



# Customer satisfaction in the cooperative banking industry: A quantitative approach.

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# Abstract

**[Introduction]** Cooperative banks in France have a major impact on the finance industry and the French economy. The French financial ecosystem differs in comparison with other European countries because of a higher number of cooperative banking groups, which have a dominant market share in the financial industry. With a highly competitive retail banking market frequently described as a commoditized space, customer satisfaction remains the largest competitive advantage for banks. **[Research Purpose]** Overall, the ambition with this research was to gain a deeper understanding of customer satisfaction in the retail banking market segment. The fundament of this thesis is a theoretical framework that analyzed customer satisfaction for retail clients of cooperative banks. By this, we identified which characteristic of the relationship between customers and their cooperative bank have the highest impact on customer satisfaction. Thus, our research question implied a search to explain an underlying causal relationship between six different variables within *Perceived Quality* and *Perceived Value* with customer satisfaction. Perceived Value (PV) included *Trust*, *Employee Competences*, and *Price Transparency*. Perceived Quality (PQ) included *Accessibility*, *Reliability*, and *Reactivity*. **[Methodology]** By adopting a quantitative approach, we could test, support and rank which variables impact customer satisfaction for cooperative banking clients. The analyzed dataset comprises a total of 21 914 respondents which are customers from 142 cooperative banking branches in France. **[Results & Conclusion]** From the analysis of the empirical results, we answered our research question by detailing the relationships between perceived quality; perceived value, and customer satisfaction. Finally, our findings indicated that *Perceived Quality* contributes to customer satisfaction in cooperative banking to a larger extend than *Perceived Value*. Moreover, the study ranked the importance of each variables impacting customer satisfaction as follow: (1) *Accessibility*, (2) *Employee Competences*, (3) *Trust*, (4) *Reliability*, (5) *Price Transparency*, (6) *Reactivity*.

**Keywords:** Cooperative Banking Industry, Financial Industry, Retail Banking, Customer Satisfaction, Perceived Quality, Perceived Value, France

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## **List of Tables**

Table 1 – Previous research on customer satisfaction

Table 2 – Hypotheses summary

Table 3 – Levels of customer Satisfaction

Table 4 – Annual barometric satisfaction survey questions

Table 5 – Raw data set representation

Table 6 – Data cleansing steps (pre-operationalization)

Table 7 – Mean calculation at the branch level

Table 8 – Mean and median analysis

Table 9 – Skewness analysis

Table 10 – Kurtosis analysis

Table 11 – Cronbach's alpha coefficients (Reliability testing)

Table 12 – Descriptive statistic (initial model)

Table 13 – Correlation matrix (initial model)

Table 14 – Simple regression analysis results

Table 15 – Hypotheses results

## **List of Figures**

Figure 1 – Research Structure

Figure 2 – Customer Satisfaction for cooperative banking customers

Figure 3 – Perceived Quality for cooperative banking customers

Figure 4 – Perceived Value for cooperative banking customers

Figure 5 – Theoretical Model of Customer Satisfaction in the cooperative banking industry

Figure 6 – Research Design

Figure 7 – Multiple Regression representation and equation for Customer Satisfaction

## **List of Acronyms**

CS – Customer Satisfaction

PQ – Perceived Quality

PV – Perceived Value

## Table of Contents

<b>1. Introduction .....</b>	<b>7</b>
<b>1.1. Background .....</b>	<b>7</b>
<b>1.2. Research Gap &amp; Relevance.....</b>	<b>9</b>
<b>1.3. Purpose and research question.....</b>	<b>13</b>
<b>1.4. Research structure.....</b>	<b>14</b>
 <b>1. Literature Review.....</b>	 <b>15</b>
<b>2.1. Definition of Customer Satisfaction .....</b>	<b>15</b>
<b>2.2. Perceived Quality.....</b>	<b>16</b>
2.2.1 Accessibility (PQ1) .....	17
2.2.2. Reactivity (PQ2) .....	18
2.2.3. Reliability (PQ3).....	19
<b>2.3. Perceived Value.....</b>	<b>20</b>
2.3.1. Trust (PV1) .....	20
2.3.2. Employee Competences (PV2) .....	22
2.3.3. Price Transparency (PV3).....	23
<b>2.4. Literature Summary.....</b>	<b>24</b>
2.4.1. Customer Satisfaction Model for Cooperative Banking customers .....	24
2.4.2. Hypotheses summary .....	26
 <b>2. Methodology .....</b>	 <b>27</b>
<b>3.1. Choice of the subject.....</b>	<b>27</b>
<b>3.2. Research Design .....</b>	<b>27</b>
<b>3.3. Data Collection.....</b>	<b>30</b>
3.3.1. Unanticipated events .....	30
3.3.2. Description of the dataset.....	31
3.3.3. Data cleansing .....	33
3.3.4. Validity and Reliability .....	36
<b>3.4. Quantitative Analysis .....</b>	<b>37</b>
3.4.1. Descriptive Analysis .....	37
3.4.2. Bivariate Correlations .....	38
3.4.3. Multi Regression analysis .....	38

<b>3.5. Limitations and Ethical Consideration.....</b>	<b>39</b>
3.5.1 Criticism of the chosen method .....	39
3.5.2. Limitations of the chosen method.....	40
3.5.3. Ethical Considerations .....	41
 <b>4. Empirical Results.....</b>	 <b>42</b>
4.1. Exploratory Factor Analysis and Cronbach’s alpha test.....	42
4.2. Descriptive Statistic Results .....	44
4.3. Bivariate Correlation Results .....	45
4.4. Multiple Regression Analysis Results .....	46
4.5. Post-hoc analysis .....	47
4.5.1. Multiple Regression Analysis for Perceived Quality and Perceived Value.....	47
4.5.2. Simple Regression Analysis of ACCESS, REAC, RELIA, TRUST, EMP and PRICE with CS.....	51
 <b>5. Discussions .....</b>	 <b>53</b>
5.1. Key findings.....	53
5.2. Interpretations .....	54
5.3. Literature Implications .....	55
5.4. Limitations.....	57
 <b>6. Conclusion and Recommendations .....</b>	 <b>58</b>
6.1. Conclusion .....	58
6.2. Recommendations.....	59
6.2.1. Practical recommendations for cooperative banks .....	59
6.2.2. Recommendations for future research.....	59
 <b>Appendix .....</b>	 <b>61</b>
<b>Bibliography .....</b>	<b>70</b>

# 1. Introduction

This chapter will present a brief background with the chosen topic and a description of the research gap, which this thesis aims to fill. It will also provide the reader with the purpose of this thesis and the research question. Finally, an overview of the thesis structure will also be presented in this section.

## 1.1. Background

Customer satisfaction can be defined as something including value, quality, and satisfaction (Tahseen et al., 2013; Zeithaml et al., 1988 & 1994). According to Fecikova (2004), value is connected to service offered and amount paid in exchange, quality refers to meeting the customers' needs and expectations, while satisfaction could be described as organizations meeting the needs or wants of their customers. Since banks operate in a trusted industry, high satisfaction from customers is considered to be crucial for future survival and relevance (Titko & Lace, 2010). Furthermore, the relevance of a bank model can be demonstrated through the result of customer satisfaction; it has lately also shown the importance of how it affects an organization's revenues (Anderson et al., 2008; Chavan & Ahmad, 2013; Choy et al., 2012). Banks with a high level of customer satisfaction are more likely to have increased profits compared to competitors with lower levels of customer satisfaction (Mbama et al., 2018; Coldwell, 2001).

Customer satisfaction has become the center of attention for bankers since it represents an important variable in a more competitive market (Tao, 2014). Banking experience has proven that achieving a decent rate of customer satisfaction is less willing to change its banking relation, hence a satisfied customer is of great importance for banks nowadays (Tahseen et al., 2013; Tao, 2014). Statistics show that customers that are faithful and satisfied require five times less effort, time, and money compared to new customers. Indeed, customer satisfaction mediates the impact of service quality on loyalty (Karatep, 2011).

Satisfaction is a relevant predictor of loyalty, where customers that are more satisfied tend to be more loyal and are more likely to recommend the bank to new customers by positive word of mouth (Matos & Rosa, 2013; Hoyer & MacInnis, 2001). The founder of Apple, Steve Jobs

once stated *“Get closer than ever to your customers. So close that you tell them what they need well before they realize it themselves”*. This could be interpreted as those banks that operate close to their customers and their needs are more likely to increase the overall satisfaction, hence increasing the banks’ relevance in the trust industry simultaneously as their profit increases. Moreover, satisfied customers are more likely to be willing to pay a higher price for their products compared to new ones (Koraus, 2011; Titko and Lace, 2010). Customers that consider their current bank as an unserious business relationship are more likely willing to leave for a new supplier, hence the importance of aiming to achieve high customer satisfaction (Bilan 2013).

Most organizations in the majority of industries pay particular attention to customer satisfaction (Khattack and Rehman, 2010). Researchers have shown that service quality, customer perceived value, and satisfaction are crucial factors for companies to gain a competitive advantage (Bolton and Drew, 1991; Zeithaml and al, 1996). These factors are becoming a top priority concern for managers in the increasingly intense banking industry competition and customer-centered market. Furthermore, quality has been recognized as a strategic tool for competitors to reinforce a bank's competitive advantage and improve their profitability (Reicheld, 1993; Sasser et al., 1995; Stiakakis et al., 2009). Halstead et al. (1994) & Karafolas (2016), states that customer satisfaction is the outcome of a comparison between the expectation of the customer and the performance which is perceived by the customers. In other words, perceived performance could be interpreted as equivalent to the expectations and confirmation which may lead to customer satisfaction or customer dissatisfaction.

Cooperative banks in France are considered to have a major impact on the finance area and the French economy (Karafolas, 2016). French banks differ in comparison with other European states, because of the high number of cooperative banking groups which have a high share in the economy and finance (Karafolas, 2016; EACB, 2021). Over the last 20 years, cooperative banks in France have been considered dynamic because their market share has grown by offering simple and understandable products (Karafolas, 2016). Moreover, the cooperative banks in France were innovative in terms of launching online banking services in an early stage (Mbama, 2018). Overall, cooperative banks are being highlighted because of the existing underlying trust between the bank and its customers by having democratic governance and social commitment (Karafolas, 2016).



## 1.2. Research Gap & Relevance

There are previous studies that tried to identify essential drivers of customer satisfaction (Anderson et al., 2008; Chavan & Ahmed, 2013; Singh & Kaur, 2011; Zameer et al., 2014). However, those existing studies have been conducted in different ways, for example, categorizing customers in smaller groups based on age or the amount of time a customer interacts with their bank during a month. The conclusions and results from those studies are considered to have the same outcome, highlighting the importance of customer satisfaction. Furthermore, those previous studies do not explain or highlight which underlying variables are considered the most influential and why one specific variable might have a bigger impact on customer satisfaction compared to another. Earlier studies have focused on traditional banks in various countries, which is considered as a different business model compared to the cooperative banking model and how the organization works with their customers.

Existing research has primarily focused on analyzing the perceived quality and perceived value in and out of the banking industry context on traditional banking model rather than cooperative banking (Roig and al, 2006; Seiler et al., 2013; Parasuraman et al. 1988; Zameer et al., 2014). Moreover, the weight of cooperative banks is important in the French banking system since they collect more than half of deposits and are at the origin of nearly half of loans: 62,3% domestic deposit, 60,5% loans, 76,7% mortgage market shares (EACB, 2021). Due to the significance of the market share covered by Cooperative banks in France, studying customer satisfaction on this banking model is relevant.

Furthermore, entrepreneurs and small-/medium corporates also called “SMEs”, are often a recurring discussion by researchers when the focus is on the banking industry, and more explicit cooperative banking in connection to the country’s economic development (Hasan et al., 2017; Mkhaiber et al., 2021). SME companies are considered to be the biggest employer in most countries, for example, Germany, France, Japan, and the UK (Mkhaiber et al., 2021). However, for SME companies to be successful and reach their full potential, they are in most cases required to have a good relationship with their cooperative bank, due to their reliance on credits and funding to grow (Karafolas, 2016). Allowing SMEs to grow often increases the need for hiring more workforce, thus improving the national economy and reducing unemployment (Mkhaiber et al., 2021). However, this thesis does not aim to focus on SMEs but rather highlight

the importance and relevance of conducting a study focusing on customer satisfaction and cooperative banking, because of their impact on the national economy through funding other actors, directly and indirectly.

Banks can be described as financial intermediaries between borrowers and depositors. There are a variety of banking models (Karafolas, 2016). A commercial bank or traditional bank is formed for commercial purposes and hence its primary aim to earn profit from its financial business (Cambridge dictionary, commercial bank entry). On the other hand, cooperative banks are owned by the members for a common purpose, which is to provide financial alternatives to agriculturists, SMEs, fragile retail customers, and finance mainly the local economy (Mkhaiber et al., 2021). It relies on the principles of cooperation, open membership, democratic decision-making, and mutualist values. All cooperative banks share a common characteristic: they are member-focused. One of the main differences of Cooperative Banking compared to traditional banking models relies on corporate governance but also banks' commitment to ethics and social responsibility (Karafolas, 2016; Guzmán et al., 2020).

Moreover, the satisfaction culture remains a pillar of the cooperative model of banks (Karafolas, 2016). Cooperative banks are often studied among or directly compared with traditional shareholder-owned banks (Karafolas, 2016). In our study, we will focus only on cooperative banking retail customers, which are private, and their satisfaction with their cooperative bank. Retail banking, also known as consumer banking, is a way for individual consumers to manage their money (Cambridge dictionary, retail banking entry). As for services or products, banks serving customers of the retail market are providing: credit loans, deposit services, savings accounts, mortgages, credit cards, mobile and website applications.

This study has the ambition to identify and explain which independent variable(s) might have the highest impact on customer satisfaction on cooperative banking models and the underlying cause of it, with a focus on the French market. Cooperative banking model is considered to have a majority in representation in terms of market share, hence the relevance of this study (EACB, 2021).

Authors/Articles	Purpose	Design/Method	Result
Anderson, S., Klein, L., & Widener, S.K. (2008). <i>Drivers of Service Satisfaction: Linking Customer Satisfaction to the Service Concept and Customer Characteristics. Journal of Service Research</i> , 10 (4), 365-381.	The “service-dominant logic” focuses on the firm and the customer co-creating value, as defined by the customer.	Using data from the U.S. airline industry	Consistent with Vargo and Lusch's premises that “the customer is always a co-creator of value” and that value is “uniquely and phenomenologically determined by the beneficiary,” the conclusion that a parsimonious model of customer satisfaction demands consideration of both the service concept and customer characteristics is reached
Chavan, J., & Ahmad, F. (2013). <i>Factors Affecting On Customer Satisfaction in Retail Banking: An Empirical Study. International Journal of Business and Management Invention</i> , 2 (1), 55- 62.	Customer satisfaction which is a significant matter for most marketers	Survey of 300 respondents	Results show that there was a relationship between service quality and customer satisfaction. On the other hand, there was no relationship between customer satisfaction and tangible aspects of the service environment.
Singh, J., & Kaur, G. (2011). <i>Customer satisfaction and universal banks: an empirical study. International Journal of Commerce &amp; Management</i> , 21 (4), 327-348.	The purpose of this research paper is to find out the factors that influence customer satisfaction as regards the working of universal banks in India.	Survey of 456 respondents. Data were collected through a well-structured questionnaire.	The study shows that customer satisfaction is affected by seven factors, namely 1) employee responsiveness, 2) appearance of tangibles, 3) social responsibility, 4) services innovation, 5) positive word-of-mouth, 6) competence, and 7) reliability.  The results of multiple regression evaluate that three variables, namely social responsibility, positive word-of-mouth, and reliability, are statistically significant. (in the model at five percent significance level that influences the customer satisfaction.
Zameer, H., Ali, S., Nisar, W., and Amir, M. (2014). <i>The Impact of the Motivation on the Employee's Performance in the Beverage Industry of Pakistan, International Journal of Academic Research in Accounting, Finance, and Management Studies</i> , 4(1), pp. 293-298.	This research paper investigates the drivers of employee motivation to high levels of organizational performance.	Survey questionnaires to a sample of teaching staff members who were teaching in different scientific departments in Hayat University for Science and Technology.	The result indicates that motivation is a significant factor in affecting academic staff's performance as well as ultimately organizational performance in Hayat University.
Roig, Juan & Sánchez-García, Javier & Moliner, Miguel & Monzonís, Jaume. (2006). <i>Customer perceived value in banking services. International Journal of Bank Marketing</i> . 24. 266-283. 10.1108/02652320610681729.	This research aims to find out the dimensionality of the concept of perceived value in the banking sector.	A survey of 200 customers of financial entities	Perceived value is found to be a multidimensional construct composed of six dimensions, namely functional value of the establishment, functional value of the personnel; the functional value of the service; functional value price; emotional value; and social value.
Seiler, V., Rudolf, M. & Krume, T. 2013, <i>"The influence of socio-demographic variables on customer satisfaction and loyalty in the private banking industry", International journal of bank marketing</i> , vol. 31, no. 4, pp. 235-258.	In this research, the authors investigate the impact of customer demographics on service value, customer satisfaction, as well as customer loyalty in the private banking industry.	The authors estimate a structural equation model with the help of partial least squares (PLS). The authors conduct an analysis of variance (ANOVA) to test for differences in the means of the constructs to investigate the impact of socio-demographic variables.	The authors find that customer satisfaction has a positive influence on customer loyalty. On the other hand, service value has no significant direct effect on customer loyalty; the influence of service value on customer loyalty is completely mediated by customer satisfaction.

Hasan et al., 2017 I. Hasan, K. Jackowicz, O. Kowalewski, L. Kozłowski <i>Do local banking market structures matter for SME financing and performance? New evidence from an emerging economy J. Bank. Finance</i> , 79 (2017), pp. 142-158.	This paper analyzes the relationship between local banking structures and SMEs' access to debt and performance	Usage of a unique dataset on bank branch locations in Poland (firm-, county-, and bank-level data)	The result shows that there is a strong position for local cooperative banks to facilitate access to bank financing, lowers financial costs, boost investments, and favours growth for SMEs.
Mkhaiber, A. & Werner, R.A. 2021, <i>"The relationship between bank size and the propensity to lend to small firms: New empirical evidence from a large sample"</i> , <i>Journal of international money and finance</i> , vol. 110, pp. 102281.	Small and medium-sized firms are the biggest employer in many countries such as Japan, UK and Germany.  The research paper examines the question of whether there is a significant relationship between bank size and customer size as well as whether bigger or smaller banks are more likely to be supportive to small and very small businesses regarding lending loans.	The data covers over 14,000 active and inactive U.S. banks of all sizes (from 1994 to 2013).	The thesis shows that the results are strong and indicate an inverse relationship between bank size and the propensity of banks to provide to small businesses.
Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1985) <i>'A Conceptual Model of Service Quality and Its Implications for Future Research, Journal of Marketing</i> , 49(4), pp. 41–50. DOI: 10.1177/002224298504900403.	In the 1980s, the attainment of quality in products, as well as services, has become a pivotal concern. By marketers, quality intangible goods have been defined and measured in comparison to quality in services which is largely undefined and thus unresearched.	Executive exploratory investigation in form of interviews & focus group interviews	The authors stated that there is a need to develop and measure customer's service quality perceptions. Furthermore, the authors conducted 10 evaluative criteria which transcend a variety of services. Additionally, the aim of the thesis of the service quality model is that customers quality perceptions are impacted by a series of distinct gaps occurring on the marketer side.
Karafolas, S. 2016, <i>Credit cooperative institutions in European countries</i> , Springer, [Cham], Switzerland.	This book aims to explain Cooperative banking in European countries.	This book includes a comparative analysis of credit cooperative systems in 23 European countries.	The book reviews the evolution and current model of each credit cooperative system as well as its importance for the national and local banking markets.
Guzmán, C., Santos, F.J. & Barroso, María de la O 2019; 2020, <i>"Analysing the links between cooperative principles, entrepreneurial orientation and performance"</i> , <i>Small business economics</i> , vol. 55, no. 4, pp. 1075.	This study investigates a theoretical model that relates cooperative principles, entrepreneurial orientation, as well as performance.	Survey on 155 worker cooperatives.	The authors state that the cooperative principle positively impacts the performance of the cooperative (directly and via entrepreneurial orientation).

Table 1. Previous research on customer satisfaction

### 1.3. Purpose and research question

In this research, we are building a theoretical framework that analyses customer satisfaction for retail clients of a cooperative bank in France. By adopting a quantitative approach, we want to identify which characteristic of the relationship between a customer and its cooperative bank has the highest impact on customer satisfaction. Our model will be based on the duality of customer satisfaction from the perceived quality and perceived value; two fundamentals concepts in marketing.

Perceived quality can be defined as the customer's perception of the overall quality or superiority of a product or service concerning its intended purpose, relative to alternatives (Bei et al., 2001). Perceived quality is first, a perception by customers (Aaker, 1991; Bei et al., 2001). On the other hand, perceived value is a trade-off between what the customers get from a service and what they buy to get the service (Zeithaml, 1988 & 1994).

From a theoretical perspective, the analysis of customer satisfaction in the cooperative banking industry in France is relevant as the model of organization and the purpose of the business of Cooperative banks differs from other forms of banking actors. Whereas traditional banks are focusing on creating value for their shareholders, the main objective for Cooperative banks is to meet the needs of their members and stakeholders (Castelló et al., 2018). In this research, we will design the theoretical framework from a cooperative banking customer perspective of the French banking retail market.

From a practitioner perspective, identifying such an impact on customer satisfaction will help Cooperative Banks perform and sustain their competitive advantage. Indeed, by merging the results of the outcomes of this study with strategic management and practices, cooperative banks could increase their performance as customer satisfaction determines behavioral models that positively influence business results (Mbama, 2018; Tao, 2014). Against the background of the above, the research question for this study is formulated as follows:

**What are the relationships between perceived quality, perceived value, and customer satisfaction? *A study of the cooperative banking industry in France.***

## 1.4. Research structure

To tackle this study, we used the following structure:

Section 1, the introduction;

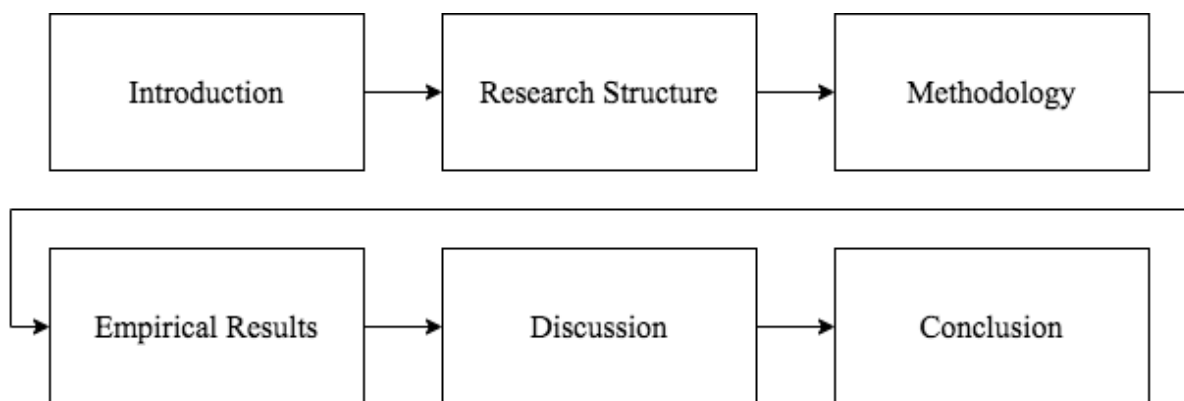
Section 2, the theories review and theoretical model development;

Section 3, the methodology and data presentation;

Section 4, empirical results and post-hoc analysis;

Section 5, discussion, interpretation and limitations;

Section 6, conclusion and recommendations.



*Figure 1.* Research Structure

# 1. Literature Review

This chapter will present the literature that served as the foundation of this thesis. The definition of customer satisfaction will first be presented followed up with the Cooperative Banking Customer Satisfaction Model, explaining the perceived quality and perceived value. Furthermore, each variable that is being examined in this paper will be presented with a definition and followed up with a hypothesis. This thesis has studied the following variables: *Accessibility, Reactivity, Reliability, Trust, Employee Competences, and Price Transparency.*

## 2.1. Definition of Customer Satisfaction

The notion of customer satisfaction has attracted attention from academics and managers for more than three decades as customers are the primary source of revenue of most firms. It has been identified that customer satisfaction is a necessary condition to customer loyalty, which is the main factor for profit growth and performance (Reichheld, 1993). Kotler and Keller (2012) define customer satisfaction as a “person’s feeling of pleasure or disappointment which resulted from comparing a product’s perceived performance or outcome against his/ her expectations”. Customer satisfaction is a direct result of purchase and use (perceived quality) resulting from the buyers' comparison of the rewards, and costs of the purchase concerning the anticipated consequences (perceived value). Satisfaction can be constructed by the cognitive process of comparing what a customer receives against what a customer gives up to acquire the service (rewards/costs). Moreover, satisfaction has been identified as an emotional feeling resulting from an evaluative process (Westbrook, 1981). Align with this perspective, customer satisfaction is defined as an emotional response that results from a cognitive process of evaluating the service or product received against the costs of obtaining the service (Woodruff, 1997). In our study, we will differentiate the variables of customer satisfaction into two categories.

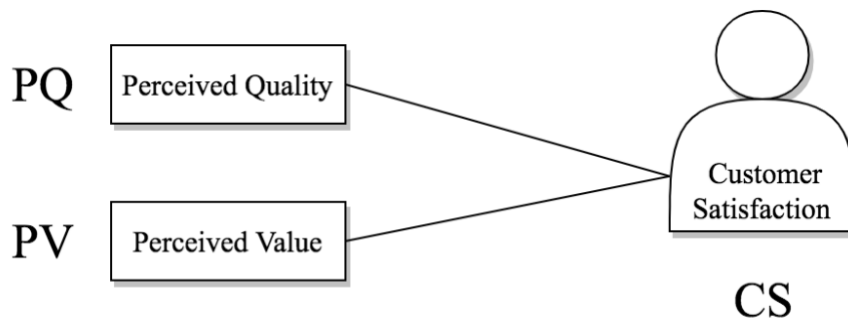


Figure 2. Customer Satisfaction for cooperative banking customers (Baqué, Ferati, Singh, 2021)

## 2.2. Perceived Quality

Academics have come to a consensus on two aspects regarding perceived quality: quality of service has been a difficult notion to define and measure, but it should be assessed from a customer perspective (Parasuraman, et al., 1988). The definition of perceived service quality represents the difference between customers' expectations and their perceptions of the service performance (Parasuraman, et al., 1988).

The SERVQUAL model is an illustration of the multidimensions that are to be included in quality (Parasuraman, et al., 1988). Also called the RATER model, it has lately been developed to measure the quality of service by classing them into five categories: Reliability, Assurance, Tangibles, Empathy, Responsiveness.

The SERVQUAL model had originally ten dimensions of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, tangibles (Parasuraman, et al., 1985). Furthermore, Parasuraman et al. (1994) stated that the primary purpose of measuring perceived service quality is to explain the variance on some dependent construct. This model initially looked at four different service industries such as banking, credit cards, repairs and maintenance, and telephone companies.

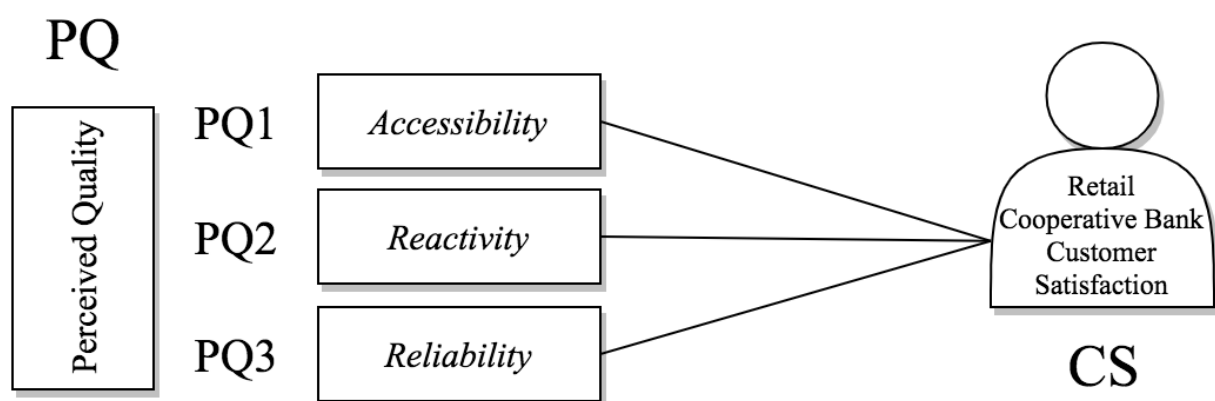


Figure 3. Perceived Quality for cooperative banking customers (Baqué, Ferati, Singh, 2021)



### **2.2.1 Accessibility (PQ1)**

This variable involves approachability and ease of contact, meaning banking service is easily accessible on all the platforms (physical presence) of the branch or ease access on digital platforms (Mbama, et al., 2018). Digital banking includes electronic banking services like telephone banking (t-banking), electronic banking (e-banking), and mobile banking (m-banking). Furthermore, waiting time to receive service is not extensive (online or at a branch), convenient hours of physical operation, convenient location of service facility (Mbama, et al., 2018). Over the past two decades, technology and digitalization have changed the way clients interact with their bank. Therefore, customers consider internet banking services more common and a part of the total accessibility to their bank (Hossain & Leo, 2009). Thus, it creates new opportunities for the banking industry, where digitalization banking matters can be handled remotely, for example paying bills and transferring money, hence saving time for their customers by not needing the advice to visit the local bank physically (Campbell & Frei, 2010; (Mbama & Ezepue, 2018).

Furthermore, companies in general and banks specifically often try to develop and make their customers use self-service technology, hereafter mentioned as SST (Collier & Kimes, 2012). The purpose of using SST is to lower labor costs for an organization, simultaneously as the customers' service experience improves by allowing customers to do some parts partly, or completely by themselves with help of developed technology (Mbama & Ezepue, 2018). However, customers that are expected to use SST in their daily banking need to feel that they get something in return (Collier & Kimes, 2012; Meuter, et al., 2000). Cooperative banks that have developed and enabled friendly accessible technology, for example, mobile banking that easily can be used for customers through their phone for daily banking purposes. Money transfer, payment, and withdrawal, often results in a reward of being "convenience" for the customer, thus saving time and money. Creating possibilities for customers to conduct their business by themselves whenever they want, hence removing the independence of adapting to open banking hours might be considered to increase customer satisfaction (Campbell & Frei, 2010; Collier & Kimes, 2012).

By providing online banking for the customers, enables the banks to receive higher customer retention rates (Campbell & Frei, 2010). Clients are more active in banking activity by a higher performance of transactions caused by online banking, and thereby clients obtain more products

(Xue, et al., 2011). On the other hand, banks have to decide whether to close their physical office or combine it as a complement for more complex advisory, for example when a family is about to buy a house and need mortgage loans (Diener & Špaček, 2020). According to Tam and Oliveira (2017), mobile banking has become important in the past years, with increased customer traffic, forcing banks to use mobile banking as a part of their banking strategic tool to further improve and develop customer interaction, indirectly affecting customer satisfaction.

⇒ Hypothesis 1: *Accessibility increases customer satisfaction for cooperative banking customers.*

### **2.2.2. Reactivity (PQ2)**

This variable means the willingness and readiness of employees and digital platforms to provide service. It involves efficient mailing and communication with the customers, answering emails, phone calls quickly and frequently (Grandey et al., 2011; Tahseen & Al Lawati, 2013).

Previous studies have shown that a high level of responsiveness is key for customer satisfaction (Grandey et al., 2011). It has also shown that customers tend to be dissatisfied the longer the response time is on their inquiries (Grandey et al., 2011). Over the past decade companies, and more explicit financial industry that is considered to operate in a “trust-area” has determined to develop their processes to be quicker in their responsiveness towards their customers, through advisors and systems because it has shown to be a crucial link between responsiveness and customer satisfaction (Tahseen & Al Lawati, 2013). Furthermore, previous research has shown that customers’ expectations of receiving a response tend to overestimate the actual time they have to wait after contacting a bank (Garceia et al., 2012). Customers that for example have to wait less than 15 minutes to get the response for their inquiry might perceive the waiting time to be more than an hour, thus affecting the relationship negatively and customer satisfaction. However, distraction is an action that could be used to handle the customers’ perception of waiting time, by making customers feel that time goes faster than it does (Davis & Vollmann, 1990). A distraction that could be used by the banking industry while having a customer waiting for a response on their inquiry is to enable another kind of service while waiting, for example asking customers other relevant questions connected to their financial situation (ibid.)

⇒ Hypothesis 2: *Reactivity increases customer satisfaction for cooperative banking customers.*

### **2.2.3. Reliability (PQ3)**

This variable involves the reliability and consistency of performance from the bank over time. It means that the bank performs the service right the first time (Iberahim et al., 2016). Furthermore, it also means that the bank honors its promises during the relationship with its customers. It can involve accuracy in billing or product using, keeping banking records correctly, or performing the service at the designated time (ibid.)

Reliability covers the ability to deliver a certain level of service with an expected standard every time it is required by customers (Iberahim et al., 2016). Furthermore, reliability can be seen in how an organization solves customer services problems, performing accurate services from the beginning to the end, providing services within agreed time as well as maintaining an immaculate record (Iberahim et al., 2016). Stiakakis and Georgiadis (2009) highlight reliability as a key criterion of electronic service quality. Moreover, reliability includes an error-free order of fulfillment, immaculate record, accurate quote, accurate billing, and calculation of commissions of the service for the customer (Yang and Fang, 2004).

Two main factors that affect banking services are consistency and dependability (Iberahim et al., 2016). Firstly, consistency suggests uniformity or compatibility between things which means that the quality is always identical, things are done precisely as well as the standards have to be the same (ibid.). Additionally, service quality consists of uniformity of service outcome which is determined by customers. Therefore, banks are responsible to explain to their customers the changing needs consistently (Frei et al., 1999). Secondly, dependability suggests that the assurance of providing services is done as in the expectation of the customers (Iberahim et al., 2016). Additionally, trust is another fundamental factor that influences the adoption of different types of services in electronic banking (Rexha et al., 2003).

⇒ Hypothesis 3: *Reliability increases customer satisfaction for cooperative banking customers.*

## 2.3. Perceived Value

The concept of perceived value has only received increasing attention in recent years. The definitions of perceived value generally illustrate a trade-off between what the customers receive from a service and what they are giving to acquire the service (Zeithaml, 1988). Lovelock (2004) suggests that perceived value can be enhanced by either adding benefits to the service or by reducing the outlays associated with the purchase and use of the service. Price is often used as the key measure to represent what customers have to sacrifice to obtain the service. However, it is stated that non-financial costs such as time, physical and emotional aspects are also considered as the outlays to obtain the service and can be identified as independent variables about perceived value (Lovelock, 2004). In other words, the perceived value can be conceptualized on two approaches: one as the benefits received (economic, social, and relational) and another of sacrifices made (price, time, and convenience) by the customer. Sanchez et al., (2006) developed a multidimensional model that divided perceived value into six categories: installations, professionalism, quality, price, emotion, social.

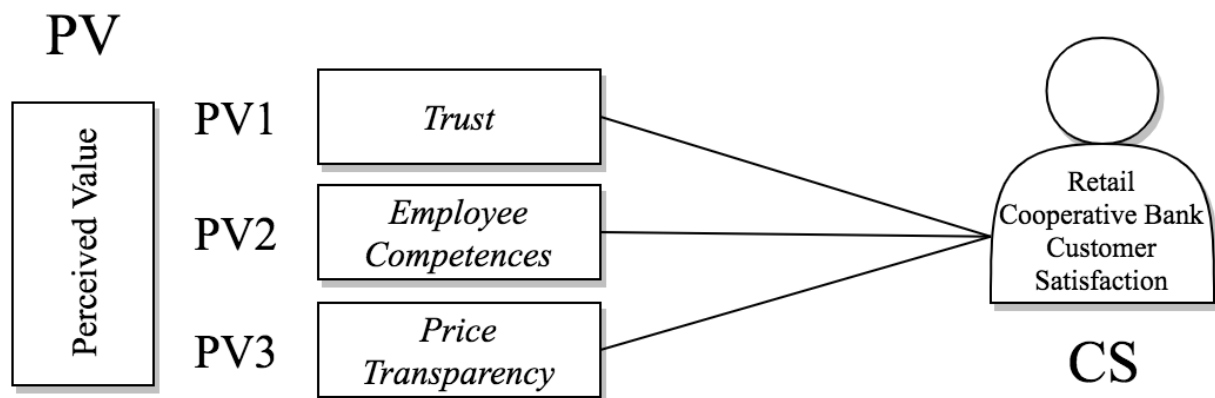


Figure 4. Perceived Value for cooperative banking customers (Baqué, Ferati, Singh, 2021)

### 2.3.1. Trust (PV1)

Trust in this paper refers to the extent to which customers can rely on fair use of their data and given information from their bank while maintaining privacy (Wälti, 2012). Furthermore, based on how the customers' bank keeps their promises in terms of requested service and time, also affects trust (Wälti, 2012). Since trust establishes an important bond between the brand and

customers, it is one of the determinants of brand loyalty and customer satisfaction. According to Wälti (2012), financial institutions need to have trust from their customers to work. Trust refers to a bank's clients' belief in power, justice, referring to the employees' honesty in regards to their relationship with their bank. If the customers do not trust their bank, they are more likely not to conduct business and directly affect the banks' profit (Gill et al., 2006). Furthermore, loyalty in both ways between customer and bank is considered essential for maintaining a high level of trust (Robison, 2008). Banks that keep themselves informed regarding their customers' financial situation and work proactively by helping their long-term loyal customers in terms of understanding their economic situation and raising their confidence (Robison, 2008). Cooperative banks that allow themselves to work proactively towards their customers in terms of advising an early stage when customers have a difficult financial situation, or providing well-informed information before making an investment decision enables increased trust towards their bank and the financial industry. However, even if a bank tries to act proactively towards their clients to help with their client's financial situation, there is always a risk where specific advice has not been completely understood by the customer or even inappropriate, which might result in worsening the relationship between the bank and client, thus affecting trust negatively and indirect customer satisfaction.

Armstrong (2012) states that overall trust in the banking industry has decreased since the financial crisis 2008, which has put the banks in a difficult position. Furthermore, the public lack of trust in the banking system affects the banks' possibility of providing capital and investments to their customers, which results in banks reducing their lending and driving the interest rate up, thus negatively affecting customer satisfaction (Thornton, 2009). Experts claim that it is crucial for the banking industry, in general, to regain a high level of trust, and to have a functioning financial service in the long term (Shim et al., 2013). Furthermore, previous studies show that more than half of the banks' customers prefer a bank that they trust rather than one that might give them a better return on their investments while having a low level of trust (Sanjit Kumar et al., 2011). The variable *trust* highlights the importance of having a good relationship between a bank and customer, to increase customer satisfaction, enabling more possibilities to conduct business and increase profit, simultaneously securing the banks' relevance for the future.

⇒ Hypothesis 4: Trust increases customer satisfaction for cooperative banking customers.

### **2.3.2. Employee Competences (PV2)**

Employee value is considered to be the reliability of the information given by the advisors, and the knowledge of the service an advisor provides while having a certain level of professionalism during communication exchange with their customer (Delcourt et al., 2011). Furthermore, competence is considered as the knowledge and behavior of the bank's employees, such as product knowledge and emotional intelligence (Grandey et al., 2011). Previous studies claim that employees with a high level of emotional intelligence often tend to improve the customer's perception of the advisor's service that is being recommended for a specific client's need, which indirectly affects customer satisfaction (Delcourt et al., 2011). Having the ability to communicate with the customer and possessing emotional competence tends to result in better interaction with the bank's customers and therefore easier to analyze and identify the needs, which in turn reflects on the customers' perspective of having an advisor that is interested and competent in their financial situation. Hagaer & Gonczi (1996), states that competence is skills and knowledge possessed by the employees, with the ability to undergo analyzes and solve problems, simultaneously as they have the right attitude towards their customer. It takes competence to know how to act with different people and being able to act politely under pressure while delivering a high level of service.

Employee's ability to empathize with the customers and their needs has become more important in the financial industry and affects the satisfaction of a customer (Tahseen & Al Lawati, 2013). Studies show that employees that have a positive attitude towards their work are often seen to reflect on customers and their satisfaction, because of employees being symbols of the company (Grandey et al., 2011). This is often mentioned as the "service profit chain", which means that a company that has satisfied employees tends to increase satisfaction levels of their customer, by being more effective in faster response time and ability to quickly help their customers by answering their questions. Furthermore, having competent employees enables efficiency in the workload from the managerial perspective since they are to a large extent self-going, thus being competent enough to make the right decisions (Cohen, 2013). A high level of competence might result in employees feeling more important for the bank by contributing to a larger extent and without having a manager that oversees all the decision that are being made, thus affecting positively the advisers private internal feeling of satisfaction that later reflects on how the customer is being helped, hence increasing customer satisfaction.

⇒ Hypothesis 5: Employee competence increases customer satisfaction for cooperative banking customers.

### **2.3.3. Price Transparency (PV3)**

This variable covers transparency and explanations regarding the Quality value is the amount perceived which customers are willing to pay for a banking service or product based on their perception about the product before the transaction (Ferguson & Ellen, 2013; Matzler et al., 2006). Customers have expectations about the value of a product or service which can be seen as perceived price (Matzler et al., 2006; Lichtenstein et al., 1990). Thus, reasonability, transparency, and fairness in banks' service charges are a matter for customers (Kaura et al., 2014; Kaura et al., 2013). According to Bolton et al. (2003) and Xia et al. (2004), fairness is a judgment of an outcome that is acceptable such as market prices. Therefore, price fairness judgment can be first the outcome, and secondly, the procedure that leads to the outcome (Kukar-Kinney et al., 2007). Additionally, people judge fairness in pricing as an exchange relationship between rewards in proportion to what they invested in the relationship (Herrmann et al., 2007).

The price has a function of information to the customers if they make a purchasing decision and when they evaluate a service (Ryu and Han, 2010). Overall, under the term of price, the amount of cash is charged for a product or service (Khandelwal and Bajpai, 2012). However, many researchers came up with the conclusion that the customer's perceived price is not equal to the actual price (Kim et al., 2012; Bei and Chiao, 2001; Lichtenstein et al., 1988). Price perception can be simplified by the adaptation level theory as well as assimilation/contrast theory (ibid.). The adaptation theory explains that a consumer attributes an adaptation level price for a specific product or service. This becomes a reference for evaluating the actual price of a product (Oh, 2003). On the other hand, the assimilation/contrast theory suggests that consumers have a scope of acceptance, rejection, and neutrality in terms of the difference between expectations and actual results determining in case assimilation or contrast effects will grow (Anderson, 1973). Overall, the perception of price is subjective of the customer's decision if the perceived price for a product or service, in comparison with the competitor's reference prices is reasonable or not (Han and Hyun, 2015).

The customer evaluates the acceptability of the price as “too high”, “acceptable”, or “reasonable” (Oh and Jeong, 2004). Furthermore, hidden charges or secrecy are perceived as price unfairness because the customers have the impression that the organization has something to hide (Ferguson & Ellen, 2013). Therefore, banks provide high transparency to their customers about their pricing structure, otherwise, under an informed purchase decision, the customers determine the reasonableness of the price based on their understanding of an expected fair price (Oh, 2003).

⇒ Hypothesis 6: Price transparency increases customer satisfaction for cooperative banking customers.

## **2.4. Literature Summary**

### **2.4.1. Customer Satisfaction Model for Cooperative Banking customers**

Our conceptual framework has three main parts: (1) customer satisfaction in the cooperative bank (CS), (2) Perceived quality (PQ), and (3) perceived value (PV) as is illustrated (above in Figure 2.4.). Overall, in this thesis, we differentiate the variables of customer satisfaction into two categories; perceived quality and perceived value. In our study, we focused on six independent variables. Three variables are perceived quality covering Accessibility (PQ1), Reactivity/ Responsiveness (PQ2), and Reliability (PQ3). Furthermore, three variables from perceived value cover Trust (PV1), Employee Competences (PV2), and Price Transparency (PV3). The main definition of customer satisfaction refers to a person’s feeling of pleasure or disappointment which is a result of comparing a products’ perceived performance or result against their own expectations (Kotler and Keller, 2012). The perceived quality (hereinafter called PQ) is defined by Parasuraman et al. (1988) as the difference between customer’s expectations and their perceptions of the service performance. Accessibility (PQ1) which is the first variable deals with approachability and ease of contact (Mbama et al., 2018). In other words, whether the banking service is comfortably accessible on all types of platforms such as the physical presence or ease of access on digital platforms (Mbama et al., 2018). Reactivity (PQ2) which is the second variable deals with the willingness and readiness of employees, as well as digital platforms to deliver service (Grandey et al., 2011; Tahseen & Al Lawati, 2013). It includes efficient mailing and communication with their customers in the form of answering



emails, phone calls rapidly and frequently (Grandey et al., 2011; Tahseen & Al Lawati, 2013). Reliability (PQ3) which is the third variable deals with the ability to provide a certain level of standardized service that can be required anytime by customers (Iberahim et al., 2016). The perceived value (hereinafter called PV) displays a trade-off between what the customers get from a product or service and what they are paying to receive the product or service (Zeithaml, 1988). Trust (PV1) which is the first variable deals with the extent value to which customers can expect on trustful and careful use of their data and given information from their bank while keeping privacy (Wälti, 2012). Employee Competences (PV2) which is the second variable deals with the reliability of the information set by the advisors as well as the competence of the service an advisor contributes, while having a certain level of proficiency and skills during communication with their customers (Delcourt et al., 2011). Price Transparency (PV3) is the third variable that deals with the expectations about the value of a product or service, which can be determined as perceived price (Ferguson & Ellen, 2013; Matzler et al., 2006).

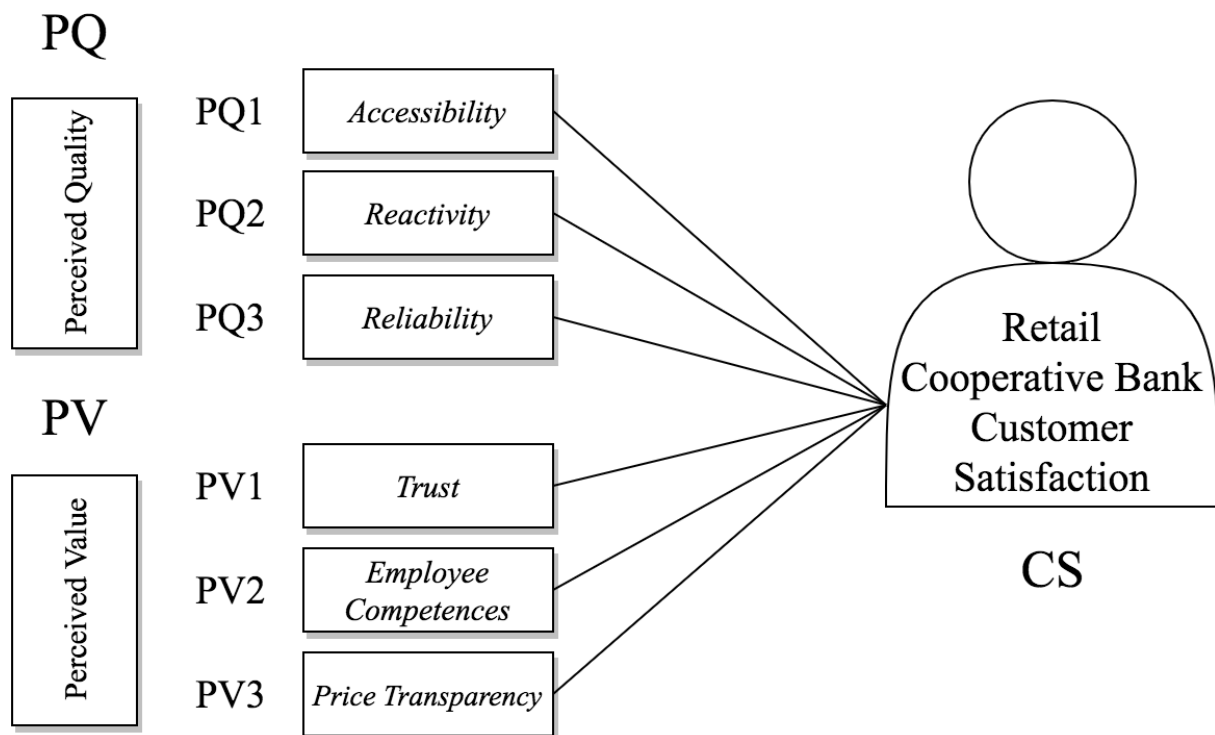


Figure 5. Theoretical Model of Customer satisfaction in the cooperative banking industry (Baqué, Ferati, Singh, 2021)

#### 2.4.2. Hypotheses summary

H-PQ	<b>Perceived Quality</b> increases customer satisfaction for cooperative banking customers.
H1	<b>Accessibility</b> increases customer satisfaction for cooperative banking customers.
H2	<b>Reactivity</b> increases customer satisfaction for cooperative banking customers.
H3	<b>Reliability</b> increases customer satisfaction for cooperative banking customers.
H-PV	<b>Perceived Value</b> increases customer satisfaction for cooperative banking customers.
H4	<b>Trust</b> increases customer satisfaction for cooperative banking customers.
H5	<b>Employee competences</b> increases customer satisfaction for cooperative banking customers.
H6	<b>Price transparency</b> increases customer satisfaction for cooperative banking customers.

*Table 2.* Hypotheses Table

## **2. Methodology**

In this chapter, our choice of subject will be discussed. Furthermore, this chapter will give the reader a brief overview of the methodological parts to easier understand the process that has been conducted in order to shape this research. After a discussion of the Choice of the subject follows Research Design, Data Collection, Quantitative Analysis and Limitations, and Ethical Consideration.

### **3.1. Choice of the subject**

Our focus is to determine the relationship between perceived quality, perceived value, and customer satisfaction in a French cooperative bank, using six underlying variables. The reason behind this is because of undergoing events within the banking industry in general, derived from technological developments, for example, new ways of interacting with its customers, besides physical meetings. A high level of customer satisfaction is believed to be crucial for maintaining and increasing future profitability, simultaneously remaining relevant to customers in a trusted industry, like banking.

Inspiration and ideas have been collected through reading different articles covering financial markets, primarily French cooperative banking. Furthermore, the undergoing digitalization and new tech companies are changing the existing rules which create new ways to integrate and do business with its customers. By reading several articles, discussing with people that work in the financial industry, and reflecting on our own experience from working in the financial industry, a research gap was identified and the research question of this thesis was created to fill that gap.

### **3.2. Research Design**

Our research question for this thesis implies a search to explain an underlying causal relationship between six different variables within perceived quality, perceived value, and customer satisfaction, hence the deductive approach is therefore considered the most suitable to use (Saunders et al., 2009). For our research to provide findings that ensure a certain level of reliability, a structured methodology is required by explaining our process step by step (ibid.).

Furthermore, this research relies on previous knowledge and theoretical considerations, from which our hypotheses are developed and empirically tested (Bryman & Bell, 2011). Customer satisfaction in the banking industry has previously been examined to a large extent, while observing the review of literature, thus creating a solid theoretical background in the area. However, customer satisfaction in cooperative banking concerning perceived quality and perceived value with underlying variables has not been examined in a broader theoretical construct, thus the need for an empirical assessment to determine whether there is a relationship between the underlying variables and customer satisfaction or not. Theoretical construct is created for further testing by having a hypothesis for each of our six identified variables. Consistent with our approach and research, the study has progressed as illustrated below in figure 5, adapted and inspired by Saunders et al. (2009).

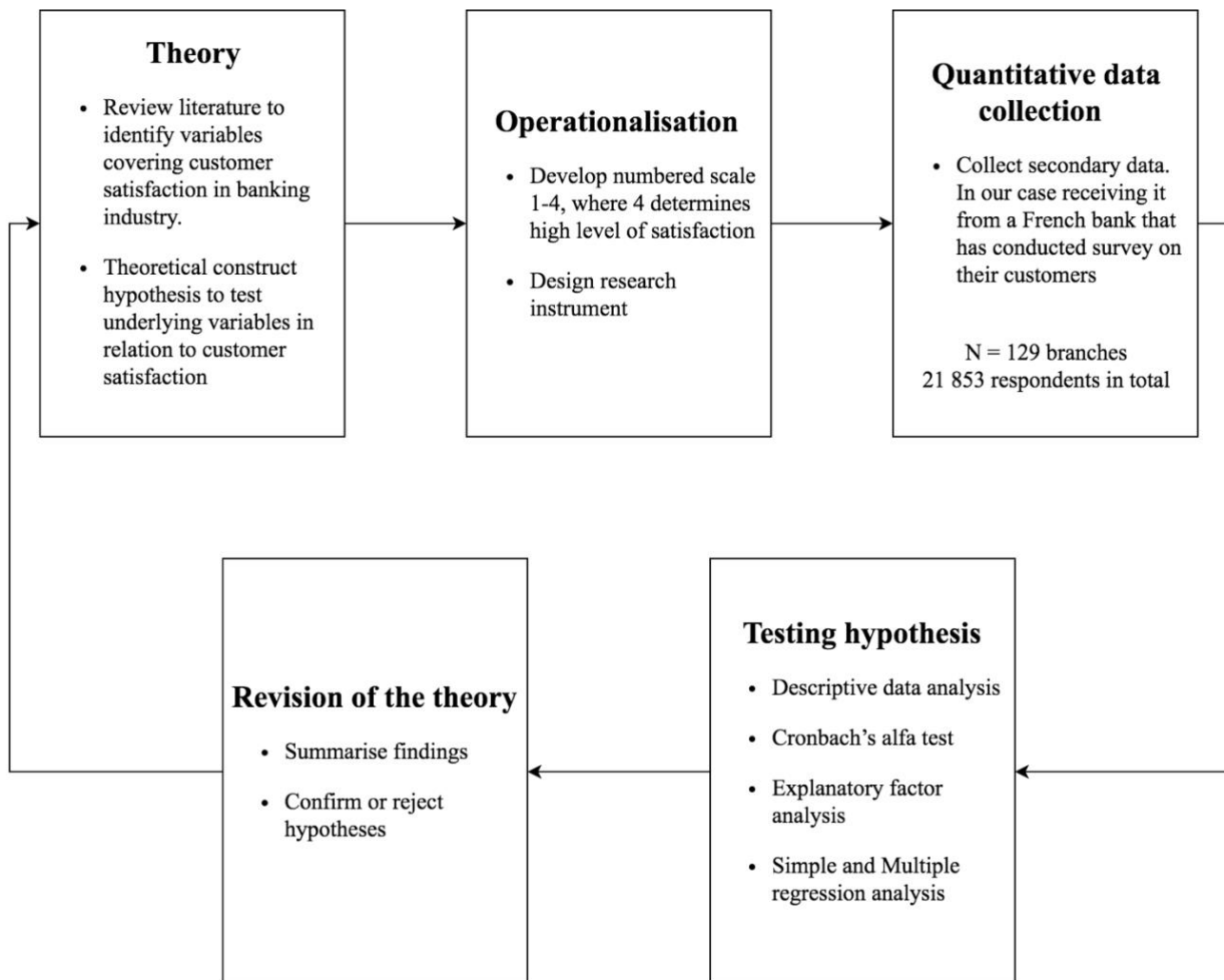


Figure 6. Research Design

We progressed our study in five stages, in which a critical review of the literature was conducted during the first stage, in order to identify existing theories related to customer satisfaction in the financial industry. Our purpose of reviewing previous literature was to identify the variables of customer satisfaction in the cooperative banking industry and the possible relationship between perceived quality, perceived value, and customer satisfaction. For this, we chose descriptive as a quantitative model (Brandimarte, 2011). During the second stage, we had to operationalize our study by enabling quantitative measurement, more specifically a numbered scale from 1 to 4, where 4 represent a high level of customer satisfaction and 1 the opposite, low level of customer satisfaction. Our six chosen variables within Perceived Value and Perceived Quality have been developed through exploration of previous theory rather than logically devising, thus strengthening the validity in our measures (Saunders et al., 2009; Bryman & Bell, 2007; Wilkins and Huisman, 2011). In the third and fourth stages of our process, raw data were received from a major French bank that annually performs surveys on customer satisfaction. Once the data had been collected, statistical analyses were conducted to test our theoretical hypotheses and variables. Lastly, in the fifth stage, conclusions were drawn and current hypotheses were either confirmed or rejected based on our statistics measurement which guides us to generalize our results.

Furthermore, awareness of existing limitations while designing certain research and choice of methodology was important for our study. Our awareness regarding limitations depending on the direction we took enables the possibility to develop measures in order to overcome or compensate for those limitations. In this study, we try to connect existing theory with quantitative measurements which our deductive approach limits our ability to discover new ideas beyond the predefined relationship that is being tested, e.g. the six underlying variables in perceived quality, perceived value, and customer satisfaction (Saunders et al., 2009; May, 2001). However, to reduce our limitations in the predefined relationship, we reviewed the previous literature in depth to further gain awareness and understanding to which extent the variety of existing theories actually is, allowing us to have a broad perspective when initial assumptions and hypotheses are being made before our testing.

Additionally, we used a longitudinal research design. However, we have data from 2020 and due to that, we have to limit our research. Therefore, we cannot examine how the variables change over time which is the case in descriptive longitudinal research (Ployhart & Vandenberg, 2010).

### **3.3. Data Collection**

Banks are periodically surveying their customers to evaluate the overall satisfaction for the proposed services and products. In the retail banking industry, customer satisfaction is usually conceptualized as a multidimensional construct (Manrai, L.A et al., 2007). Meaning that banks are surveying two or more underlying dimensions in their customer satisfaction survey. Naturally, we wanted to collect a large sample of data of pre-qualified respondents that would be cooperative banking customers. We hoped and assumed that the questions on an empirical level would fall into our theoretical model. Gathering secondary data from a large banking group combines three advantages: an easier collection of a large credible sample for free.

In the following section, we are describing the difficulties we faced to collect such sensible information from banks, the dataset that we received, the process of cleaning and implementing the raw data from EXCEL to SPSS, and our process to verify the validity and reliability of the dataset.

#### **3.3.1. Unanticipated events**

The aim was to get as much data about customer satisfaction in cooperative banking in Europe. Such data are not public and well protected from banks for regulation and strategic reasons. We wrote emails to 29 cooperative banks and the European Cooperative Bank Association. We got only one positive response from one cooperative bank group in France covering 25% of France's banking market share. Firstly, the banking group made an agreement of principle of sharing the data on customer satisfaction for the all-French region covering around 30M customers (retail, private, corporate markets) in France. However, the contractual document from Uppsala University and our letters of consent were not accepted by the legal department of the bank because of the regional ownership of the data and European GDPR compliance (General Data Protection Regulation). Finally, by contacting a regional cooperative bank from the group, we were able to get the annual barometric results of the customer satisfaction for their retail market.

### 3.3.2. Description of the dataset

The dataset is the result of a French cooperative bank's annual barometric customer satisfaction survey from its retail market for the 2020 period. A barometric study can be seen as an instrument for banks to feel the satisfaction of their customers. Therefore, the dataset was sourced as a longitudinal study performed over one year on the same group of respondents: the bank's retail customers (Saunders et al., 2009; Bryman & Bell 2011). Concerning the size, the dataset relies on the performance of 142 branches. It combines a base of 21 914 respondents in total. The survey is anonymous and sent once a year to each customer. The fact that the survey is anonymous means that we cannot compare the results between different demographics groups (age, gender, income, seniority with the bank, etc.). The bank is annually sending the survey, on a ten-month period (excluding August and December), all their customers between 16 to 80 years old, via email. Customers are answering 30 questions, mainly by choosing their satisfaction rate from 1 to 4.

Scale	Levels of satisfaction
1	Not satisfied at all
2	Not very satisfied
3	Quite satisfied
4	Very satisfied

*Table 3.* Levels of customer satisfaction

Out of 31 questions, four questions had different answer options. There was a total of three “Yes” or “No” questions (measuring if the customers had to proceed with a request, complaint, or a credit request in the last 12 months) and one NPS recommendation question asking the customers on a scale from 0 to 10: How likely is it that you would recommend [bank's brand name] to a friend or colleague? The Net Promoter Score® is an index ranging from -100 to 100 that measures the willingness of customers to recommend a company's products or services to others. The NPS method differentiates three groups of customers: the detractors (0-6), the passives (7 & 8), the promoters (9 & 10). The NPS is interpreted and used as an indicator of customer loyalty and not directly customer satisfaction. NPS scores vary substantially between industries with the banking industry being at the bottom of the list of the major 20 industries (Temkin Group, 2018; Qualtrics, 2018/2019).

In the following table, we present the question asked during the annual barometric survey that we used (27 out of 30) to answer our research question and explain the relationship between perceived value / perceived quality and customer satisfaction.

<b>How satisfied are you with ...?</b>	
<b>Q1</b>	Your Bank
<b>Q2</b>	NPS Recommendation (How likely would you recommend...)
<b>Q3</b>	Your Branch
<b>How satisfied are you with the/your ...?</b>	
<b>Q4</b>	Banking Website
<b>Q5</b>	Mobile Banking App
<b>Q6</b>	General atmosphere in the branch
<b>Q7</b>	Ease of reaching the bank by phone
<b>Q8</b>	Ease of reaching an advisor by phone
<b>Q9</b>	Ease of obtaining an appointment with an advisor
<b>Q10</b>	Speed of handling in the agency
<b>Q11</b>	Speed of response to emails
<b>Q12</b>	Ability to quickly respond to a credit request
<b>Q13</b>	Speed of processing requests
<b>Q14</b>	Being able to get an answer easily and without effort
<b>Q15</b>	Processing of the complaint
<b>Q16</b>	Continuity of relationship when changing advisor
<b>Q17</b>	Level of information when changing advisor
<b>Q18</b>	Length of time you keep the same advisor
<b>Q19</b>	Bank's ability to make life easier for its customers
<b>Q20</b>	Bank's recognition of customer
<b>Q21</b>	Advisor
<b>Q22</b>	Ability to propose solutions according to personal interests
<b>Q23</b>	Ability to propose solutions according to professional interests
<b>Q24</b>	Ability to be proactive
<b>Q25</b>	Quality of advice and expertise to take on my projects
<b>Q26</b>	Rates concerning the services provided
<b>Q27</b>	Bank's rates explanations by my advisor

Table 4. Annual Barometric Satisfaction Survey (anonymous cooperative bank)



The dataset was structured with observations at a branch level for rows and the distribution in percentage from the 4-satisfaction scale as columns.

		Question 1				Question 2			
Branch	Total N	1	2	3	4	1	2	3	4
AG1	N1	%	%	%	%	%	%	%	%
AG2	N2	%	%	%	%	%	%	%	%
AG3	N3	%	%	%	%	%	%	%	%

Table 5. Raw dataset representation

As illustrated in table 3, the dataset that we received was corralled, combined, and stored observations from customers at the branch level. We received the regional consolidated data from the national Head of Customer Satisfaction and Quality of the bank group. The empirical dataset was saved on an Excel document and sent by email. Our first objective was to clean and import the data from Excel to IBM SPSS Statistics Version 26 in order to conduct the statistical analysis.

### 3.3.3. Data cleansing

We proceed to the cleaning of the dataset in five steps in order to be able to transfer them from Excel to SPSS.

Steps	Data Cleansing
Step 1	Translating the data and analyzing each row/column.
Step 2	Delete irrelevant observations and questions.
Step 3	Calculate suitable results from consolidated data in % to numerical values.
Step 4	Double check the new modified dataset.
Step 5	Import the data from Excel to SPSS (IBM Version 26).

Table 6. Data Cleansing steps (pre-operationalization)

**Step 1: Translating the data and analyzing each row/column.**

Firstly, as we received the data from a French bank, we had to translate the questions and results into English. As one of the authors has French as its first language, the “noise” of the translation of the data from French to English was kept to a minimum.

**Step 2: Delete insignificant observations and questions**

Secondly, we had to make choices regarding our observations and variables. We had no choice but to take each branch as one observation. Indeed, we could not come back to the 21 914 answers without distorting and biasing the dataset. As a reminder, the original dataset was composed of 142 branches. After verifying each row and their number of respondents, we deleted all the branches (=13 branches/rows) with less than 30 observations. We considered that under 30 respondents per row, the base of observations was too low and not relevant for the customer satisfaction performance of the branch. We based our analysis on a sample of 129 branches representing 21 853 respondents. We can see that our branch respondents vary from a minimum of 48 to a maximum of 424 respondents which means that our analysis considered all sizes of banking retail business facilities. The average of respondents per branch was 170 customers.

Concerning the 27 remaining questions that fit our theoretical approach, we needed to verify the response rates for each question and analyze if some questions had fewer respondents. We noted that two questions had 124 and 123 missing values out of 129 branches. We analyzed the dataset to understand why and if we could keep these two questions. It is explained by the nature of the questions: 1. ability to quickly respond to credit requests (=92 respondents) and 2. proposing solutions according to professional interest (=110 respondents). Bank retail customers are not in need of contracting credit each year and only a minority uses their bank for private and professional purposes at the same time (e.g: entrepreneurs, liberal professionals). Nevertheless, we still have around 100 respondents each behind these two questions so we decided to keep these variables in the analysis.

To strengthen our analysis, we will perform a post hoc test in our empirical results section to attempt to control the error rate and exclude these two questions under their respective factors.

### Step 3: Calculate suitable results from consolidated data in % to numerical values

Thirdly, we needed to calculate the correct value answers per question per observation as we originally got the repartition % of each answer from 1 = “not satisfied at all” to 4 = “very satisfied” (cf. tables x). We simply had to do a SUMPRODUCT function for each observation on each question and we will get an average that will be then used in SPSS. The SUMPRODUCT is a function in Excel that multiplies the range of cells or a fixed array (in our case our scale from 1 to 4) and returns the sum of products. It first multiplies then adds the values of the input arrays.

		Question 1			
Branch	Total Respondents	1	2	3	4
B1	N	20%	40%	30%	10%
SUMPRODUCT		2.3			
Details of the calculation		$\begin{aligned} &= \text{SUMPRODUCT}(\{1,2,3,4\}, \{40\%, 40\%; 30\%, 10\% \}) \\ &= (1*20\%)+(2*40\%)+(3*30\%)+(4*10\%) \\ &= 2.3 \end{aligned}$			

Table 7. Mean calculation at the branch level

After locking the grade scale array (1 to 4) in the formula and by simply clicking and dragging the fill handle in excel, we could have the SUMPRODUCT for each branch. Then, we needed to repeat the operations for each question.

### Step 4: Double-check the new modified dataset

The operation required multiple human actions on the original dataset and thus, increased the risk of error while manipulating the data. To prevent us from importing wrong data to SPSS, we proceeded to a second cleaning from the original dataset with an ex-financial statistician with extensive experience using Excel (+20 years). We then compared our results by subtracting our columns to see if there was any difference, the two-times cleaning of the data was successful and identical.

### Step 5: Import the data from Excel to SPSS (IBM Version 26)

### **3.3.4. Validity and Reliability**

To test the validity of the variables, we did an exploratory factor analysis which included the following analyses:

- Communalities
- KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)
- Bartlett's test of sphericity
- Factor loadings
- Bivariate correlation matrix

Communalities table allows us to see the usefulness of items and adjust for the items below (should over 0,5). In other terms, it represents the explained variance of the factor solution for each variable. KMO was used to measure the proportion of variance among variables that might be common variance. Here we were seeking high values close to 1 (+0,5) generally indicating that factor analysis was useful for our data. Bartlett's test of sphericity tested the hypothesis that our correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that factor analysis may be useful with our data. The factor loading analysis is used to identify the correlations between the variables and the factors.

We could identify the underlying dimensions from the question on an empirical level matching our 6 variables from a theoretical level. Questions that may be considered to measure the 'same' thing should correlate to a greater extent with each other compared to questions measuring different things. To check the reliability of our grouped questions, we used Cronbach's alpha test. The grouping of questions was then verified concerning correlations.

### 3.4. Quantitative Analysis

#### 3.4.1. Descriptive Analysis

After having regrouped the constructs (PV1, PV2, etc.), we used descriptive statistical analysis to illustrate the main characteristics of the constructs (Brandimarte, 2011; Nardi, 2008). We analyzed the following characteristics of the statistical series: Median, Mean, Kurtosis, and Skewness. These two indications gave us information about the structure of our constructs. Comparing these two indicators allows us to know whether the distribution within the grouped variable is equal or unequal.

Analysis of the Median and the Mean	
<b>Median = Mean</b>	Equal Distribution
<b>Median derivates from the average</b>	Unequal Distribution

Table 8. Mean and Median analysis

Two other results, skewness, and kurtosis, made us understand the distribution of the constructs within the statistical series: the skewness and the kurtosis. The skewness evaluates the symmetry of a distribution (Hair and al., 2016).

Skewness analysis	
<b>If skewness = 0</b>	Symmetrical Distribution
<b>If skewness is positive</b>	Distribution is spread to the left
<b>If skewness is negative</b>	Distribution is spread to the right

Table 9. Skewness analysis

The kurtosis corresponds to the dispersion of the “extreme” values by reference to the normal law and so the “weakness” of the distribution (Hair et al., 2016).

Kurtosis analysis	
<b>If the kurtosis = 3 (mesokurtic)</b>	Normal Distribution
<b>If kurtosis &gt; 3 (leptokurtic)</b>	Presence of outliers
<b>If kurtosis &lt; 3 (platykurtic)</b>	Low presence of outliers

Table 10. Kurtosis analysis

To conclude, the descriptive analysis gave us the necessary information to better understand the data and enhance the conclusions that can be deduced from the analysis.

### **3.4.2. Bivariate Correlations**

Correlation generally describes the effect that two or more phenomena occur together and therefore they are linked. In our case, we wanted to be sure that the variables that we suspect affect customer satisfaction are not measuring the same exact phenomenon.

It is very important, however, to stress that correlation does not imply causation. Indeed, causation means that one event causes another event to occur. Causation can only be determined from an appropriately designed experiment and this was not possible in the thesis. From a theoretical perspective, we can affirm that there is no causation between our variables.

A correlation expresses the strength of linkage or co-occurrence between two variables in a single value between -1 and +1. In our case, we are examining the Pearson coefficient that explains the linear relationship between the two variables. This value that measures the strength of linkage is called the correlation coefficient, which is represented typically as the letter  $r$ . The correlation coefficient between two continuous-level variables is also called Pearson's  $r$  or Pearson product-moment correlation coefficient. If the coefficient value lies between  $\pm 0.50$  and  $\pm 1$ , then it is said to be a strong correlation. If the value lies between  $\pm 0.30$  and  $\pm 0.49$ , then it is said to be a medium correlation. When the value lies below  $\pm 0.29$ , then it is said to be a small correlation.

### **3.4.3. Multi Regression analysis**

In our analysis, we wanted to illustrate the effect of more than one variable on customer satisfaction. For this, we used multiple linear regression analysis (MLR), also known simply as multiple regression, which is a statistical technique that uses several explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression is to model the linear relationship between the explanatory (independent) variables and response (dependent) variables. Aligned with our theoretical model:

### *Customer Satisfaction*

$$= B_0 + B_1 \text{Accessibility} + B_2 \text{Reliability} + B_3 \text{Reactivity} + B_4 \text{Trust} \\ + B_5 \text{Employee} + B_6 \text{Price} + E$$

$B_0$  = Y intercept

$B_n$  = the slope coefficient for each independent variable  $E$  = Error

$Y$  = Customer satisfaction

$E$  = Error

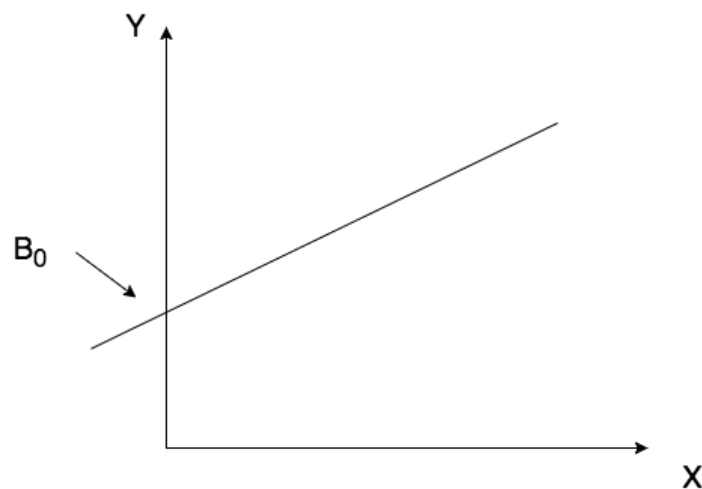


Figure 7. Multiple Regression representation and equation for Customer Satisfaction

## **3.5. Limitations and Ethical Consideration**

### **3.5.1 Criticism of the chosen method**

Before, we selected the quantitative research approach which suits the best for our thesis; we had a critical perspective to evaluate the source (Patel and Davidson, 2012). Each research approach has its pros and cons. Therefore, a qualitative method would have been a possible option to examine this study. An advantage of the qualitative method over a quantitative method was that in-depth information on customer satisfaction could have been conducted in the form of interviews. Another advantage of interviews was to ask additional questions to the respondent if the context is unclear. However, two of the authors had in-depth knowledge about

banking either in cooperative or traditional banking. That leads to that we can sort and relate easily the data in a whole context. Another disadvantage of conducting a personal interview was the current COVID-19 pandemic situation which became more complicated because of the safety aspect of the respondent and for us. An online- interview had not the same quality as a personal interview because the body language of the respondent could not be perceived which could be seen as a disadvantage. Furthermore, due to our time limit for our thesis, a high number of interviews would not be possible. Due to a low number of respondents on customer satisfaction in cooperative banking in France, the results could not be generalized. Another suitable approach for this study would have been to conduct an own survey. This approach would have been our fallback option in case we had not received any data from a cooperative bank. An advantage of this approach would have been that the data might have a higher degree of objectiveness than the data we received from the cooperative bank. As an example, we could exclude the scenario that a financial advisor asks a satisfied customer to participate in the survey and therefore doing a favor for the bank. In this case, the data would have been subjective. Additionally, an advantage of conducting our survey, we would have control over the whole data process. However, this option was positioned as a fallback option because the data set of the cooperative bank includes a high number of respondents. Another advantage of getting secondary data from the cooperative bank from France was that this bank has more experience and more financial possibilities in surveying with a large data set.

### **3.5.2. Limitations of the chosen method**

The study had been limited to cooperative banking. Other types of banks such as traditional banks or digital banks were excluded from our study. Another limitation could rely on our method. Indeed, the method could have compared results of customer satisfaction if others form banking and actors: cooperative banks vs. traditional banks vs., or digital banks, neo-banks, etc.). Our study aimed to get data about customer satisfaction from several cooperative banks in Europe. However, if more cooperative banks in France/Europe would have participated in our study, this would be an ideal situation in terms of the high expressiveness of our results about customer satisfaction in cooperative banking. However, as mentioned before, we received a survey about customer satisfaction from one cooperative bank in France.



The thesis had limitations concerning the dataset. We received secondary data from a cooperative bank in France. Therefore, those data were originally collected externally which lead us to have no control over the variety of dimensions asked by customers. The collected secondary data is not always aligning with the researcher's objective and previous literature review. However, we needed to adjust some variables and delete some identified variables that were not obedient to the dataset. Additionally, there was limited availability of information from respondents in the dataset as it was anonymous. On another hand, our study covered a short period of one year (2020) impacted by strong external factors such as COVID-19. Due to our time limitation, our study could not have covered longer periods that cover a more stable environment. Finally, our study excluded other potential variables in perceived quality, perceived value, and external factors such as regulations, technologies, politics, and micro-and macro factors.

### **3.5.3. Ethical Considerations**

We followed two types of ethical research principles, namely the Swedish Research Council (2002) and Bryman & Bell (2011). The four research ethics principles, namely 1) information requirements, 2) the consent requirement, 3) confidentiality requirement, and 4) the utilization requirement is issued by the Swedish Research council which have to be considered during this study (Swedish Research Council, 2002). Firstly, the information requirement needs to inform banks about the purpose and procedure of the study. Moreover, the information requirement means that data collection must only be used for the current purpose of the study (Swedish Research Council, 2002; Bryman & Bell, 2011). By this, the cooperative banks were informed by email. The consent requirement includes that respondents must consent to participation before the study begins, and have the opportunity to cancel participation without adverse consequences (Swedish Research Council, 2002). This requirement was followed by the notification via email. This allowed the bank to agree or disagree before the study began. The confidentiality requirement is achieved when data is handled with care and out of reach of unauthorized persons (Swedish Research Council, 2002). To achieve the requirement, the bank which provided data is being kept anonymous. The utilization requirement means that the data collection is only used for the study (Swedish Research Council, 2002). Overall, our focus was to present the empirical data in a manner that would protect the privacy of the bank, lack of informed consent, invasion of privacy as well as a deception to fulfill the high ethical standards of Bryman & Bell (Bryman & Bell, 2011).

## 4. Empirical Results

In this section, we present the empirical results and the analysis of the data based on the theoretical concepts. The analyzed data will then lead to the answer to our research question that was proposed in the introduction chapter.

As a reminder, our RQ and the 8 hypotheses:

**What are the relationships between perceived quality, perceived value, and customer satisfaction?** *A study of the cooperative banking industry in France.*

H-PQ	<b>Perceived Quality</b> increases customer satisfaction for cooperative banking customers.
H1	<b>Accessibility</b> increases customer satisfaction for cooperative banking customers.
H2	<b>Reactivity</b> increases customer satisfaction for cooperative banking customers.
H3	<b>Reliability</b> increases customer satisfaction for cooperative banking customers.
H-PV	<b>Perceived Value</b> increases customer satisfaction for cooperative banking customers.
H4	<b>Trust</b> increases customer satisfaction for cooperative banking customers.
H5	<b>Employee competences</b> increases customer satisfaction for cooperative banking customers.
H6	<b>Price transparency</b> increases customer satisfaction for cooperative banking customers.

Table 2. Hypotheses Table

### 4.1. Exploratory Factor Analysis and Cronbach's alpha test

To start our analysis, we used an Exploratory Factor Analysis (EFA) in order to perform data reduction and summarization. EFA is an interdependence statistical technique and by using this technique, we tried to identify underlying dimensions, or constructs, that explained the correlations among the set of indicators and to identify the factors that make up the variable hypothesis testing.

In the first EFA (see Appendix 1, 2), the 25 initial items (questions) had parameters as the following: Principal Components for extraction method - Varimax for rotation method - no fixed number of factors - suppression of small coefficients below 0,10. First of all, the matrix was not positive definite. The KMO and Bartlett's test were not available. We could identify four items that should be deleted for the missing value issue and because extraction equals the initial value 1 (see Appendix 1). Indeed, the first EFA shows us that we need to modify/delete some of our items by starting with the following questions:

- REAC1 - Speed of handling in the agency
- REAC3 - Ability to quickly respond to a credit request
- RELIA3 - Processing of the complaint
- EMP3 - Ability to propose solution according to professional interest

Even if we can see that three components were extracted, the initial eigen decomposition of the matrix shows a break from component 1 (from 18.538 to 2.980, see Appendix 2). The first component is explained by around 75% of the total variance. The EFA was performed to test the validity of our items into constructs and it did not match our theoretical model. Indeed, construct validity refers to the extent to which operationalizations of a construct measure a construct as defined by a theory.

After checking the dimensionality of our items, we created the constructs (see details in Appendix 3) to test the reliability of the grouped variables. To strengthen our thesis and results, we used two different measurements for our dependent variables Customer satisfaction: (1.) SATISFACTIONtwo with the two following items: *Global Satisfaction of the Bank* and *Global Satisfaction of the Branch* and (2.) LOYALTY with the following item: *NPS Recommendation*

To test the reliability of the constructs, we used Cronbach's alpha test to illustrate internal consistency or in other terms, how closely related a set of items are as a group. It is considered to be a measure of scale reliability.

Constructs / Variables	Number of items	N	Cronbach's alpha
<b>Accessibility</b>	6	129	0,915
<b>Reactivity</b>	3	5	0,801
<b>Reliability</b>	3	129	0,414
<b>Trust</b>	5	129	0,951
<b>Employee</b>	5	6	0,931
<b>Price</b>	2	129	0,901

*Table 11.* Cronbach's alpha coefficients (Reliability testing)

REACTIVITY had a good coefficient. Nevertheless, we have 124 excluded values. After analyzing the descriptive statistics for the three items under REACTIVITY (see Appendix 4), it was a confirmation that we should delete the following item: REAC3 - Ability to quickly respond to a credit request. Moreover, REALIABILITY had a bad coefficient. It was a confirmation that we should delete the following item: RELIA3 - Processing of the complaint as we got a better coefficient (+0,9) after removing this item. For the EMPLOYEE construct, we had 123 excluded values (see Appendix 5). It was a confirmation that we should delete the following item: EMP3 - Ability to propose solutions according to professional interest.

At this stage, we identified a reduction of four items to proceed with our analysis. Indeed, the likelihood that our factors would work as for our theoretical model was small with the dataset. We had another possibility of running an EFA for each construct. By doing so, we would have been able to test convergent validity but not able to test discriminant validity. This was a limitation to our quantitative approach but it was a compromise to keep the structure of our theoretical model.

## 4.2. Descriptive Statistic Results

In this table, we could verify that our variables were normally distributed. Indeed, after removing some items under the constructs, we could state that there is no presence of outliers as we have a normal distribution for all variables (independent, dependent, control). We will use the size of our branch as our control variable (Respondents per Branch.) We considered that the size of the branch for a customer can impact both the overall satisfaction from services and each independent variable. As for an example, accessibility, or trust for can vary depending of

the size of the branch. Customers from small branches will naturally feel more familiar with their advisors and the management team of the branch and have a more personalized, rapid, and less “industrial” service approach.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
SATISFACTIONtwo	129	2,58	3,43	3,0805	,15729	-,204	,213	-,023	,423
LOYALTY	129	-38,00	34,00	,5271	13,11016	-,076	,213	-,209	,423
ACCESSIBILITY	129	2,86	3,58	3,2536	,13272	-,071	,213	-,247	,423
RELIABILITY	129	2,34	3,56	3,0122	,22076	-,240	,213	-,103	,423
REACTIVITY	129	2,65	3,76	3,2574	,24014	-,368	,213	-,313	,423
TRUST	129	2,22	3,21	2,7412	,17849	,082	,213	,145	,423
EMPLOYEE	129	2,82	3,64	3,2084	,17560	,011	,213	-,470	,423
PRICE	129	2,37	3,01	2,7058	,13310	-,133	,213	-,344	,423
Respondents per Branch	129	48	424	169,40	78,651	,918	,213	,702	,423
Valid N (listwise)	129								

Table 12. Descriptive statistics (initial model)

### 4.3. Bivariate Correlation Results

**Correlations**

		ACCESSIBILITY	RELIABILITY	REACTIVITY	TRUST	EMPLOYEE	PRICE	Respondents per Branch
ACCESSIBILITY	Pearson Correlation	1	,900**	,817**	,911**	,918**	,831**	-,007
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,940
	N	129	129	129	129	129	129	129
RELIABILITY	Pearson Correlation	,900**	1	,772**	,847**	,880**	,810**	-,021
	Sig. (2-tailed)	,000		,000	,000	,000	,000	,815
	N	129	129	129	129	129	129	129
REACTIVITY	Pearson Correlation	,817**	,772**	1	,738**	,807**	,653**	,000
	Sig. (2-tailed)	,000	,000		,000	,000	,000	1,000
	N	129	129	129	129	129	129	129
TRUST	Pearson Correlation	,911**	,847**	,738**	1	,890**	,875**	-,048
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,586
	N	129	129	129	129	129	129	129
EMPLOYEE	Pearson Correlation	,918**	,880**	,807**	,890**	1	,816**	,022
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,803
	N	129	129	129	129	129	129	129
PRICE	Pearson Correlation	,831**	,810**	,653**	,875**	,816**	1	-,062
	Sig. (2-tailed)	,000	,000	,000	,000	,000		,488
	N	129	129	129	129	129	129	129
Respondents per Branch	Pearson Correlation	-,007	-,021	,000	-,048	,022	-,062	1
	Sig. (2-tailed)	,940	,815	1,000	,586	,803	,488	
	N	129	129	129	129	129	129	129

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 13. Correlations matrix (initial model)

At this point, we could state that our independent variables had high correlation coefficients with Pearson's  $r$  above 0,7. Multicollinearity occurs when independent variables in a regression model are correlated and it was the case in our dataset. This correlation was a problem because independent variables should be independent. The assumptions for the validity of the analysis and the no correlation between independent variables was not fulfilled at this stage. The key goal of regression analysis is to isolate the relationship between each independent variable and the dependent variable.

#### **4.4. Multiple Regression Analysis Results**

We proceeded until the multiple regression analysis and we had the confirmation that our results with this initial model could not be used (see Appendix 6). Indeed, due to the high Variance inflation factor (VIF) for all our variables, which is a measurement of the amount of multicollinearity in a set of multiple regression variables, we could not use this model for analysis and interpretation. Various recommendations for acceptable levels of VIF have been published in the literature. Perhaps most commonly, a value of 10 has been recommended as the maximum level of VIF but however in social science the VIF should be lower than 10. A recommended maximum VIF value of 5 (Rogerson, 2001) for medical research and even 4 (Pan & Jackson, 2008) for geography research can be found in the literature.

Moreover, the sig coefficients (p-value) were above the stand coefficient of 0.05 for most of the variables and confirmed that they were not statistically significant in our model (see Appendix 6). The coefficients that were estimated can swing wildly based on which other independent variables are in the model. The coefficients become very sensitive to small changes in the model. In our analysis, multicollinearity reduced the precision of the estimated coefficients, which weakens the statistical power of our regression model. We were not able to trust the p-values to identify independent variables that are statistically significant and to test our hypothesis.

## 4.5. Post-hoc analysis

To avoid the problem of multicollinearity, we decided to proceed with further analysis and reduced model interpretation. In this post-hoc analysis, we used two other operationalization of the variables and the theoretical model to answer our research question. In the first place, we proceeded with a multi regression analysis with a summarized model including only Perceived Quality and Perceived Value for Customer Satisfaction. In the second place, analyzed a simple linear regression for each construct with our dependent variable customer satisfaction.

### 4.5.1. Multiple Regression Analysis for Perceived Quality and Perceived Value

At this step, we decided to proceed to 2 EFA with the remaining underlying variables/questions and regrouped them under the two larger notions of Perceived Quality and Perceived Value.

To check the validity of the new regrouped variables (PQ and PV), we proceed to a KMO and Bartlett's test (see Appendix 7). KMO is a measure of sampling adequacy. We used it to examine the appropriateness of factor analysis. High values (between 0.5 and 1.0) indicate appropriateness. Values below 0.5 imply the opposite. For PQ, we could comment that we had a good KMO coefficient of 0,919 (above 0,9) and significance (sig = 0,000). For PV, we had a similar result with good KMO of 0,950 (above 0,9) coefficient and good significance (sig. = 0,000).

In the next step of the EFA, we analyzed the explained variance in each factor (see Appendix 8). The table for Perceived Quality showed the amount of variance variable shares with all the other variables. Here it accounted for 74,168 %. Compared to Perceived Quality, for Perceived Value, we had a cumulative variance of 83,099% explaining variance for the component. There was a possibility to balance this difference and narrow our analysis by deleting further items.

We had better extraction coefficients in the communalities table (see Appendix 9) than our first EFA with all the items. We proceeded to a further reduction of items under Perceived Quality in order to have moderate Pearson correlation coefficients.

At this point (see Appendix 10), we could state that the construct of nine items for PQ had a good Cronbach's alpha test coefficient and confirm the reliability of the variable (0,951). We had a good coefficient of 0,977 (above 0,9) for PV explaining the reliability of the construct as well.

**At this stage, for the new construct of Perceived Quality and Perceived Value, we** were able to test the convergent validity for the two variables PQ and PV. Nevertheless, we will try to delete a few more after analyzing the correlation matrix for each new construct. We then proceeded to a correlation analysis for all the remaining items. After analyzing the correlation matrix (Appendix 11), we could still observe a high average Pearson correlation coefficient between independent variables. There was a need to delete further items under our PQ and PV construct to limit as much as possible multicollinearity.

We could identify the following items to delete (average Person above 0,8). Four items to delete for Perceived Quality:

- ACCESS4 - Ease of reaching the bank by phone
- ACCESS5 - Ease of reaching an advisor by phone
- ACCESS6 - Ease of obtaining an appointment with my advisor
- RELIA2 - Being able to get an answer easily and without effort

By reading these questions, it was clear that the items were measuring a very close notion of accessibility and "easiness of contacting the bank/advisor without effort". Pearson's coefficients were confirming this interpretation directly in the matrix (Appendix 11). With the reduction of the item under the construct PQ, Pearson's correlation coefficients were slightly lower (Appendix 12).

From the correlation matrix with all the initial items for PV (Appendix 13), we could identify the following seven items to delete (average Person above 0,8) for Perceived Value:

- TRUST1 - Continuity of the relationship with my advisor
- TRUST4 - Bank's ability to make life easier for its customers
- TRUST5 - Bank's recognition of customer
- EMP2 - Ability to propose solution according to personal interests
- EMP4 - Ability to be proactive
- EMP5 - Quality of advice and expertise to take on my projects
- PRICE2 - Bank's rates explanations by my advisor



After proceeding to the reduction of items in PV, we identified lower Pearson's coefficients and reduced chance of multicollinearity (see Appendix 14). We proceeded to the creation of the final constructs as below:

**Perceived Quality** = (Accessibility1 + Accessibility2 + Accessibility3 + Reliability1) / 4

**Perceived Value** = (Trust2 + Trust3 + Employee1 + Price1) / 4

From the ambition to answer our initial equation with all the constructs as independent variables, we needed to reduce our model and modify our multi regression equation. Below, our new equation:

*Customer Satisfaction*

$$= B_0 + B_1 \text{PerceivedQuality} + B_2 \text{PerceivedValue} \\ + B_3 \text{Respondent per Branch} + \text{Error}$$

#### **First regression analysis with the first measure of CS (SATISFACTIONtwo)**

Contrary to our first ambition with the initial model, the results of the regression on the reduced model could be used for interpretations (see Appendix 11 to 14). The r coefficients suggested that the assumption of multicollinearity cannot be entirely avoided as it is considered moderately correlated. Moreover, tolerance (0.218) and VIF (>5) values did not indicate a violation of this assumption and they are indicating a better statistical environment compared to our first equation.

A Durbin-Watson statistic was calculated to assess the assumption that the values of the residuals are independent, which suggested that this assumption was not violated (1,761). A scatterplot was created to assess the assumption that the variance of the residuals was constant (homoscedasticity).

A multiple linear regression analysis was conducted to examine whether customer satisfaction can be impacted by the perceived quality and perceived value of cooperative banking services. The model was significant,  $F(3, 125) = 289.30$ ,  $p < 0.001$  explaining 87% ( $R^2 = 0.87$ ) of the variance in the outcome variable. Both Perceived Quality ( $B = 0.85$ ,  $t = 9.54$ ,  $p < 0.001$ ) and Perceived Value ( $B = 0.29$ ,  $t = 4.59$ ,  $p < 0.001$ ) contributed significantly to the model.

$$\text{Customer Satisfaction} = -0.572 + 0.851PQ + 0.291PV + \text{Error}$$

The result of the equation demonstrated that Perceived Quality (0.851) affects more Customer Satisfaction than Perceived Value (0.291). The results indicated that PQ and PV increase Customer Satisfaction.

### **Second regression analysis with the other measure of CS (LOYALTY)**

To confirm our first regression analysis with the first measurement SATISFACTIONtwo, we proceeded to a second regression analysis with the second measurement of customer satisfaction called LOYALTY (see Appendix 16). Once again, tolerance (0.218) and VIF (>5) values did not indicate a violation of the collinearity assumption.

A Durbin-Watson statistic was calculated to assess the assumption that the values of the residuals are independent, which suggested that this assumption was not violated (1,979). A scatterplot was created to assess the assumption that the variance of the residuals was constant (homoscedasticity).

The model was significant,  $F(3, 125) = 224.06$ ,  $p < 0.001$  explaining 83.9% ( $R^2 = 0.839$ ) of the variance in the outcome variable. Both Perceived Quality ( $B = 67.40$ ,  $t = 8.12$ ,  $p < 0.001$ ) and Perceived Value ( $B = 25.60$ ,  $t = 4.33$ ,  $p < 0.001$ ) contributed significantly to the model and increases Customer Satisfaction.

#### *Customer Satisfaction*

$$= -295.230 + 67.397PQ + 25.595PV + 0.006\text{Res. per Branch} + E$$

After proceeding to the regression for perceived quality with two measures of customer satisfaction, we can interpret that Perceived Quality (PQ) increases more customer satisfaction than Perceived Value (PV). Both measurements of Customer Satisfaction confirmed this statement.

#### 4.5.2. Simple Regression Analysis of ACCESS, REAC, RELIA, TRUST, EMP and PRICE with CS

Simple linear regression was used to assess whether each identified independent variable predicted Customer Satisfaction. In the following table, we reported the statistical elements to compare the impact of each factor to the measurement of Customer Satisfaction (SATISFACTIONtwo).

Variables	Adjusted R <sup>2</sup>	F (regression, residual)	F	p-value	B (standardize)	t-value
<b>ACCESS</b>	0.87	(1,127)	822.41	>0.001	0.931	28.68
<b>REAC</b>	0.61	(1,127)	198.52	>0.001	0.781	14.10
<b>RELIA</b>	0.78	(1,127)	447.86	>0.001	0.883	21.16
<b>TRUST</b>	0.80	(1,127)	500.71	>0.001	0.893	22.38
<b>EMP</b>	0.83	(1,127)	625.44	>0.001	0.912	25.00
<b>PRICE</b>	0.69	(1,127)	282.45	>0.001	0.831	16.81

Table 14. Simple regression analysis (Dependent Variable measurement: SATISFACTIONtwo)

The results of each simple regression suggested that each factor predicted positive customer satisfaction. By comparing the standardized coefficient, we could establish the following ranking:

1. Accessibility (PQ) = 0.931
2. Employee (PV) = 0.912
3. Trust (PV) = 0.893
4. Reliability (PQ) = 0.883
5. Price (PV) = 0.831
6. Reactivity (PQ) = 0.781

## 4.5. Practical Implications

After analyzing the results obtained from the processing of our data, it is essential to consider the practical implications taken from these results and from our dataset. It is important to keep in mind that these recommendations could benefit from further research on the topic of customer satisfaction.

The first implication is the potential common method bias in our study. Common method bias (CMB) happens when variations in responses are caused by the instrument itself, in our case the questionnaire sent once a year by the cooperative bank to its clients, rather than the actual predispositions of the respondents that the survey attempts to uncover, their customer satisfaction on the services provided. In other words, the instrument of measuring customer satisfaction introduced a bias which we analyzed in our empirical results part. Consequently, the results might have been contaminated by the noise stemming from the biased instrument. Indeed, the relatively high VIFs ( $>4$ ) resulted from a full collinearity test and indicated that the model can be considered impacted by common method bias.

A second implication under our results could be the presence of consistency bias. This common method variance bias also arises when respondents are providing the measure for both the predictor (customer satisfaction) and the criterion variables (questions under our independent variables). This is because customers tried to maintain consistency between their cognitions and attitudes. Therefore, when responding to questions posed by their bank, they had a desire to appear consistent and rational in their responses. This produces relationships that would not otherwise exist at the same level in 'real-life settings'.

## 5. Discussions

In this chapter, our key findings will be discussed. Furthermore, this chapter will give the reader a discussion to better understand what our results actually mean for this research, cooperative banking, and customer satisfaction. The process that has been conducted in order to present our discussion is as follows; Key findings, Interpretations, Literature Implications, and Limitations.

### 5.1. Key findings

The aim of this study was to test a theoretical framework on customer satisfaction for retail clients of a cooperative bank in France. By adopting a quantitative approach, we could identify which characteristic of the relationship between a customer and its cooperative bank has the highest impact on customer satisfaction. From the analysis of the empirical results, we could answer our research question by detailing the relationship between perceived quality, perceived value, and customer satisfaction.

First of all, the results support the theory that perceived quality and perceived value have an impact on customer satisfaction. However, our data could not test our first initial model. At first, the data suggested a high correlation between independent variables but after downsizing the model, we could reach a moderate correlation and proceed to the regression analysis of *Customer Satisfaction* with *Perceived Quality* and *Perceived Value*.

By reducing the model and by summarizing the underlying variables, we were able to test the effect of PQ and PV on CS. The two models of regression with different measurements for Customer Satisfaction indicated that *Perceived Quality*, by far, increased more customer satisfaction than *Perceived Value*.

In order to compare the impact of each initial identified variables, we proceeded with a simple regression analysis that confirmed that each hypothesis increased customer satisfaction. Moreover, we could rank the impact by comparing the standardized coefficient of each simple regression. Factors explaining customers satisfaction can be ranked in the following order of importance: (1) Accessibility, (2) Employee, (3) Trust, (4) Reliability, (5) Price, (6) Reactivity.

Hypotheses	Path	Coefficient	Result
<b>H-PQ</b>	Perceived Quality → Customer Satisfaction	0.851*	Supported
<b>H1</b>	Accessibility → Customer Satisfaction	0.931*	Supported
<b>H2</b>	Reactivity → Customer Satisfaction	0.781*	Supported
<b>H3</b>	Reliability → Customer Satisfaction	0.883*	Supported
<b>H-PV</b>	Perceived Value → Customer Satisfaction	0.291*	Supported
<b>H4</b>	Trust → Customer Satisfaction	0.893*	Supported
<b>H5</b>	Employee → Customer Satisfaction	0.912*	Supported
<b>H6</b>	Price Transparency → Customer Satisfaction	0.831*	Supported

Table 15. Hypotheses results (\*p<0.01; Independent variable measure 1 SATISFACTIONtwo)

## 5.2. Interpretations

From our empirical results, we can state that there was a moderate correlation between the questions asked to answer customer satisfaction in the bank and between our theoretically identified variables. The lower correlation coefficient was found around 0.5 to 0.7 and it is still considered as correlated. The results of our analysis did not meet our expectations in terms of the quality of the data to perform the initial multiple regression analysis. We considered different alternatives, different constructs, underlying items, summarized models and we were always confronted with moderate correlation with the independent variables. By using multiple forms of analysis of the data and by using information from previous studies, this corroborating evidence permits us to deduce that there is a significant relationship between *Perceived Quality*, *Perceived Value*, and *Customer Satisfaction* in the cooperative banking industry in France.

In a more digitalized world, and moreover during a unique period of social distancing, it is not a surprise to find the notion of *Accessibility* as the most important to fulfill customers' expectations and satisfaction. From the branch banking model to an omnichannel distribution strategy, retail banking actors have now advance analytics opportunities for better targeting and marketing personalization across channels. By meeting the demands of customers switching from physical to digital channels, banks should not omit the investments of sales excellence for their employees as we currently know from our results that *Employee Competences* and *Trust* come just after *Accessibility*.

### 5.3. Literature Implications

Our findings and analysis presented under the empirical result indicate that *Perceived Quality* has a larger impact on *Customer Satisfaction* in cooperative banking than *Perceived Value*. The conclusion that could be made is that there is no evidence supporting the rejection of our hypotheses H-PQ. Furthermore, even though our result indicates that *Perceived Quality* has a higher significant and positive relationship with customer satisfaction in cooperative banking compared to *Perceived Value*, the analysis and evidence do not support a rejection of our hypotheses H-PV either.

Previous research highlights the importance of having trust between customers and the bank, in order to gain customer satisfaction (Armstrong, 2012; Gill et al., 2006; Wälti, 2012; Robison, 2008). Furthermore, Delcourt et al., (2011) and Grandey et al., (2011) states that employees with a significant level of emotional intelligence often tend to analyze the situation better in order to adjust to the customer situation and indirectly affect their perception, thus indirectly affecting customer satisfaction. Employees that possess high competence and knowledge require less effort to solve difficult problems under pressure and simultaneously knowing how to act towards their customers by delivering a certain level of service to affect customer satisfaction (Hagaer & Gonczi, 1996). Our results from the regression analysis show that PV, and moreover, the independent variable *Trust* and *Employee Competences* has a lower impact and influence on customer satisfaction compared to *Accessibility* in PQ, hence the conclusion that could be made is that competence and good relationship from the customer's perspective is less important. The variable *Price Transparency* in our analysis indicates less impact on customer satisfaction compared to *Trust and Employee Competences* in PV. According to previous studies the customer tends to have high expectations regarding price, hence being able to see the value of a product or service, where reasonability, transparency, and fairness in bank's service charges are considered to be essential in the decision-making process of accepting a product and being satisfied (Kaura et al., 2014; Lichtenstein et al., 1990; Matzler et al., 2006). Furthermore, customer evaluates the acceptability of a price as "too high", "acceptable", or "reasonable, meaning that hidden charges are perceived as price unfairness which tend to affect the customer satisfaction negatively, thus the importance of *Price Transparency* (Ferguson & Ellen, 2013; Oh and Jeong, 2004; Oh, 2003). Our result indicates the opposite of previous research, where *Price Transparency* is considered to be less important for cooperative banking

customers in order to achieve high customer satisfaction. The result might indicate a shift where *Price Transparency* is nowadays expected to be fair because of the overall product and price offering being homogeneous between different banks (Han and Hyun, 2015).

*Perceived Quality* indicates a larger significant impact on customer satisfaction in cooperative banking compared to *Perceived Value*. Previous research highlights the importance of *Perceived Value*, in order for banks to have a high level of customer satisfaction, meanwhile, our results indicate the opposite, where *Perceived Quality* has a larger impact on customer satisfaction and therefore considered more important.

We believe that our research provides new insight into the relationship between *Perceived Quality* and customer satisfaction. PQ is according to our study more important than PV in order to have a satisfied customer. This result indicates a shift and opposite claim of importance compared to previous research. The underlying reasons that could be discussed regarding our result, is the increased flexibility and possibility for customers to nowadays being able to conduct their business by themselves whenever they want with help of developed technological platforms provided by banks. Customers have the ability to interact and conduct their business through mobile banking or the internet, which is believed to have an essential impact in order to gain satisfied customers (Campbell & Frei, 2010; Collier & Kimes, 2012; Xue et al., 2011). Furthermore, our findings contribute to a clearer understanding of the transformation from *Perceived Value* to *Perceived Quality*, where independent variables as *Price* and *Trust Transparency* are considered less important for customer satisfaction, while *Accessibility* has shown increased importance in order to receive satisfied customers (Grandey et al., 2011). This shift could be interpreted as a result of increased accessibility for customers to information through the internet, banking webpage, and AI-support, allowing customers to receive a quicker response to their inquiries (Tahseen & Al Lawati, 2013). Customers are nowadays not being forced to reschedule, for example, taking the day off from work to visit the bank thanks to new ways of interacting with them, thus making the personal interaction less important.

The banking industry has undergone a major transformation in the past years as a result of increased digitalization and external regulations, allowing customers to a larger extent interact with their bank through digital platforms in order to conduct their business (Mbama et al., 2018). However, previous research has focused more on the importance of *Perceived Value*, covering the independent variables as *Trust*, *Employee Competences*, and *Price Transparency*



in order to receive high customer satisfaction. This could be explained because of the previous way a bank and its customer conducted business, which was face-to-face interaction in the local branch. Because of the ongoing transformation in the banking industry, with increased customer interaction through digital platforms and less physical interaction in the local branches, has probably affected the customer's perception of what is most important, hence *Perceived Quality* has become more essential for customers in order to feel satisfied, thus supporting our findings and result (Hosseini, 2009; Mbama et al., 2018).

## 5.4. Limitations

Firstly, the generalizability of our results is limited by the regional cooperative banking industry in France. However, even if we worked on a large dataset of 21 853 respondents in 129 branches from a regional cooperative bank, our results are too weak to generalize for the whole cooperative banking industry that is evolving beyond the scope of a unique country like France. Our dataset is too small to generalize to others country with differences in their banking culture or digitalization level of maturity. However, if we had got access to the data from a cooperative bank group in France which covers 20 million customers in France and has about 25% of France's banking market share our statistical power could have been increased, and the sampling error might have been lowered. In other words, by this, our results could have been generalized for the whole of central Europe (excluding north, southern and eastern Europe).

A limitation could be found in the respondents for our dependent and independent variables. Indeed, our dataset regrouped the same customers that evaluated their customer satisfaction and loyalty for the bank and the several underlying questions in our constructs. This could create a consistency bias because people tried to maintain consistency between their cognitions and attitudes. When answering the questions posed by the bank, they had a desire to appear consistent and rational in their responses. This might have produced relationships that would not otherwise exist at the same level in real-life settings.

The methodological choices were constrained by a quantitative analysis. We could have used a qualitative approach and our results might have become more detailed or exhaustive.

It was beyond the scope of this study to get additional (nominal) data such as the age group, income group, or gender. However, we could have compared the results between respondents' groups and then conclude on the needs and difference resulting in their customer satisfaction.

Due to the lack of data from the previous years, the results cannot confirm how huge was the impact of the COVID-19 on Perceived Value and Perceived Quality or the overall satisfaction for retail customers.

## 6. Conclusion and Recommendations

In this chapter, the aim of the study and our research question is answered based on the result part. This is followed by the conclusion. Finally, we provide suggestions for the bank and for further research.

### 6.1. Conclusion

Cooperative banks in France have a major impact on the finance industry and the French economy. The French financial ecosystem differs in comparison with other European countries because of a higher number of cooperative banking groups, which have a dominant market share in the financial industry.

Overall, the ambition with this research was to gain a deeper understanding of customer satisfaction in the retail banking market segment. In our study, we explained the underlying dimension behind customer satisfaction in the retail banking industry. We answered the following research question: What are the relationships between perceived quality, perceived value, and customer satisfaction? We based our research on the customers from cooperative banks in the retail banking segment.

Our findings indicated that *Perceived Quality* contributes to customer satisfaction in cooperative banking to a larger extend than *Perceived Value*. Moreover, the study ranked the importance of each variables impacting customer satisfaction as follow: (1) *Accessibility*, (2) *Employee Competences*, (3) *Trust*, (4) *Reliability*, (5) *Price Transparency*, (6) *Reactivity*.

## **6.2. Recommendations**

### **6.2.1. Practical recommendations for cooperative banks**

In general, we would suggest the cooperative bank get a higher quality of data in order to make better decisions. Furthermore, we would recommend the bank to have a closer look at how their customers in each age group behave in terms of banking usage. For example, the employees of the banks can change their perspective from being an agent of the banks to a bank customer and check how they behave in terms of banking. The advantage of this approach is that the employee of the banks/banks is more aware of the current changes in the banking industry. By this, the banks can act quicker about the current preference of their customers, and thereby respond faster by adopting their product and services which suits the best for their customers. This can be seen as a strategic advantage over their competitor if the banks are one step ahead. Additionally, to get a higher quality of the data, we would recommend the bank to consider and add other variables in their survey.

Firstly, the bank can check other variables in perceived value such as security and personalization. Secondly, the bank may include survey questions that cover up other aspects of perceived quality such as installations, emotional and social aspects. Finally, external factors such as cooperative banking image, banking regulations, pandemics, micro-and macro factors, and politics can be considered to get a big picture about customer satisfaction in the cooperative banking industry.

Overall, due to the huge transformation in the banking industry in the last years, we would recommend that the cooperative bank focus more on perceived quality. Our result shows that perceived quality has the highest impact on customer satisfaction.

### **6.2.2. Recommendations for future research**

Our study only focused on cooperative banks in France by doing a quantitative approach. However, our research was unable to address how the power distance is between each level of a bank manager in relation to their customers. Therefore, it would be interesting to do a qualitative study on the different management levels of the bank managers. By interviewing

bank managers from each level (top-level, middle-level, and low-level managers), it would be interesting to research how well they understand their customers' satisfaction in terms of banking. Thus, it would have been interesting to compare the opinions of the bank manager at each level about customer satisfaction with the opinion of their customers.

Moreover, our results do not cover what kind of transformation leads to a possible shift that perceived quality (*Accessibility, Reactivity, and Reliability*) has a higher impact than perceived value (*Trust, Employee, and Price Transparency*). Our estimation of the transformation is due to the developments in digitalization, new ways of interplay with the customers, new external regulation, or growing accessibility through various channels. It would be an interesting topic to confirm this transformation which leads to the shift from perceived quality to perceived value. Furthermore, we would recommend doing additional research on cooperative banks in Europe and compare the result of customer satisfaction in terms of cultural differences.

Another suggestion would be to compare results of customer satisfaction with other forms of banking and actors: cooperative banks vs. traditional banks vs., or digital banks, neo-banks. It would be interesting to see if there are differences in customer satisfaction in terms of the three variables in perceived quality and three variables in perceived value. Additionally, it would be interesting to consider a longer time frame and to do similar research on customer satisfaction in cooperative banking to see how the importance of the variables has changed.

The last suggestion would be to examine the customer satisfaction over a longer period of time. A new research question could be: How time and technology development changed customers' expectations and the impact of Perceived Quality and Perceived Value?

# Appendix

## Appendix 1 – EFA Communalities for underlying variables

**Communalities**

	CONTROL Respondents per Branch	ACCESS1 Banking Website	ACCESS2 Mobile Banking App	ACCESS3 General atmosphere in the branch	ACCESS4 Ease of reaching the bank by phone	ACCESS5 Ease of reaching an advisor by phone	ACCESS6 Ease of obtaining an appointment with an advisor	REAC1 Speed of handling in the agency	REAC2 Speed of response to emails	REAC3 Ability to quickly respond to a credit request
Initial	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Extraction	,980	,990	,991	,919	,935	,983	,984	1,000	,961	1,000

REAC1 Speed of handling in the agency	REAC2 Speed of response to emails	REAC3 Ability to quickly respond to a credit request	RELIA1 Speed of processing requests	RELIA2 Being able to get an answer easily and without effort	RELIA3 Processing of the complaint	TRUST1 Continuity of relationship when changing advisor	TRUST2 Level of information when changing advisor	TRUST3 Length of time you keep the same advisor	TRUST4 Bank's ability to make life easier for its customers	TRUST5 Bank's recognition of customer
1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1,000	,961	1,000	,944	,962	1,000	,986	,998	,989	,803	,905

EMP1 Advisor	EMP2 Ability to propose solutions according to personal interests	EMP3 Ability to propose solutions according to professional interests	EMP4 Ability to be proactive	EMP5 Quality of advice and expertise to take on my projects	PRICE1 Rates concerning the services provided	PRICE2 Bank's rates explanations by my advisor
1,000	1,000	1,000	1,000	1,000	1,000	1,000
,950	1,000	,999	,993	,997	,858	,946

## Appendix 2 – EFA Total explained variance

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18,538	74,154	74,154	18,538	74,154	74,154	10,316	41,264	41,264
2	2,980	11,921	86,075	2,980	11,921	86,075	8,887	35,547	76,811
3	2,555	10,220	96,295	2,555	10,220	96,295	4,871	19,484	96,295
4	,926	3,705	100,000						
5	2,110E-15	8,441E-15	100,000						

### Appendix 3 – Details of independent and dependent variables

CUSTOMER SATISFACTION (measurement 1)  
Called SATISFACTIONtwo

Q1 Global\_Satisfaction

Q3 Global\_SatisfactionBranch

CUSTOMER SATISFACTION (measurement 2)  
Called LOYALTY

Q2 NPS\_Recommendation

#### Accessibility

Q4 Banking Website

Q5 Mobile Banking App

Q6 General atmosphere in the branch

Q7 Ease of reaching the bank by phone

Q8 Ease of reaching an advisor by phone

Q9 Ease of obtaining an appointment with an advisor

#### Reactivity

Q10 Speed of handling in the agency

Q11 CSpeed of response to emails

Q12 Ability to quickly respond to a credit request

#### Reliability

Q13 D4 Speed of processing requests

Q14 D6 Being able to get an answer easily and without effort

Q15 R3 Processing of the complaint

#### Trust

Q16 Continuity of relationship when changing advisor

Q17 Level of information when changing advisor

Q18 Length of time you keep the same advisor

Q19 Bank's ability to make life easier for its customers

Q20 Bank's recognition of customer

#### Employee

Q21 Advisor

Q22 Ability to propose solutions according to personal interests

Q23 Ability to propose solutions according to professional interests

Q24 Ability to be proactive

Q25 Quality of advice and expertise to take on my projects

#### Price Transparency

Q26 T1 Rates concerning the services provided

Q27 T2 Bank's rates explanations by my advisor

### Appendix 4 – Descriptive statistics for REACTIVITY

#### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
REAC1 Speed of handling in the agency	129	2,66	3,57	3,2126	,18004
REAC2 Speed of response to emails	129	2,65	3,76	3,2574	,24014
REAC3 Ability to quickly respond to a credit request	5	2,93	3,62	3,3240	,28431
Valid N (listwise)	5				

## Appendix 5 – Descriptive statistics for EMPLOYEE

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EMP1 Advisor	129	2,83	3,76	3,3041	,18223
EMP2 Ability to propose solutions according to personal interests	129	2,75	3,63	3,1540	,18478
EMP3 Ability to propose solutions according to professional interests	6	2,86	3,73	3,3633	,30031
EMP4 Ability to be proactive	129	2,79	3,61	3,1753	,17722
EMP5 Quality of advice and expertise to take on my projects	129	2,82	3,65	3,2002	,17523
Valid N (listwise)	6				

## Appendix 6 – MLR results for the initial model

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,947 <sup>a</sup>	,898	,892	,05174	1,872

a. Predictors: (Constant), Respondents per Branch, REACTIVITY, PRICE, RELIABILITY, TRUST, EMPLOYEE, ACCESSIBILITY

b. Dependent Variable: SATISFACTIONtwo

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

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,843	7	,406	151,708	,000 <sup>b</sup>
	Residual	,324	121	,003		
	Total	3,167	128			

a. Dependent Variable: SATISFACTIONtwo

b. Predictors: (Constant), Respondents per Branch, REACTIVITY, PRICE, RELIABILITY, TRUST, EMPLOYEE, ACCESSIBILITY

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

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,044	,173		-,257	,798		
	ACCESSIBILITY	,481	,116	,406	4,131	,000	,087	11,430
	REACTIVITY	,009	,035	,014	,260	,796	,300	3,335
	RELIABILITY	,090	,051	,126	1,755	,082	,163	6,140
	TRUST	,110	,075	,125	1,465	,145	,116	8,644
	EMPLOYEE	,215	,075	,240	2,857	,005	,120	8,357
	PRICE	,093	,074	,079	1,250	,214	,213	4,693
	Respondents per Branch	8,298E-5	,000	,041	1,406	,162	,970	1,031

a. Dependent Variable: SATISFACTIONtwo

## Appendix 7 – KMO and Bartlett's test for PQ and PV

### Perceived Quality

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,919
Bartlett's Test of Sphericity	Approx. Chi-Square	1344,112
	df	36
	Sig.	,000

### Perceived Value

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,950
Bartlett's Test of Sphericity	Approx. Chi-Square	2217,084
	df	55
	Sig.	,000

## Appendix 8 – Explained Variance for PQ and PV

### Perceived Quality

#### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,675	74,168	74,168	6,675	74,168	74,168
2	,794	8,822	82,990			
3	,481	5,341	88,331			
4	,355	3,939	92,270			
5	,238	2,643	94,913			
6	,200	2,218	97,131			
7	,145	1,610	98,741			
8	,059	,660	99,401			
9	,054	,599	100,000			

Extraction Method: Principal Component Analysis.

### Perceived Value

#### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9,141	83,099	83,099	9,141	83,099	83,099
2	,562	5,107	88,206			
3	,387	3,517	91,723			
4	,236	2,143	93,865			
5	,179	1,625	95,490			
6	,146	1,329	96,820			
7	,098	,893	97,713			
8	,083	,750	98,463			
9	,074	,672	99,135			
10	,057	,517	99,651			
11	,038	,349	100,000			

Extraction Method: Principal Component Analysis.



### Appendix 9 – Communalities for PQ (left) PV (right)

**Communalities**

	Initial	Extraction
ACCESS1 Banking Website	1,000	,513
ACCESS2 Mobile Banking App	1,000	,334
ACCESS3 General atmosphere in the branch	1,000	,724
ACCESS4 Ease of reaching the bank by phone	1,000	,874
ACCESS5 Ease of reaching an advisor by phone	1,000	,898
ACCESS6 Ease of obtaining an appointment with an advisor	1,000	,864
REAC2 Speed of response to emails	1,000	,740
RELIA1 Speed of processing requests	1,000	,857
RELIA2 Being able to get an answer easily and without effort	1,000	,871

Extraction Method: Principal Component Analysis.

**Communalities**

	Initial	Extraction
TRUST1 Continuity of relationship when changing advisor	1,000	,825
TRUST2 Level of information when changing advisor	1,000	,756
TRUST3 Length of time you keep the same advisor	1,000	,747
TRUST4 Bank's ability to make life easier for its customers	1,000	,876
TRUST5 Bank's recognition of customer	1,000	,900
EMP1 Advisor	1,000	,876
EMP2 Ability to propose solutions according to personal interests	1,000	,867
EMP4 Ability to be proactive	1,000	,884
EMP5 Quality of advice and expertise to take on my projects	1,000	,886
PRICE1 Rates concerning the services provided	1,000	,726
PRICE2 Bank's rates explanations by my advisor	1,000	,799

Extraction Method: Principal Component Analysis.

### Appendix 10 – Reliability Test for PQ (left) and PV (right)

**Reliability Statistics**

Cronbach's Alpha	N of Items
,951	9

**Reliability Statistics**

Cronbach's Alpha	N of Items
,977	11

## Appendix 11 - PQ items correlation matrix before final reduction

### Correlations

		ACCESS1 Banking Website	ACCESS2 Mobile Banking App	ACCESS3 General atmosphere in the branch	ACCESS4 Ease of reaching the bank by phone	ACCESS6 Ease of obtaining an appointment with an advisor	REAC2 Speed of response to emails	RELIA1 Speed of processing requests	RELIA2 Being able to get an answer easily and without effort
ACCESS1 Banking Website	Pearson Correlation	1	,499**	,509**	,628**	,627**	,561**	,570**	,596**
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129
ACCESS2 Mobile Banking App	Pearson Correlation	,499**	1	,399**	,470**	,466**	,489**	,476**	,453**
	Sig. (2-tailed)	,000		,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129
ACCESS3 General atmosphere in the branch	Pearson Correlation	,509**	,399**	1	,791**	,771**	,652**	,791**	,798**
	Sig. (2-tailed)	,000	,000		,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129
ACCESS4 Ease of reaching the bank by phone	Pearson Correlation	,628**	,470**	,791**	1	,853**	,769**	,858**	,857**
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129
ACCESS6 Ease of obtaining an appointment with an advisor	Pearson Correlation	,627**	,466**	,771**	,853**	1	,775**	,834**	,850**
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,000	,000
	N	129	129	129	129	129	129	129	129
REAC2 Speed of response to emails	Pearson Correlation	,561**	,489**	,652**	,769**	,775**	1	,751**	,770**
	Sig. (2-tailed)	,000	,000	,000	,000	,000		,000	,000
	N	129	129	129	129	129	129	129	129
RELIA1 Speed of processing requests	Pearson Correlation	,570**	,476**	,791**	,858**	,834**	,751**	1	,940**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000		,000
	N	129	129	129	129	129	129	129	129
RELIA2 Being able to get an answer easily and without effort	Pearson Correlation	,596**	,453**	,798**	,857**	,850**	,770**	,940**	1
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	
	N	129	129	129	129	129	129	129	129

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Appendix 12 - PQ items correlation matrix after reduction

### Correlations

		ACCESS1 Banking Website	ACCESS2 Mobile Banking App	ACCESS3 General atmosphere in the branch	RELIA1 Speed of processing requests
ACCESS1 Banking Website	Pearson Correlation	1	,499**	,509**	,570**
	Sig. (2-tailed)		,000	,000	,000
	N	129	129	129	129
ACCESS2 Mobile Banking App	Pearson Correlation	,499**	1	,399**	,476**
	Sig. (2-tailed)	,000		,000	,000
	N	129	129	129	129
ACCESS3 General atmosphere in the branch	Pearson Correlation	,509**	,399**	1	,791**
	Sig. (2-tailed)	,000	,000		,000
	N	129	129	129	129
RELIA1 Speed of processing requests	Pearson Correlation	,570**	,476**	,791**	1
	Sig. (2-tailed)	,000	,000	,000	
	N	129	129	129	129

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Appendix 13 - PV items correlation matrix before reduction

Correlations												
		TRUST1 Continuity of relationship when changing advisor	TRUST2 Level of information when changing advisor	TRUST3 Length of time you keep the same advisor	TRUST4 Bank's ability to make life easier for its customers	TRUST5 Bank's recognition of customer	EMP1 Advisor	EMP2 Ability to propose solutions according to personal interests	EMP4 Ability to be proactive	EMP5 Quality of advice and expertise to take on my projects	PRICE1 Rates concerning the services provided	PRICE2 Bank's rates explanations by my advisor
TRUST1 Continuity of relationship when changing advisor	Pearson Correlation	1	,889**	,809**	,839**	,837**	,803**	,782**	,806**	,799**	,769**	,783**
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
TRUST2 Level of information when changing advisor	Pearson Correlation	,889**	1	,786**	,783**	,789**	,750**	,723**	,756**	,739**	,740**	,779**
	Sig. (2-tailed)	,000		,000	,000	,000	,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
TRUST3 Length of time you keep the same advisor	Pearson Correlation	,809**	,786**	1	,762**	,811**	,777**	,761**	,774**	,778**	,705**	,714**
	Sig. (2-tailed)	,000	,000		,000	,000	,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
TRUST4 Bank's ability to make life easier for its customers	Pearson Correlation	,839**	,783**	,762**	1	,919**	,855**	,857**	,862**	,858**	,805**	,833**
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
TRUST5 Bank's recognition of customer	Pearson Correlation	,837**	,789**	,811**	,919**	1	,876**	,871**	,858**	,872**	,828**	,840**
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
EMP1 Advisor	Pearson Correlation	,803**	,750**	,777**	,855**	,876**	1	,927**	,942**	,938**	,699**	,790**
	Sig. (2-tailed)	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
EMP2 Ability to propose solutions according to personal interests	Pearson Correlation	,782**	,723**	,761**	,857**	,871**	,927**	1	,925**	,940**	,731**	,795**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
EMP4 Ability to be proactive	Pearson Correlation	,806**	,756**	,774**	,862**	,858**	,942**	,925**	1	,955**	,727**	,798**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000		,000	,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
EMP5 Quality of advice and expertise to take on my projects	Pearson Correlation	,799**	,739**	,778**	,858**	,872**	,938**	,940**	,955**	1	,728**	,806**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	,000		,000	,000
	N	129	129	129	129	129	129	129	129	129	129	129
PRICE1 Rates concerning the services provided	Pearson Correlation	,769**	,740**	,705**	,805**	,828**	,699**	,731**	,727**	,728**	1	,829**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	,000	,000		,000
	N	129	129	129	129	129	129	129	129	129	129	129
PRICE2 Bank's rates explanations by my advisor	Pearson Correlation	,783**	,779**	,714**	,833**	,840**	,790**	,795**	,798**	,806**	,829**	1
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	
	N	129	129	129	129	129	129	129	129	129	129	129

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Appendix 14 - PV items correlation matrix after reduction

### Correlations

		TRUST2 Level of information when changing advisor	TRUST3 Length of time you keep the same advisor	EMP1 Advisor	PRICE1 Rates concerning the services provided
TRUST2 Level of information when changing advisor	Pearson Correlation	1	,786**	,750**	,740**
	Sig. (2-tailed)		,000	,000	,000
	N	129	129	129	129
TRUST3 Length of time you keep the same advisor	Pearson Correlation	,786**	1	,777**	,705**
	Sig. (2-tailed)	,000		,000	,000
	N	129	129	129	129
EMP1 Advisor	Pearson Correlation	,750**	,777**	1	,699**
	Sig. (2-tailed)	,000	,000		,000
	N	129	129	129	129
PRICE1 Rates concerning the services provided	Pearson Correlation	,740**	,705**	,699**	1
	Sig. (2-tailed)	,000	,000	,000	
	N	129	129	129	129

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Appendix 15 – Multiple Regression Analysis of CS (SATISFACTIONtwo)

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,935 <sup>a</sup>	,874	,871	,05647	1,761

a. Predictors: (Constant), Respondents per Branch, PERCEIVED\_QUALITY, PERCEIVED\_VALUE

b. Dependent Variable: SATISFACTIONtwo

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,768	3	,923	289,304	,000 <sup>b</sup>
	Residual	,399	125	,003		
	Total	3,167	128			

a. Dependent Variable: SATISFACTIONtwo

b. Predictors: (Constant), Respondents per Branch, PERCEIVED\_QUALITY, PERCEIVED\_VALUE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,572	,161		-3,558	,001		
	PERCEIVED_QUALITY	,851	,089	,648	9,538	,000	,218	4,577
	PERCEIVED_VALUE	,291	,063	,312	4,591	,000	,218	4,585
	Respondents per Branch	,000	,000	,056	1,774	,079	,996	1,004

a. Dependent Variable: SATISFACTIONtwo

## Appendix 16 – Multiple Regression Analysis of CS (LOYALTY)

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,918 <sup>a</sup>	,843	,839	5,25337	1,979

a. Predictors: (Constant), Respondents per Branch, PERCEIVED\_QUALITY, PERCEIVED\_VALUE

b. Dependent Variable: LOYALTY

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18550,417	3	6183,472	224,056	,000 <sup>b</sup>
	Residual	3449,738	125	27,598		
	Total	22000,155	128			

a. Dependent Variable: LOYALTY

b. Predictors: (Constant), Respondents per Branch, PERCEIVED\_QUALITY, PERCEIVED\_VALUE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-295,230	14,945		-19,754	,000		
	PERCEIVED_QUALITY	67,397	8,303	,615	8,117	,000	,218	4,577
	PERCEIVED_VALUE	25,595	5,906	,329	4,334	,000	,218	4,585
	Respondents per Branch	,006	,006	,037	1,044	,298	,996	1,004

a. Dependent Variable: LOYALTY

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