:  
90,0000

----- END MATRIX -----

## Monetary Cost (Perceived Severity)

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*

Model : 1  
Y : ZQu6  
X : ZTechaf  
W : ZMCost

Sample  
Size: 125

\*\*\*\*\*  
\*

OUTCOME VARIABLE:  
ZQu6

Model Summary						
	R	R-sq	MSE	F	df1	df2
p	,2833	,0803	,9425	3,5198	3,0000	121,0000
,0172						

Model					
	coeff	se	t	p	LLCI
ULCI					

```

constant      ,0209      ,0883      ,2368      ,8132      -,1254
,1672
ZTechaf       ,2431      ,1013      2,4012      ,0179      ,0753
,4110
ZMCost        ,2067      ,0890      2,3220      ,0219      ,0591
,3542
Int_1         -,0348      ,1042      -,3339      ,7391      -,2075
,1379

```

Product terms key:

```

Int_1      :      ZTechaf  x      ZMCost

```

Test(s) of highest order unconditional interaction(s):

```

          R2-chng      F      df1      df2      p
X*W      ,0008      ,1115      1,0000      121,0000      ,7391

```

```

***** ANALYSIS NOTES AND ERRORS
*****

```

Level of confidence for all confidence intervals in output:  
90,0000

----- END MATRIX -----

## Multiple Regression Analysis

### Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	Technological risk after	.	Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
2	Optimism	.	Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).

a. Dependent Variable: Qu\_6



### Model Summary<sup>c</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,190 <sup>a</sup>	,036	,028	84,079
2	,257 <sup>b</sup>	,066	,051	83,089

a. Predictors: (Constant), Technological risk after

b. Predictors: (Constant), Technological risk after, Optimism

c. Dependent Variable: Qu\_6

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32506,111	1	32506,111	4,598	,034 <sup>b</sup>
	Residual	869521,601	123	7069,281		
	Total	902027,712	124			
2	Regression	59766,063	2	29883,031	4,329	,015 <sup>c</sup>
	Residual	842261,649	122	6903,784		
	Total	902027,712	124			

a. Dependent Variable: Qu\_6

b. Predictors: (Constant), Technological risk after

c. Predictors: (Constant), Technological risk after, Optimism

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	
		B	Std. Error	Beta		
1	(Constant)	81,693	13,585		6,014	
	Technological risk after	11,067	5,161	,190	2,144	
2	(Constant)	129,868	27,713		4,686	
	Technological risk after	10,567	5,107	,181	2,069	
	Optimism	-9,874	4,969	-,174	-1,987	

### Excluded Variables<sup>a</sup>

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Risk Perceived	,041 <sup>b</sup>	,454	,650	,041	,947
	Optimism	-,174 <sup>b</sup>	-1,987	,049	-,177	,998
2	Risk Perceived	,033 <sup>c</sup>	,361	,719	,033	,945

a. Dependent Variable: Qu\_6

b. Predictors in the Model: (Constant), Technological risk after

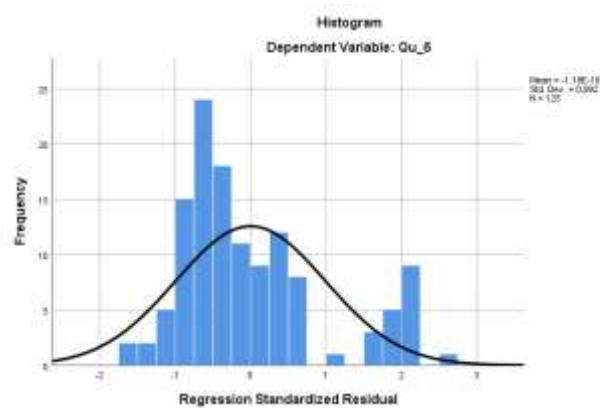
c. Predictors in the Model: (Constant), Technological risk after, Optimism

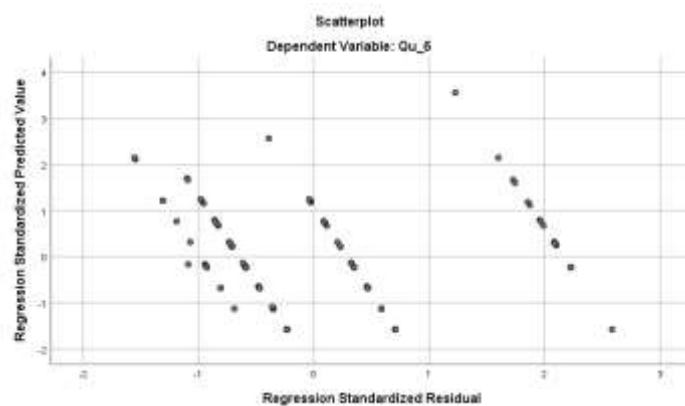
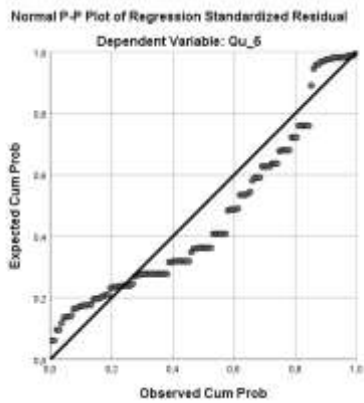
### Residuals Statistics<sup>a</sup>

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	71,32	184,09	105,95	21,954	125
Residual	-129,083	214,684	,000	82,416	125
Std. Predicted Value	-1,578	3,559	,000	1,000	125
Std. Residual	-1,554	2,584	,000	,992	125

a. Dependent Variable: Qu\_6

## Charts





## Correlation Matrix

		Correlations			
		Risk Perceived	Optimism	Technological risk	Qu_6
Risk Perceived	Pearson Correlation	1	-,066	,173*	,083
	Sig. (2-tailed)		,371	,018	,358
	N	187	187	187	125
Optimism	Pearson Correlation	-,066	1	,063	-,183*
	Sig. (2-tailed)	,371		,392	,041
	N	187	187	187	125
Technological risk	Pearson Correlation	,173*	,063	1	,154
	Sig. (2-tailed)	,018	,392		,087
	N	187	187	187	125
Qu_6	Pearson Correlation	,083	-,183*	,154	1
	Sig. (2-tailed)	,358	,041	,087	
	N	125	125	125	125

\*. Correlation is significant at the 0.05 level (2-tailed).