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THE ROLE OF CRYPTOCURRENCY IN SHAPING CUSTOMER LOYALTY

A mixed-method analysis with a focus on Loyalty reward programs

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Abstract

An emerging body of research has focused on cryptocurrencies and loyalty programs; nevertheless, there is still a significant knowledge void and potential for more investigation into this field and the relation between them. Research has given a limited amount of attention to the role that cryptocurrencies play, even though cryptocurrencies have the potential to radically alter the nature of value perception, which is an essential component of the design of any loyalty program. As a primary research gap, we argue that limited attention has been paid to how incorporating cryptocurrencies, as the reward of a loyalty program, can influence the effectiveness of that program, which is translated as customer loyalty. This thesis pays attention to this issue and fills this research gap. We intend to have a more in-depth look to understand the role that cryptocurrencies play in loyalty programs as there is limited research on these two topics together, even though cryptos and loyalty programs have a combined monetary value of billions of dollars.

The purpose of this thesis is to get a better understanding of the ways in which cryptocurrency, as a forward-thinking component of a reward program's innovative design, might affect consumer loyalty. The study focuses on three primary questions. The first is related to the impact that cryptocurrencies have on people's conceptions of loyalty in the context of loyalty reward programs. The second one focuses on the role of emotions and cognitions of the types of rewards and how the customer molds their loyalty to a particular reward program. The third question centers on the potential implications and impacts that come along with implementing cryptocurrency as a design element in a reward program.

To address our research questions, a mix-method study and analysis were conducted. First, we conducted quantitative research on why people (users of loyalty programs) are interested in reward programs and examined how their cognitions and emotions associated with cryptocurrencies influence attitudinal and behavioral loyalty. To accomplish this, we administered a survey to 162 respondents, analyzing various variables, including perceived value, status dependence, and skepticism in the perception of loyalty. Second, we also conducted 7 semi-structured interviews with people who have worked in the loyalty reward industry (employees of firms offering a reward program), which was helpful for taking into consideration the company’s point of view too regarding the role of cryptocurrencies in influencing customer loyalty (adding to the insights derived from the quantitative part of the study regarding the user point of view).

Our study contributes to the body of literature on loyalty programs (Kim et al., 2021), which are now being deployed and examined at a pace that is unprecedented, since loyalty programs are excellent tools for relationship marketing. However, attempts in the real world often fail, or at the very least do not live up to expectations, which highlights the need for a closer look at the design of loyalty programs that can boost their effectiveness. We build on prior research that suggests paying attention to the design, psychological, and operational elements which can play a role in influencing customer loyalty and particularly, we focus on cryptocurrencies as a design element that can trigger different emotions and cognitions, which are critical for attitudinal and behavioral loyalty.

Keywords: Loyalty, Reward programs, Design Elements, Cryptocurrency, Psychological elements, Customer Loyalty,

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1. Introduction

1.1 Problem Background

Customer rewards are instrumental in relationship marketing yet have often been reviled as cheap promotional devices, short-term fads, giving something for nothing, leaving researchers and practitioners with mixed feelings (McCall & Voorhes, 2010) and unmet expectations (Nunes & Dreze, 2006). Despite this, customer rewards have been around for decades, and an increasing number of companies and customers are jumping on the bandwagon (Freund, 2017). Rewards can and do build customers' loyalty, and most companies now appreciate how valuable that loyalty can be (O'Brien & Jones, 1995). From airlines offering frequent-flier deals to telecommunications companies lowering their fees to get more volume, organizations are spending millions of dollars developing and implementing rewards programs. Company interest is justified. The theory is sound (O'Brien & Jones, 1995) and a growing body of literature focuses on loyalty programs and their effectiveness (Kim, Steinhoff & Palmatier, 2020). However, although many studies discuss the beneficial nature of loyalty programs for achieving desired customer behaviors (Taylor & Neslin, 2005), it is still unclear whether and, most importantly, how such programs facilitate customer loyalty to the firm (Yi & Jeon, 2003). This thesis is positioned in the literature on loyalty programs, which are defined as "any institutionalized incentive system that attempts to enhance consumers' consumption behavior over time, which captures a broad span of types of programs" (Kim et al., 2021, p. 73). Loyalty in this context is defined as the "customer attitudes aligned with a series of purchase behaviors that systematically favor the focal company over competitors" (Kim et al., 2021, p. 74).

1.1.1 Why loyalty programs?

The loyalty program industry is big; at some point, the number of miles unredeemed in the world was worth more than all the U.S. Dollars in circulation (The Economist, 2005). Similarly, the loyalty management market, valued at $2133.2 million in 2018, is projected to reach $7126.8 million by 2026 (see Kim, Steinhoff & Palmatier, 2020). The industry is estimated to be worth between $185–195 billion Dollars, with mature markets in regions like Western Europe, North America, and some parts of Asia-Pacific such as Australia, Japan, Hong Kong, and Singapore. The future growth driving markets is expected to be in Latin America and some parts of Asia Pacific, yet the primary research and literature are focused on the mature markets (Beroe Advantage Procurement, 2019). The omnipresence of loyalty programs (L.P.s) across markets shows that L.P.s has been one of the most prominent business trends of the last two decades. Besides their traditional stronghold among airlines and grocery retailers, loyalty reward schemes have spread among nonprofit organizations like museums, charities, and sports clubs, among online and offline services, and even among utility providers and business-to-business markets. On average, two-thirds of Europeans belong to at least one L.P. In the U.K. L.P.s penetration reached 90 % and even 94 % in Finland, according to a worldwide Nielsen study in 2016. The 2017 U.S. census by Colloquy reports 3.8 billion L.P.s. memberships, with the strongest penetration in the retailing sector to which more than 1.6 billion memberships belong. Beyond reinforcing customer loyalty and retention, L.P.s can help a retailer increase its share in a customer's wallet and to cross-sell and up-sell additional products to customers (Dorotic, 2019).

Why do companies introduce customer loyalty programs? This idea came from European researchers who, in the 1970s, noticed that suppliers working closely in the relationship with their customers tend to have customers who have a more significant share of the business with their suppliers. These were loyal customers (Graham R & Uncles, 1997, p. 72). Moreover, more loyal customers lead to more profits for each year they stay in a company, "the longer a company keeps a customer, the more money it stands to make." (Reichheld & Sasser, 1990, p. 106). Modern Loyalty reward programs have existed since the beginning of the 1980s; this was done by the frequently flying program of American Airlines. Many of today's loyalty programs in different sectors like Retail, credit cards, and hotels are mainly have their creation from the American Airlines model; the initial idea of this reward program was to promote customer loyalty and increase demand. Since then, little has changed from this core idea. (O'Malley, 1998, p. 48). What has changed, however, is that firms have implemented more sophisticated designs of loyalty reward programs.

1.1.2 The design of loyalty programs matters

A key issue in which the literature on loyalty programs focuses is design elements, such as "the way the company exchanges value with the customer through loyalty programs, such as points, miles, and so on" - currency (Kim et al., 2020, p. 74) or the reward type. These design elements seem to be important as they influence psychological elements, such as customers' perceived value and gratitude. As Kim et al. (2020, p. 78) also note, there is "empirical evidence that the mere presence of artificial currency, such as points, makes people overestimate the value of rewards" (see Hsee et al. 2003). From the 1980s until the present day, the dominant currencies within loyalty programs have been 'miles' or 'points'. This has been adopted by major coalition programs generating billions of dollars of revenue per annum, as well as individual retailers with niche programs, and everything in between. Creating a currency that can be controlled by an organization has become a very useful tool for customer engagement, and a viable alternative to product discounts. Even so, miles and points have limitations that restrict their attractiveness to consumers (Bagchi & Li, 2011); they expire, they can only be redeemed on a limited reward range, and the value can be manipulated by the issuer to increase profits (Shelper, et al., 2018, p. 2). The evolution of currencies in loyalty programs shows long and varied history. Tokens, tickets, stamps, miles, and points have all been invested as a device to stimulate Loyalty from worshippers and customers, often with great success. They also carry limitations, including limited utility, expiry, and devaluation characteristics. With miles & points dominating as the main loyalty currency for over 35 years, it would not be unusual in the history of Loyalty for them to be replaced by a new currency design (Shelper, et al., 2018, p. 12).

1.1.3 Cryptocurrencies as a novel design element of loyalty reward programs?

Blockchains have recently been discussed as motors of change for firms (Goldsby & Hanisch, 2022) and new ways of organizing relations (Lumineau, Wang & Schilke, 2021). Accordingly, the invention of blockchain technology and the emergence of cryptocurrencies have inadvertently created an opportunity for a paradigm shift in loyalty program design (Shelper, et al., 2018, p. 1) as it can fundamentally alter the gratitude experienced by customers and trigger repurchasing of products or services. In simple terms, a cryptocurrency "means digital cash or virtual currency devised to be faster, cheaper, and reliable than the ordinary central authority, particularly the government-issued money in a country. Hence, cryptocurrency is an alphanumeric currency in which encryption techniques are used to regulate the generation of this currency, verify the transfer of funds, and operate independently of the central bank or authorized regulatory body" (Hossain, 2021, p. 552). The first and still most important cryptocurrency in terms of value is called Bitcoin, created in 2009 by an anonymous person known as Nakamoto (Nakamoto, 2018); since then, cryptocurrencies have grown in size and importance. In just 13 years, there are thousands of cryptocurrencies, 90 of them with a value in the market of more than 1 billion USD each, bitcoin of the top with a market value of $921,847,925,763 which is equivalent to 2.9% of the world's money. (Reiff, 2021). Bitcoin is the first implementation of a concept called "cryptocurrency," which was first described in 1998 by Wei Dai on the cypherpunks mailing list, suggesting the idea of a new form of money that uses cryptography to control its creation and transactions rather than a central authority.

Cashback programs are nothing new they date back to 1986. Back then, Discover Financial Services launched a credit card that offered novel benefits, including a cashback bonus on certain purchases. Skip to the modern-day, and you'll see that with the implementation of blockchain technology in today's business world, crypto cashback and crypto rewards have become the new trend. And by tapping into it, brands can find yet another way to connect with both new and existing customers. As the name suggests, crypto rewards or cashback are incentives delivered to customers in the form of cryptocurrencies. There's no wonder why diverse companies have started creating their coin to offer a more appealing and accessible loyalty program. With one in 10 people investing in crypto now, the hype is real (Foo, 2021). Although different industries have started using crypto rewards, credit cards have taken the lead, coming with slightly different types of rewards. For example, when they use a credit card, they can receive digital currency as a reward or earn points or cashback, which they can later convert to cryptocurrency to exchange for other benefits. Some credit cards offer cryptocurrencies, such as bitcoin or Ethereum, that can be used to acquire fast food, art, electronic equipment, or even cars. Also, numerous stores and services online have enabled this payment channel, like Shopify, Xbox, and Starbucks. However, there are multiple platforms and programs available that allow customers to enjoy these benefits. In some cases, customers with crypto rewards have access to something similar to a virtual wallet. These wallets offer benefits, such as discounts on new purchases, prizes, or rewards, with companies and allies using the same cryptocurrency (Foo, 2021).

The worlds of cryptocurrency and loyalty reward systems are merging at a rapid pace, with individuals adopting credit card rewards in the form of bitcoin (BTC), ether (ETH), Stablecoin, and other cryptocurrency tokens over airline miles or hotel points. In 2021 alone, major cryptocurrency exchanges BlockFi and Gemini announced they would launch credit cards offering bitcoin rewards. Major consumer brands are also getting into the cryptocurrency rewards world. Shake Shack (SHAK) is now offering rewards in bitcoin for those who use the Cash App to buy food. Even airlines are experimenting with cryptocurrency as a loyalty reward. When Northern Pacific Airlines launches, the carrier will reward frequent flyers with its FlyCoin token. The airline guarantees the value of the coin will never drop below 2 cents per coin. It is also exploring partnerships with major crypto exchanges to allow users to buy additional coins. FlyCoin can be used to purchase free flights and elite airline status, potentially with other partners in the future (Cortez, 2022). The design of loyalty programs has not changed, but the currencies used in them have changed. Even before the first use of miles at the beginning of the 1980s, there were other types of loyalty programs like the trading of stamps almost 100 years before the airline miles; these stamps were also used as rewards or loyalty programs. (Dahlsad, 2015). History has shown that either stamps, miles, points, or any other special currency, the money used in loyalty programs, have a common denominator of change (Shelper, 2020). Here`s where cryptocurrencies have an opportunity inside the loyalty programs.

There are several reasons for a consumer to be in a loyalty program; some of the most important ones regarding satisfaction are: to meet needs, to enjoy participating, to make the brand experience better, to be consistent with brand expectations and the rewards or the benefits (Bond Brand Loyalty Inc, 2019), There are many loyalty programs in many different industries, and although some of these reasons can be more or less important depending on the company and the industry, there is one that is common in all the loyalty programs: The reward; “Customers see value in points when they spend them, not when they earn them. If your customers are not spending their points they are never realizing the value they hold. If customers don’t see value in your points they will not be motivated to earn them in the future.” (McEachern, 2014). In this thesis, we focus on whether and how cryptocurrencies as a design element of loyalty programs can enhance the value customers see and then repurchase services.

1.2 Research Gap

Research about cryptocurrencies and loyalty programs has been done, although there is still a large gap and opportunity for exploring this area. While cryptocurrencies can fundamentally change the nature of the currency, which is a key design element of any loyalty program, research has paid limited attention to their role. In the United States of America, for example, 44% of people are interested in getting cryptocurrencies as an alternative to traditional cash-back reward programs from retailers (Perason, 2021). In Australia, on the other hand, the most reason information is from 2018, with 36% of members of loyalty programs showing an interest in being rewarded with cryptocurrencies instead of the traditional loyalty points. (Posner, 2018) In 2017 there was an experiment conducted in Australia where students could gain cryptocurrencies as part of a loyalty program; the experiment showed a very high engagement rate for a loyalty program when compared to industry averages. The experiment allowed students to earn a cryptocurrency known as Ether, each time they went to make purchases, they could have a stamp, and with ten stamps, they earned USD 5 worth of Ethereum cryptocurrency. 59% of the users reported an increase in the money spent during the experiment, and 86% felt the cryptocurrency reward was more appealing than their favorite loyalty program. The main positive points were related to the mystery of fluctuation with speculation and a potential major earning in value, and the fact that Etherium felt like earning money and not points. In the negative points, the fluctuation was also a major concern as the feeling of being something different from cash. (Shelper, et al., 2018, pp. 2-7)

The experiment has relevant insights for the study of loyalty programs combined with cryptocurrencies, yet there is a major gap in research done outside of the USA and Australia, regions like Africa or Latin America have almost no studies in this field, and there is also the fact that this study was done with young people, which could have different outputs when mixed with the general population, as there seems to be more acceptance of cryptocurrencies in younger generations: "49% half of the millennials (ages 25 to 40) are at least somewhat comfortable with investing in crypto assets such as Bitcoin, compared to 37 percent of Generation X and only 22 percent of baby boomers." (Royal, 2021).

Importantly, the main research gap is that there is a lack of attention to how incorporating cryptos as the currency of a loyalty program can influence the effectiveness of that program, meaning how customer loyalty will be influenced. Due to the previous information, this thesis intends to have a deeper look at understanding the role of cryptocurrencies in loyalty programs; it's important to continue the research as there is almost no information about these two topics together, yet cryptos and loyalty programs have a monetary value of billions of dollars.

1.3 Purpose and Research Questions

The study aims to deepen our understanding of how cryptocurrencies, as an innovative design element of a reward program, can influence customer loyalty.

i. How can cryptocurrencies influence the perception of loyalty in the context of a reward program?
ii. What is the role of emotions and cognitions about a reward type in shaping customer loyalty in a reward program?
iii. What are the opportunities and challenges with incorporating cryptocurrencies as a design element in a reward program?

We address the above questions by building on the findings of a mixed-method study that relies both on 162 responses to a survey and 7 semi-structured qualitative interviews.

1.4 Thesis Disposition

The thesis is structured in the following way. First, the next section provides information about prior research on this topic and a theoretical framework for loyalty rewards programs which serve as the basis for our conceptual model. Second, in chapter 3, we present our methodological choices. Chapter 4 presents our findings. Chapters 5 and 6 present quantitative and qualitative analyses respectively. Finally, Chapter 7 discusses how our findings support, extend, and/or question prior research. Chapter 8 presents our concluding remarks.

2. Theoretical Background

2.1 Customer Loyalty and Customer Loyalty Programs

2.1.1 Customer Loyalty

The concept of ‘loyalty’ has been around for centuries. In the olden times, ‘loyalty’ was used to maximize power and control. Generals of the great ancient Roman Empire often used the loyalty of their army to gain political leverage or to overthrow the emperor. Napoleon Bonaparte, the most feared French commander of the early nineteenth century, achieved extraordinary results through the unrelenting loyalty of the soldiers under his command (Kumar & Shah, 2004). Relatedly, from a business point of view, loyalty has been discussed in terms of customer loyalty and brand loyalty. In a broader sense, loyalty is something that consumers may exhibit to brands, services, stores, product categories, and activities. Thus, we use the term customer loyalty as opposed to brand loyalty to emphasize that loyalty is a feature of people, rather than something inherent in brands (Uncles, 2003). Customer loyalty is often highlighted as one of the key factors of a company’s success (Khan, 2013). Gould (1995) proposes that no company can stay in business unless it has satisfied and loyal customers. The author suggests that customer loyalty cannot be measured by customer satisfaction alone and requires the firm to scrutinize practices to make their customers “much more than just satisfied.” Thus, customer loyalty is not merely about customer satisfaction alone but a deeper commitment to the firm and its services.

Definitions of loyalty vary, and the term loyalty has often been attributed to different meanings. Yet, a common element in most of the definitions is that loyalty is suggested to be associated with “the intention of repurchasing products and services.” (Uncles, 2003, p. 295) Based on this, to assess the effectiveness of a loyalty program, prior research has used these two dimensions of customer loyalty: attitudinal and behavioral (Watson et al. 2015). This is also noted in early definitions of the term, such as the one provided by Jacoby and Kyner (1973), who describe loyalty as “the biased (i.e., non-random), behavioral response (i.e., purchase), expressed over time, by some decision-making unit, with respect to one or more alternative brands out of a set of such brands, and is a function of psychological processes” (McMullan & Gilmore, 2008, p. 1085). Loyalty is defined as the “customer attitudes aligned with a series of purchase behaviors that systematically favor the focal company over competitors” (Kim et al., 2020, p. 74). A similar yet more elaborate definition of customer loyalty is the following: “a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing same repetitive brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (Oliver, 1999, p. 34). In those definitions, both the repurchasing behavior is noted, and the attitudinal part of loyalty is highlighted. Customer loyalty is thus both altitudinal and behavioral. While attitudinal loyalty consists of cognition, preference, and affect, behavioral loyalty manifests in a range of profitable consumption behaviors such as repeated purchases (Oliver, 1999) and word of mouth (Morgan & Rego 2008). “Attitudinal loyalty is when a customer chooses to be loyal because of a positive brand preference (a brand fulfills key functional and/or emotional needs or the customer has an emotional affiliation with the brand). Attitudinal loyalty does not necessarily equate to behavioral loyalty and does not necessarily mean that the customer is a large user of the brand". "Behavioural loyalty is when a customer continues to buy/use a particular product, service, or brand (at least as much as before). But there are many different reasons for this, including Attitudinal loyalty/Active Loyalty; "I have a positive brand preference," Apathy/Habitual Loyalty; "I can't be bothered, too much hassle, they're all the same," etc. Captive loyalty; I'm stuck in something I don't like but it's difficult to switch" (cost, barriers, availability, etc.) (Ipsos Encyclopedia, 2016).

Further, Oliver (1999) suggested that customer loyalty not only is multi-dimensional, as discussed above but also develops through three phases of loyalty development which may lead to a deeply held commitment to rebuy in the future. Oliver's (1997) framework follows this cognition-affect-conation pattern and argues that consumers can become "loyal" progressively and in a rather linear manner. Specifically, it is proposed that consumers become loyal in a cognitive sense first, then in an affective sense, later in a conative manner, and finally in a behavioral manner.

(McMullan & Gilmore, 2003) The research aims to test the hypothesis that customer loyalty develops sequentially through four phases. There are four distinct phases in the development of a customer's loyalty towards a product or service: cognitive, affective, conative, and action. The findings of their research contribute to a growing body of knowledge concerning the management of customer loyalty. The strength of their research is that it contributes a valid and reliable scale for the measurement of customer loyalty. Previously, the main method for profiling customers' loyalty used behavioral data. The advantage of this scale is that it uses attitudinal and behavioral data. The loyalty scale offers practitioners a range of possibilities for identifying and managing customer loyalty within organizations. The authors conclude that an organization's long-term success in a market is determined by its ability to expand and maintain a significant level of loyalty among its customers.

Net Promoter Score (NPS) is one way of calculating one customer loyalty score. It is important to know the percentage of loyal customers who will buy again and recommend. And as one of several loyalty metrics, it may well be useful. However, it is unsatisfactory for business decision-making because it does not tell you why they are loyal or disloyal. NPS does not provide any statistically reliable data and information on what it is that customers value so that you can both retain them and win additional customers (Fisher & Kordupleski, 2019).

Moreover, Dick and Basu (1994) suggest that loyalty involves both a favorable attitude that is higher compared to potential alternatives and repeated patronage. Thus, it is key to conceptualize loyalty in terms of the relationship between the relative attitude toward an entity (brand/service/store/vendor) and patronage behavior. In that sense, customer loyalty is viewed as the strength of the relationship between an individual's relative attitude and repeat patronage. The relationship is seen as mediated by social norms and situational factors. Cognitive, affective, and conative antecedents of relative attitude are identified as contributing to loyalty, along with motivational, perceptual, and behavioral consequences (Dick & Basu, 1994). They classified the concept of relative attitude with repeat patronage (at two levels – high and low of each) leading to the four specific conditions related to loyalty as follows.

1. Loyalty - High relative attitude and high repeat patronage
2. Latent Loyalty - High relative attitude and low repeat patronage
3. Spurious Loyalty - Low relative attitude and high repeat patronage
4. No loyalty - Low relative attitude and low repeat patronage

To improve customer loyalty, firms have started providing rewards as those allow for positive psychological elements (Kim et al., 2021) and often encourage customers to consider switching costs. "Switching costs emerge when a customer has a particular perception of the additional cost required to switch from a current supplier to a new one or a different one" (Blut, et al., 2016, p. 82). Rewards become crucial in loyalty programs as research related to the share of wallet (Wirtz, et al., 2007) has proved that switching costs in low attitudinal loyalty users has a positive impact on the share of wallet, but this is only possible with an attractive award. On the other hand, an attractive reward program always has a positive impact on the share of the wallet (i.e. the percentage of expense on the particular brand) (Wirtz, et al., 2007). The structure of loyalty programs, such as reward requirements, involves trade-offs that must be balanced. If rewards are earned too easily, there is not sufficient points pressure to create significant incremental sales. If earning rewards is too difficult, customers might give up easily, thus eroding any potential points pressure. Also, because there are fewer cash-ins, there is less rewarded behavior: customers don't.

2.1.2 Customer Loyalty Programs

Customer relationship management is the general company strategy that concentrates on the creation and retention of long-lasting and strong relations with customers. Loyalty programs, which are defined here as "any institutionalized incentive system that attempts to enhance consumers' consumption behavior over time, which captures a broad span of types of programs" (Kim et al., 2020, p. 73), are instrumental in developing such long-lasting customer relations (Gudonaviciene & Rutelione, 2009, p. 397). As integrated systems of marketing actions that aim to make member customers more loyal, loyalty programs are becoming one of the most influencing factors for the increase of company profit (Fruend, 2017). The goal of these programs is to enhance customer relationships by offering high value to profitable market segments (Evanschitzky, et al., 2012) and ultimately enhance loyalty to the firm (Nunes & Dreze, 2006). When this goal is achieved, customers loyalty manifests in repeat purchases, more purchasing, convincing other potential customers to purchase through words of mouth, refraining existing customers from switching, causing an increase in sales and consequently causing to increase in the total revenue and total profit (Khan, 2014).

Loyalty programs are offered by both retailers and manufacturers to stimulate continued patronage among consumers through discounts, cash, free goods, or special services, such as free magazines on specialized topics of interest to loyalty program members. Thus, the *reward types* can be different, meaning that rewards can be both tangible or financial, but also soft rewards, which are based on emotional benefits (Yi & Jeon, 2003). While retail cooperatives pioneered loyalty programs by giving members allowances based on their annual purchases, the more modern use of loyalty programs began with Raleigh cigarette coupons and with stamp-based programs such as the S&H Green Stamp Company (which offered consumers points based on purchases; these points were redeemable for a broad selection of merchandise) (Berman, 2006, p. 123). This also highlights another important issue in loyalty reward programs, which refers to the *reward value,* or else the monetary value amount of the reward, which often differs depending on the *tiers*, as customers are grouped into a hierarchy based on their purchase levels (Kim et al., 2021).

Loyalty programs have proliferated across travel, retail, financial services, and other economic sectors. The average US household, for example, participates in some 29 different loyalty programs, according to the biennial 2015 Colloquy Loyalty Census. The result is a maze of point systems and redemption options, together with cumbersome processes for exchanging points among program partners. Loyalty programs are ripe for innovation that would make them easier to use (Stansbury & Hill, 2017). The search for innovation has paid close attention to bringing novel *currencies* into the loyalty programs, meaning that firms have tried to find new ways in which they can "exchange value with the customers through loyalty programs, such as points, miles, etc." (Kim et al., 2021, p. 74) Since modern Loyalty programs started, a new type of currency was created, called "Miles" which came from the number of miles a loyalty program member had flown. After American Airlines' initiation, other airlines like United Airlines and Delta followed the same strategy. Over the next five years, many other companies in the airline industry and other industries like hotels, car rentals, banks, and Retailers started their loyalty programs based on miles or points (Shelper, 2020), and this has also stimulated new *partnerships* as firms "started partnering with other companies and offering a joint program in which customers can earn and redeem rewards at different companies" (Kim et al., 2021, p. 74)

Loyalty programs are not the universal tool that is solving all business problems, and prior research also raises concerns about their potential to meet expectations and increase customer loyalty (Yi & Jeon, 2003). Though, well-prepared and developed loyalty simulation tools can be an effective method to strengthen relations with customers, increase sales, identify the most popular and best saleable products, evaluate how to choose the best price decisions, arrange for the product assortment, and solve other urgent questions for business (Gudonaviciene & Rutelione, 2009, p. 397). In the simplest terms, loyalty points are a type of incentive program used by businesses to encourage customers to continue spending their money with them. The more you spend exclusively with one brand, the more points you can earn via their loyalty programs, which can be exchanged for items, upgraded services, or experiences of value. One of the earliest examples of a loyalty rewards program was the S&H Green Stamp program, launched in 1896 by Sperry & Hutchinson. When shopping with participating retailers (including supermarkets, gas stations, and department stores), customers would earn green stamps. In turn, collectors could use these stamps for merchandise from Green Stamp stores or the mail order catalog. The first example of a travel-based loyalty program is said to be launched by Texas International Airlines, although it was American Airlines that spread it massively;. As flyers purchased tickets and traveled with the carrier, they would get credited for the actual number of miles flown between points, which could be traded in for free flights in the future. By 1991, credit card issuers started getting into the loyalty program business. That year, American Express (AXP) launched the Membership Miles program, offering cardholders the chance to earn flexible miles which could be used for travel across several airlines. Ten years later, the program remains the biggest card-based loyalty program in the world (Cortez, 2022).

The beneficial role of loyalty programs can also be discussed in terms of what we mentioned above as the *reward value*, or else the monetary value amount of the reward. Research about different types of money done in New Zealand with students of up to 25 years; showed a correlation between actual money and loyalty program points. In this study, people were asked, "Is X a type of money?" for 30 different items. Only 12 items with the most significant "Yes" answer were selected to continue the experiment. Among those 12 items, there were four different types of loyalty programs, one in the hotel industry, one in the banking industry, and two in the airline industry. An average of 3 out of 4 people perceived those points to be similar to money. A similar experiment in Hong Kong shows similar results; three different loyalty programs were perceived as money rating from 58% to up to 90% with a "Yes" answer (Chan, et al., 2016, pp. 9-11). The general perception of the consumers is that these points are near money; nevertheless, because the perception is not like actual money (Stourm, et al., 2015, p. 254), the behavior of people is different compared to legal money. The budgeting from the near money is in a separate mental account, resulting, unlike the legal money, the spending of the points or miles is perceived more as saving money instead of spending money (Chan, et al., 2016, p. 253).

Although customers engaged in Loyalty programs seem to be more loyal, they can also have inevitable frustrations. These frustrations can be summarized in 4 categories (Stauss, et al., 2005, p. 241). First: Qualification Barrier, where the reward directly impacts the challenging conditions to get it. Consumers often complain about the overwhelming number of miles or points required to access the reward. The expiry of the miles or points also plays a significant role here. Second one: Inaccessibility. This usually exists once the qualification barrier is passed, but the reward cannot be accessed, this can be due to capacity, like seats in airlines, poor training from employees, with the inability to deliver specific promises, like special support for customers, for example, a free shuttle to the airport, but maybe they do not have that in the city where the customer lives. Third: Worthlessness, when the benefits of the loyalty program are perceived by the customers as none or too low value, for example, when they find out the benefits are not exclusive or there are no advantages for the customer as the benefits are irrelevant. In this case, a study done in Australia shows that almost half of the members (46%) of loyalty programs are concerned about the lack of value given the effort to achieve the rewards. This was one of the top concerns of all loyalty programs. (Posner, 2020, p. 12) Fourth: Redemption Costs. Getting access to the reward needs mental cost or additional material. For example, a customer must tell an employee that they benefit from an express line in the airport. They have to overcome inhibitions and pass or ask the non-qualified customers to move. All the above highlight that the design of a loyalty program is very important as different design elements, such as structure (tiers, currency, enrollment) and rewards (type, value, fir, rewarded behavior), can trigger different psychological elements, such as not only gratitude but also skepticism or perceptions of unfairness (Kim et al., 2021)

According to (Berman, 2006, pp. 124-125), based on different characteristics and design elements, there are four main categories of loyalty programs.

Table 1. A typology of Loyalty program types (Berman, 2006)

Program Types	**Characteristics of program**	**Example**
Type 1 Members receive additional discount at register	• Membership is open to all customers • Clerk will swipe discount card if a member forgets or does not have a card • Each member receives the same discount regardless of purchase history • Firm has no information base on customer names, demographics, or purchase history • There are no targeted communications directed at members	Supermarket programs
Type 2: Members receive 1 free when they purchase n units	• Membership is open to all customers • Firm does not maintain a customer database linking purchases to specific customers	Local car wash, nail salon, SuperCuts, Airport FastPark, PETCO
Type 3: Members receive rebates or points based on cumulative purchases	• Seeks to get members to spend enough to receive a qualifying discount	Airlines, hotels, credit card programs, Staples, Office Depot
Type 4: Members receive targeted offers and mailings	• Members are divided into segments based on their purchase history • Requires a comprehensive customer database of • customer demographics and purchase history	Tesco, Dorothy Lane Markets,Wakefern's ShopRite, Giant Eagle Supermarkets, Harris Teeter,Winn-Dixie, Harrah's, Hallmark

2.2 Understanding and Assessing the Effectiveness of Loyalty Programs

Loyalty programs are a ubiquitous marketing tactic, yet many of them perform poorly, and the reasons for loyalty program failure remain unclear to both marketing managers and researchers (Steinhoff & Palmatier, 2016, p. 88). According to Kim et al. (2021) as exemplary instruments of relationship marketing, loyalty programs are being implemented and studied at an unprecedented rate. Yet real-world efforts often fail or at least do not live up to expectations, and despite the growing richness of loyalty program literature, the field remains fragmented. Thus, a comprehensive perspective is required. Kim et al. (2021) have developed a comprehensive theoretical framework of loyalty program effectiveness, which consists of design, psychological, and operational elements which play a role in influencing customer loyalty; in turn, Kim et al. (2021) suggest a set of 12 propositions that account for differential effects across customer acquisition, onboarding, expansion, and retention stages. As Kim et al. (2021, p. 71) note, "With an evolving theory of loyalty programs across relationship dynamics, this propositional inventory parsimoniously delineates the trade-offs associated with relationship stage-based management of these programs."

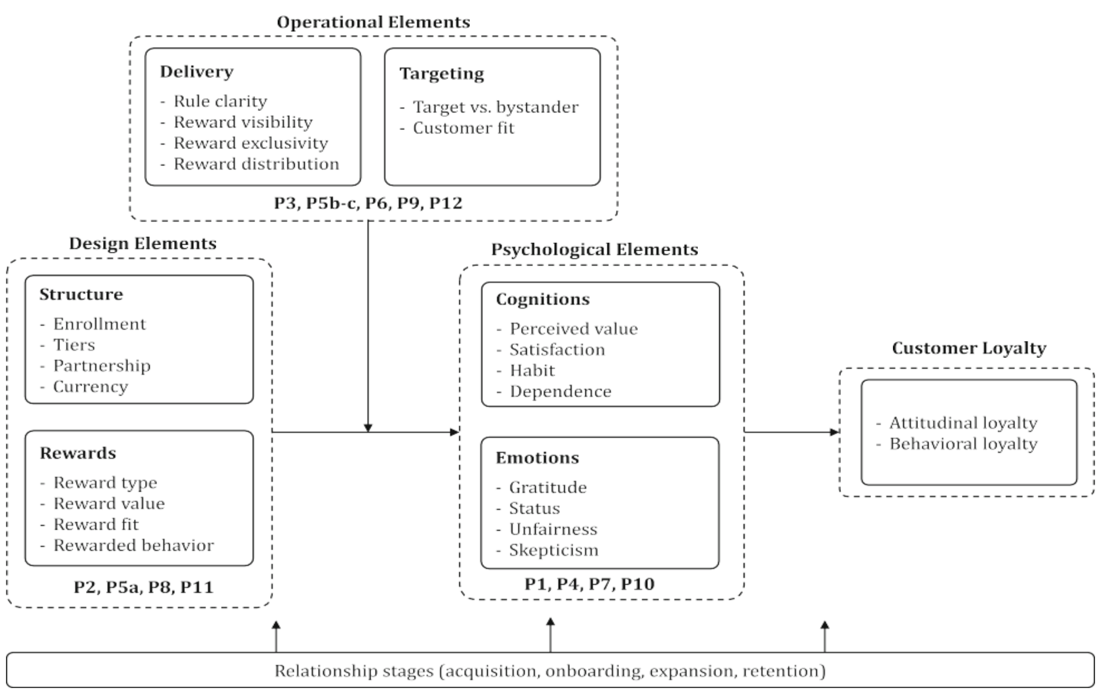

Figure 1. An integrative conceptual framework of loyalty program effectiveness **(Kim, et al., 2021)**

Kim et al. (2021) have used 129 articles and 37 marketing and psychology journals to develop an integrated conceptual framework. Prior loyalty programs research focuses on three main elements, which can be combined within a nomological net: *psychological, design, and operational elements*. These three elements are key to understanding how the various design elements of a loyalty program can determine performance, which underlying psychological mechanisms (i.e., cognitions and emotions) they trigger in customers, and how program operations can enhance or dampen their effectiveness. These elements broadly reflect the relationship marketing framework proposed by (Palmatier & Steinhoff, 2019), which emphasizes the relational mechanisms customers encounter (psychological) and actions by sellers that precede (design) and affect (operational).

Each element of the framework is explained in the following, and then, cryptocurrencies as discussed as a novel design element that can significantly shape the effectiveness of customer loyalty programs.

Psychological Elements

Psychological elements refer to cognitive and emotional processes in customers' minds proposed by Palmatier and Steinhoff (2006), which function as mediating mechanisms that determine loyalty programs' ultimate performance. Loyalty programs apply to various customer portfolios, with complex delivery methods, so they evoke diverse psychological mechanisms that work simultaneously in customers' minds.

Customer cognitions are information-processing mechanisms that explain or predict consumption-related decisions and outcomes (Bettman 1979). Loyalty program research details four relevant **cognitive elements**: perceived value, satisfaction, habit, and dependence (Kim, et al., 2021). According to (Kim, et al., 2021, p. 75), each element is explained using various authors' definitions. Perceived value reflects customers' evaluation of their net utility, calculated as benefits relative to the costs. In a loyalty program context, it might depend on discounts, various available rewards, the ease of achieving them, and the convenience of the shopping experience (Mimouni-Chaabane and Volle 2010). Customers gauge their satisfaction with the product and company before considering the benefits of loyalty programs; empirical evidence shows that satisfied customers prefer delayed rewards, whereas unsatisfied customers prefer immediate ones (Keh and Lee 2006). Intuitively, practitioners must prioritize customer satisfaction with products and services before implementing or promoting a loyalty program. Although initially, customers deliberate and analytically assess program benefits and their satisfaction, over time, they may experience a cognitive form of inertia. Habit pertains to customers' memory-based preferences for an established behavioral pattern, as a result when they consistently performed automate some behavior in the same context. As (Henderson, et al., 2014) show, habitual customers either expand or defect when rewards prompt them to reconsider their engagement. Thus, they highlight differential effects of habit, in contrast with a common assumption that habit has consistently positive effects on businesses (Shah et al. 2014). What may keep customers from switching though, is the extent to which they perceive their dependence or reliance on the loyalty program (Henderson et al. 2011). An asymmetric dependence structure may harm the relationship, but greater interdependence helps it (Kumar et al. 1995). By design, customers can build up substantial rewards in a program, which can impose significant switching costs. Even disregarding the amount or value of their reward balance (Hartmann and Viard 2008), customers might accrue psychological costs of switching if they feel dependent on or accustomed to the program, such that they become locked in (Klemperer 1995).

Further, (Kim, et al., 2021) have explained **emotional elements** by referencing several authors' studies. Emotional Customer emotions refer to valenced, affective responses to situations (Ortony et al. 1988). Rewards are generally appreciated, but mixed emotions might emerge in some circumstances, including senses of gratitude, unfairness, status, or skepticism. As noted in the article, depending on whether the customer is the target of a reward or a bystander who observes another person receive it, loyalty program benefits can have divergent effects (Steinhoff & Palmatier, 2016). Customer gratitude is "emotional appreciation for benefits received, accompanied by a desire to reciprocate" (Palmatier, et al., 2009, p. 01). A feeling of status reflects customers' perception of holding an elevated position or rank within the firm's customer hierarchy. Unfairness is the degree to which a person's own input outcome ratio, compared with that of others, is perceived as unacceptable or inequitable. Target customers who receive preferential treatment and a higher level in a tier-based loyalty program likely sense higher status and gratitude, but bystander customers may sense unfairness. When they receive unearned status rewards, customers even might develop skepticism about the motive for the reward, despite feeling somewhat grateful (Eggert, et al., 2015). Other miscellaneous emotions also might be elicited by loyalty programs, such as discomfort (Jiang, et al., 2013), frustration, or feelings of pressure and accomplishment (Stauss, et al., 2005).

Design Elements

(Kim, et al., 2021) explained design elements using various articles. Design elements and features include the program structure and rewards, which reflect strategic decisions about the program type, tiers, partnerships, and currency, as well as reward value, types, and characteristics. Decisions about the rewards' currency design strongly influence customer perceived value. Currency refers to the way the company exchanges value with the customer through loyalty programs, such as points, miles, and so on. (Hsee, et al., 2003) provide empirical evidence that the mere presence of artificial currency, such as points, makes people overestimate the value of rewards, due to the illusion of a scale (more bonus points) and certainty (linear point distribution). Customers' decision to redeem points also depends on the ease of computation (Kwong, et al., 2011). However, a point system with easy numbers is not a universal solution because customers also consider the distance (points needed) and step size (points/dollar) represented by loyalty programs (Bagchi & Li, 2011). Rewards Once the structural design elements have been set. The reward design needs to be determined. Reward value, the monetary value of the reward, clearly has a significant impact. Customers' perceptions of how much firms invest in relationship marketing positively influence various outcomes, such as commitment and gratitude, which benefit long-term firm performance (Palmatier, et al., 2006). If a reward's financial value is below customers' expectations, it prompts more negative perceptions than do non-monetary rewards (Liu, et al., 2015).

Operational Elements

Finally, empirical research cites various operational elements, captured by decisions about how and to whom to deliver rewards. Such operational details can moderate the influence of design elements (Kim, et al., 2021) (Steinhoff & Palmatier, 2016).

To sum up, all the above elements are very important for understanding and assessing the effectiveness of a loyalty reward program. Further, to measure if a loyalty program works or else its effectiveness, it is possible to ask directly to the consumer, but there is one metric often used throughout Loyalty Programs: Loyalty Program Breakage is a metric that helps understand the effectiveness of a loyalty program. The formula is the total of points that have not been spent divided by the total of points issued. The average in the industry is 85%, and the higher the number, the less effective a loyalty program is, as it means customers are not returning and using their points (McEachern, 2014). There are several reasons for this, many of them related to the main complaints of customers regarding loyalty programs.

2.3 Cryptocurrency and Blockchain

2.3.1 Cryptocurrency

In this thesis, we suggest that cryptocurrencies can be a novel design element of loyalty programs that may complement points or other existing currencies or reward types. Automation of the way we pay for goods and services is already underway, as can be seen by the variety and growth of electronic banking services available to consumers. The ultimate structure of the new electronic payments system may have a substantial impact on personal privacy as well as on the nature and extent of criminal use of payments. Ideally, a new payments system should address both seemingly conflicting sets of concerns. On the one hand, knowledge by a third party of the payee, amount, and time of payment for every transaction made by an individual can reveal a great deal about the individual's whereabouts, associations, and lifestyle. For example, consider payments for such things as transportation, hotels, restaurants, movies, theater, lectures, food, pharmaceuticals, alcohol, books, periodicals, dues, and religious and political contributions. on the other hand, an anonymous payments systems like banknotes and coins suffer from lack of controls and security. For example, consider problems such as lack of proof of payment, theft of payments media, black payments for bribes, tax evasion, and black markets. A fundamentally new kind of cryptography is proposed here, which allows an automated payments system (Chaum, 1983, p. 199).

Cryptocurrencies are digital assets that are designed to be used as forms of exchange, somewhat like traditional money. As the name implies, they exploit strong cryptography to secure exchange. Cryptocurrency is just another kind of money; cryptocurrency is unlike traditional currencies in several important ways. They are not controlled by any central authority such as a national or transnational central bank. No organization or agency underwrites the value of the currency or issues more currency into the system. Scarcity is maintained through the equations that are used to validate transactions. Cryptocurrencies are by their nature decentralized and, as a consequence, offer a form of exchange independent of state control. It is these characteristics that exemplify the libertarian ideals of cyberculture (Tredinnick, 2019, p. 39).

In the last 10 years, cryptocurrencies have proliferated at an alarming rate; there are currently well over 1000 cryptocurrencies and crypto-assets in existence. Some of the other major cryptocurrencies currently in use include Bitcoin, Litecoin, Ether, ZCash, and XRT. The oldest and most well-known cryptocurrency in widespread use is bitcoin. It was first mooted in a 2008 paper published under the name of Satoshi Nakamoto, a pseudonym used to conceal the identity of the creator, either an individual or, more probably, a collective. The identity of Satoshi Nakamoto remains a mystery to this day (Tredinnick, 2019).

A sustainable ecosystem is relevant for various stakeholders, including miners or validators, investors, developers, and consumers. Laying the foundation for a sustainable consensus mechanism and reward system could therefore pave the way for a future in which cryptocurrencies could potentially replace traditional fiat currencies (Wagner, et al., 2019, p. 2). Cryptocurrencies bring their users freedom of payment. They provide the possibility to send and receive any amount of money quickly anywhere in the world at any time. Users of cryptocurrencies are not limited spatially or in time when realizing their payments, so their users are in full control of their money (Vejačka, 2014, p. 77).

There are different and confronting opinions regarding the future of cryptocurrencies in general and bitcoins in particular. Whilst those with libertarian views of life are optimistic and embrace the cryptocurrency system, other authors, economists, and scholars from this field are not enthusiastic about the use of cryptocurrency in the system of payments and financial transactions. The optimistic view of cryptocurrency use is backed by the fact that they make it easier to transfer funds between two parties in a transaction; these transactions are facilitated through the use of public and private keys for security purposes. These fund transfers are done with minimal processing fees, allowing users to avoid the steep fees charged by most banks. In addition, many countries have started to accept bitcoin as a valid currency. Especially, countries that aim to get rid of cash have a very friendly approach to cryptocurrencies. An argument that promoters of bitcoin use are the Market Capitalization of bitcoin, Ethereum, and other cryptocurrencies, claiming that the cryptocurrency market has become very large and powerful, so banning it would be too costly for any country. On the other side, the opponents of cryptocurrencies claim that cryptocurrencies are very volatile, and can be used for money laundering or financing illegal activities (Bunjaku, et al., 2017, p. 36).

However, In September 2021, El Salvador became the first country to accept Bitcoin as legal tender, and in October of the same year, the first Bitcoin ETF in the US began trading. These crypto dynamics have continuously left many consumers and companies curious about the new digital currencies, and open to incorporating them into many business strategies as crypto rewards programs (Fernández, 2022). In April 2022 Bitcoin becomes the official currency in the Central African Republic (Browne, 2022).

2.3.2 Blockchain in Strengthening Reward Programs

As mentioned before, Loyalty Programs are reward programs offered by a company to customers who frequently make purchases. However, there are major issues with traditional loyalty programs like low redemption rates, expiring of points, customer acquisition costs, and the nuisance of keeping track of multiple loyalty programs. Blockchain provides a solution to a number of these issues (Agrawal, et al., 2019, p. 1).

Cryptocurrencies and blockchain, in general, have sparked widespread interest over the past years, leading to the emergence of countless cryptocurrencies and a number of different approaches and algorithms to govern their blockchain. The type of consensus mechanism as well as the defined attributes – such as block-time, -size, and -reward – dictate various aspects of a cryptocurrency's economy as well as its possible use cases. For example, the use of a cryptocurrency as a store of value, as opposed to a means of payment, differs insofar that the transaction time is rather insignificant when storing the currency long-term, whereas the frequency and duration of transactions is critical when it comes to instant payments (Wagner, et al., 2019, p. 1).

As an emerging decentralized architecture and distributed computing paradigm underlying Bitcoin and other cryptocurrencies, blockchain has attracted intensive attention in both research and applications in recent years. The key advantage of this technology lies in the fact that it enables the establishment of secured, trusted, and decentralized autonomous ecosystems for various scenarios, especially for better usage of the legacy devices, infrastructure, and resources (Yuan & Wang, 2018, p. 1421).

Blockchain, best known as the technology behind Bitcoin, enables a ledger of transactions to be shared across a network of participants. When a new transaction occurs (for example, a loyalty point is issued, redeemed, or exchanged), a unique token is created and assigned to that transaction. Tokens are grouped into blocks (for example, every ten minutes) and distributed across the network, updating every ledger at once. New transaction blocks are validated and linked to older blocks, creating a strong, secure, and verifiable record of all transactions, without the need for intermediaries or centralized databases (Stansbury & Hill, 2017).

(Gartner, 2021)Twenty percent of large organizations will use digital currencies for payments, stored value, or collateral by 2024, according to Gartner, Inc. The prediction has important implications for CFOs as they assess use cases and potential risks for digital currencies, which will be used more in business transactions and grow in overall economic significance in the years ahead. "Increasing mainstream acceptance of cryptocurrencies on traditional payment platforms and the rise of central bank digital currencies (CBDCs) will push many large enterprises to incorporate digital currencies into their applications in the coming years," said Avivah Litan, distinguished vice president analyst in the Gartner IT practice. "Digital currencies will be primarily used by these organizations for payment, a store of value, and the ability to leverage high-yield investments available in decentralized finance (DeFi) applications." Gartner experts recommend that organizations first clarify specific use cases for digital currencies before evaluating appropriate IT stacks to incorporate them within the enterprise. Each primary use case comes with a host of technological, regulatory, legal, and strategic considerations for both CFOs and applications leaders to assess, including selecting appropriate service providers and the ability to monitor and react to ongoing regulatory guidance. "We have noticed an uptick in interest in digital currency and blockchain applications among CFOs since the start of the year," said Alexander Bant, chief of research in the Gartner Finance practice. "While the volatility of cryptocurrencies remains a concern, anticipation of clearer regulatory guidance and the advent of CBDCs, now offers CFOs more avenues to pressure-test use cases for digital currencies."

Crypto, an emerging digital technology, is gaining more and more attention from financial institutions, investors, merchants, startups, and fintech. In 2022 there will still be a significant increase in consumer adoption, which is leading to businesses making moves and accepting cryptocurrencies as a form of payment and including crypto in their rewards programs (Fernández, 2022).

2.4 Cryptocurrency-based Loyalty Programs

By offering digital currencies as rewards, retailers are trying to adjust and make changes to rewards programs by using cryptocurrencies to bring shoppers back to their stores. Blockchain technology can be used for rewards programs in several ways. For example, blockchain-based rewards programs can track and distribute rewards points, coupons, or other loyalty program benefits. Additionally, blockchain technology can be used to verify customer identities and prevent fraud. Crypto is becoming the most desirable digital reward, as it is liquid and global (Fernández, 2022). For consumers juggling an array of loyalty programs, blockchain could provide instant redemption and exchange for multiple loyalty point currencies on a single platform. With only one "wallet" for points, consumers would not have to hunt up each program's options, limitations, and redemption rules. All loyalty programs are vulnerable to a blockchain revolution, but the travel industry is perhaps the most at risk. Travel loyalty programs tend to be complex and multi-currency; program points can even differ by trip component (flight, car rental, hotel, dining), leading to fragmented point collections and some points never being redeemed. It can be difficult for the average person even to accumulate enough points to earn a meaningful reward (Stansbury & Hill, 2017).

Cryptocurrencies are changing fast, and they're changing the financial scenario at the same speed. Blockchain technology is one of the best mechanisms for redeeming digital rewards in the form of crypto assets. The ability to issue a desirable reward is crucial for those companies that want to succeed in the new era of digital money. Although a crypto reward program is not intended to replace traditional loyalty programs, it is starting to be considered as a system facilitator that reduces costs. Being a transparent system, blockchain technology reduces losses from fraud and error, which are common in traditional reward strategies. Cryptocurrencies present risks, but the main argument for choosing them and implementing them in a reward program is that consumers love to choose. And after the quick adoption of many new technologies in the last few years, they are more willing to try something new (Fernández, 2022).

2.5 Conceptual Model

Building on the literature on customer loyalty and loyalty programs and inspired by the integrative conceptual framework of loyalty program effectiveness suggested by Kim (2021), we developed a conceptual model to identify cryptocurrency's influence on customer loyalty by focusing on the design element of currency and psychological elements.

We chose the psychological elements of perceived value, dependence, status, and skepticism as independent variables from the conceptual framework and linked them with our cryptocurrency-based reward program survey questionary. Here, we looked at how design elements of currency and the reward value of traditional points and miles can be replaced by cryptocurrency. Kwong et al. (2011) mentioned many consumers today hold loyalty program points that function as a currency but are not cash. An interesting argument made by Hsee (2003) is that artificial currency makes people overestimate the value of rewards due to illusion, and (Bagchi & Li, 2011) note that a pointsystem with easy numbers is not an effective solution.

Based on the previous literature review, we chose attitudinal loyalty and behavioral loyalty as dependent variables. As presented above, attitudinal loyalty consists of cognition, preference, affect, and behavioral loyalty manifests in a range of profitable consumption behaviors such as repeated purchases (Oliver, 1999) and word of mouth (Morgan & Rego, 2008). Further, the independent variables were chosen based on the integrative framework of Kim et al. (2021) and the psychological elements (cognitive and emotional) presented in the literature review (see section 2.2). In line with Kim et al. (2021) who propose that cognitive and psychological elements influence attitudinal and behavioral loyalty, we build and test eight hypotheses.

Cognitive and Emotional elements associated with crypto affect attitudinal loyalty

The first regression examined the influence of Perceived value, dependence, status, and skepticism on attitudinal loyalty. Here we test the below four hypotheses.

> **H_1a:** Perceived value of cryptos has a significant influence on attitudinal loyalty.
>
> **H_1b:** Dependence of cryptos has a significant influence on attitudinal loyalty.
>
> **H_1c:** Status of cryptos has a significant influence on attitudinal loyalty.
>
> **H_1d:** Skepticism of cryptos has a significant influence on attitudinal loyalty.

Cognitive and Emotional elements associated with crypto affect behavioral loyalty

The second regression examined the influence of Perceived value, dependence, status, and skepticism on behavioral loyalty. Here we test the below four hypotheses.

> **H_2a:** Perceived value of cryptos has a significant influence on behavioral loyalty.
>
> **H_2b:** Dependence of cryptos has a significant influence on behavioral loyalty.
>
> **H_2c:** Status of cryptos has a significant influence on behavioral loyalty.

H2d: Skepticism of cryptos has a significant influence on behavioral loyalty.

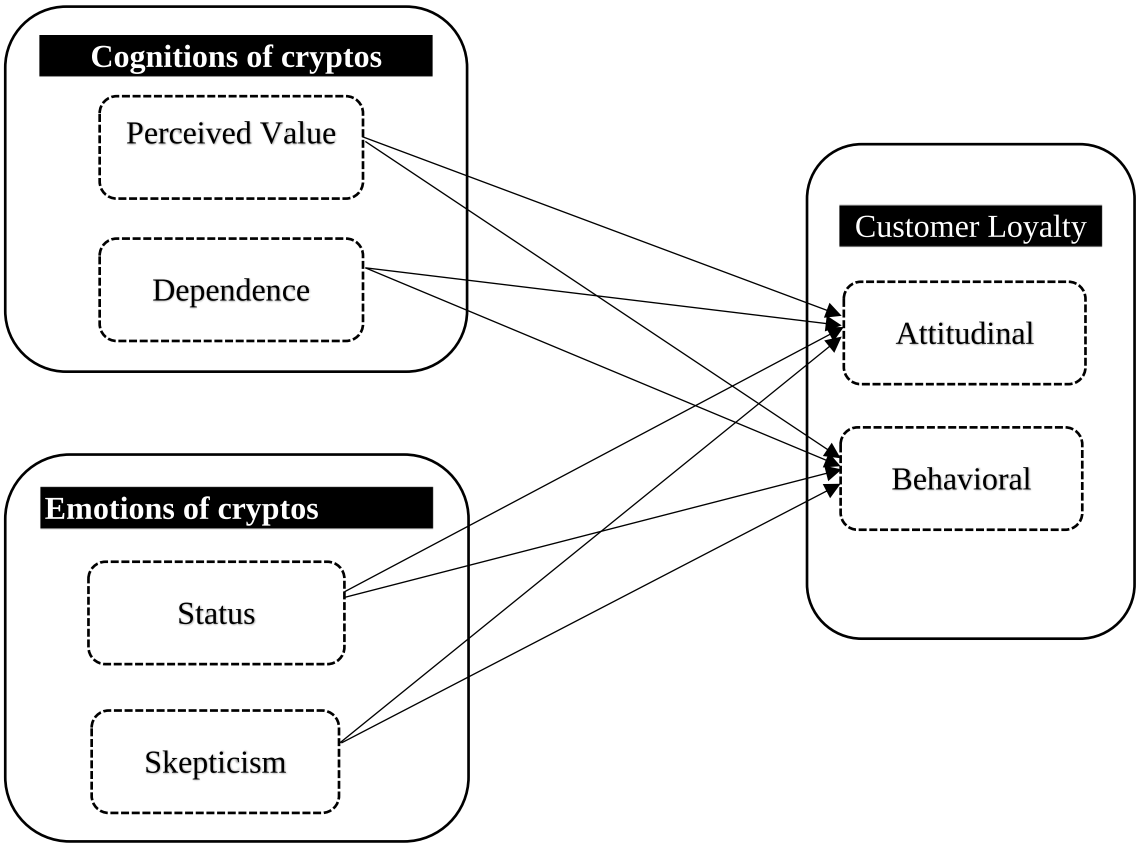

Figure 2. Conceptual Model

3. Methodology

3.1 Research Philosophy

A research paradigm is "a framework that guides how research should be conducted, based on people's philosophies and their assumptions about the world and the nature of knowledge.” (Collis & Hussey, 2021, pp. 39-40). The two main paradigms are positivism and interpretivism (Collis & Hussey, 2021). Positivism is a paradigm that originated in the natural sciences. “It rests on the assumption that social reality is singular and objective and is not affected by the act of investigating it” (Collis & Hussey, 2021, p. 40). Positivism-related research involves a deductive process to provide explanatory theories to understand social phenomena. Interpretivism is a paradigm that emerged in response to criticisms of positivism. It rests on the assumption that social reality is in our minds and is multiple and subjective. Therefore, social reality is affected by the act of investigating it. Interpretivism-related research involves an inductive process with a view to providing an interpretive understanding of social phenomena within a particular context (Collis & Hussey, 2021). Mixed methods research refers to the pragmatic use of methods drawn from different paradigms to collect, analyze and integrate qualitative and quantitative data in the same study (Collis & Hussey, 2021, p. 49). As (Vincent & O’Mahoney, 2018, p. 01) highlights: “Many of the methodology textbooks that business and management students are encouraged to use a simple and, in our view, flawed dichotomy between objectivist (positivist, deductive, and empiricist) approaches, which are typically aligned with quantitative empirical methods, and subjectivist (social constructionist, inductive, and interpretive) approaches, which are typically aligned with qualitative empirical methods.” While this dichotomy can be helpful in describing ontology and epistemology and follow what this means for methodology, it does not cover the spectrum of assumptions regarding how the world is viewed and how knowledge can be gained (Fleetwood, 2005). As such, there has been an emerging body of research highlighting the need for critical realism studies, which are often in line with mixed methods, such as the one adopted in this thesis. We are inspired by this stream and (Fleetwood, 2005) view that: “critical realist scholars seek to overcome this odd dualism (objectivism or subjectivism). CR scholars assume the existence of an objective (‘intransitive’) world that has powers and properties that can be more accurately known as a consequence of scientific endeavor but recognize that knowledge is a subjective, discursively bound (i.e., transitive), and constantly changing social construction.” Based on this view, we are interested in the perceptions of people about cryptos and acknowledge that multiple realities exist.

3.1.1 Ontology & Epistemology

Ontology refers to assumptions about the nature of reality (Saunders, et al., 2019, p. 133). In other words, ontology is the theory of being and concerns what reality represents (David & Sutton, 2011). This thesis acknowledges that reality is socially constructed but also is pin line with Bhaskar’s (1979) argument that reality can be viewed as a stratified and open system of emergent entities, which comprises the empirical, the actual, and the real (Fleetwood, 2005).

Epistemology refers to assumptions about knowledge, what constitutes acceptable, valid, and legitimate knowledge, and how we can communicate knowledge to others (Burrell and Morgan 2016). In other words, epistemology is the theory of knowledge (David & Sutton, 2011). In this thesis, we assume that gaining knowledge about the world requires an in-depth exploration of people's subjective views and interpretations and in-depth engagement of the researchers in their study. In addition, we assume that knowledge about social phenomena can be gained using statistical methods applied to responses to a survey.

This thesis aims to deepen our understanding of how cryptocurrencies, as an innovative design element of a reward program, can influence customer loyalty. The focus will be both on the users and also on the firms owning a customer reward program, and the data are gathered both through qualitative, semi-structured interviews and through a survey. For this reason, our view on the constructionism/objectivism duality is informed by a critical realism perspective, as discussed above. "Reality is 'multiply determined,' with no single mechanism determining events (Bhaskar 1975)" (Fleetwood, 2005, p. 5), and how our study is conducted takes this into account.

3.2 Research Approach

Deductive research is "A study in which a conceptual and theoretical structure is developed which is then tested by empirical observation. Thus, particular instances are deducted from general inferences" (Collis & Hussey, 2021, p. 9). On the other hand, a study that builds on an inductive logic is "A study in which theory is developed from the observation of empirical reality. Thus, general inferences are induced from particular instances" (Collis & Hussey, 2021, p. 9) which is the reverse of the deductive method. Since it involves moving from individual observation to statements of general patterns or laws, it is referred to as moving from the specific to the general. For example, you may have observed from factory records in your company that production levels go down after two hours of the shift, and you conclude that production levels vary with the length of time worked. Our thesis builds mainly on a deductive study, given the quantitative material and the hypotheses testing. Yet, our thesis is also highly influenced by inductive reasoning, given the qualitative part of your thesis and the interviews we conducted, which are often directed towards building theory.

3.3 Practical Method

3.3.1 Data Collection

According to Collis and Hussey (2021), data can be classified by source. A study can be based on secondary data (data collected from an existing source) or on primary data (data that have been generated by collecting them from an original source, such as an experiment or survey) (Collis & Hussey, 2021, p. 183). This is a mixed-method study where we gathered data using both an online survey (Collis & Hussey, 2021) based on the online tool called google forms, where we received 162 respondents and 7 semi-structured interviews where each interview is guided by a set of topics and important questions (Saunders, et al., 2019, p. 437). While the survey was sent to users of loyalty reward programs to uncover the role of cryptos in influencing customer loyalty, the interviews were conducted with people from the company side (i.e., holders of loyalty reward programs) to also shed light on their views and perceptions about the potential of using cryptos as a design element of their loyalty program. Our study is a mixed-method study where we gathered data using both an online survey (Collis & Hussey, 2021) based on the online tool called google forms, where we received 162 respondents and 7 semi-structured interviews where each interview is guided by a set of topics and important questions (Saunders, et al., 2019, p. 437). While the survey was sent to users of loyalty reward programs to uncover the role of cryptos in influencing customer loyalty, we did the interviews with people from the company side who are holders of loyalty reward programs to also understand their views and perceptions about the role of cryptos as a design element of their loyalty program.

3.3.2 Quantitative Data Collection

Survey Construction
The questionnaire is one of the most often utilized data gathering procedures in the survey approach, which is an effective technique to gather data from a large number of people before quantitative analysis. It uses the same set of questions for each responder. (Saunders, et al., 2019, p. 504)

To address our study question, we needed a sample of a subset of the population. People that utilize a loyalty reward program are the audience we sought to reach. The sample is used to identify whom the study will target and how we will contact those folks. There is no publicly accessible data on the number of individuals who utilize a reward program; there are a few private studies, but they are geographically limited. The number of users and prospective users of loyalty reward programs is difficult to estimate. Due to financial and time constraints, it is not feasible to investigate the whole population.

Quantitative Sampling Technique
To address our study question, we determined that a sample of a subset of the population was required. We sought to reach consumers of loyalty reward programs, which are often found in airlines, hotels, supermarkets, petrol stations, and retail outlets. There are several reasons why a sample should be used. To begin, we must establish who our study's target audience will be and how we will contact them. Just to contextualize, finding the right figure for the number of people that use a reward program has been difficult, yet, we have found some data that can help us to dimension the size of the sample frame. According to (Bombaij, 2021), more than 60% of all European retailers already offer a Loyalty program, and just for the particular case of the United States of America, there are more than 3.8 billion loyalty program memberships. This means, that many people hold several memberships from different companies.

As a result, we believe that a complete database of the users of reward programs would be compromised by time and financial restrictions (Saunders, et al., 2019). Based on how the quantitative survey was done, we can see that there are two main types of samplings, Probability, and Non-probability, Probability sampling (also known as representative sampling) is most typically connected with survey research methodologies in which statistical inferences must be made about a population from a sample to answer a research question. (Saunders, et al., 2019, p. 297) A complete sample frame is required for probability sampling; otherwise, non-probability sampling must be used. (Saunders, et al., 2019, p. 298), this is the main reason for choosing a non-probability sampling for this research.

In Non-probability sampling, the chance of each instance being picked from the target population is unknown, making it hard to answer research questions or fulfill goals that require statistical judgments about population characteristics. Yet, you may still be able to generalize about the target population from non-probability samples, but not statistically. (Saunders, et al., 2019, p. 296)

From the different options available in the non-probability sampling, we have chosen the self-selection sampling. In this technique, each possible respondent identifies their research interest. For this, we must advertise in relevant media or ask each participant if they want to participate, and then we need to collect the responses. (Saunders, et al., 2019, p. 323)

Self-selection sample publicity might be varied. These include articles and ads in likely-read magazines, postings on online forums and discussion groups, hyperlinks from other websites, and letters, emails, or tweets inviting colleagues and friends. (Saunders, et al., 2019, p. 324)

In general, non-probability sampling, also called non-random sampling, offers a variety of alternative sample selection approaches, the majority of which incorporate an element of subjective judgment. (Saunders, et al., 2019, p. 315), also, the self-selection sample shares some similarities to the Snowball sampling, where the main issue is the initial contact. Once this is done, these cases identify more population members, who in turn identify more, causing the sample to snowball. This issue creates a bias in the sampling that is also shared in the Self-selecting sample (Saunders, et al., 2019, p. 323). We claim that due to the particularities of this sample, a subjective judgment and a snowball effect are possible biases to be found in our research.

3.3.3 Quantitative Data Analysis

We used SPSS to analyze our quantitative data. SPSS is widely used in business research because it can process large amounts of data (Collis & Hussey, 2021, p. 204). Additional qualitative data based on semi-structured interviews with specialists working in the reward program industry were also included.

Cronbach's Alpha

Internal consistency involves correlating the responses to questions in the questionnaire with each other. However, it is nearly always only used to measure the consistency of responses across a subgroup of the questions. There are a variety of methods for calculating internal consistency, of which one of the most frequently used is Cronbach's alpha. This statistic is usually used to measure the consistency of responses to a sub-set of questions (scale items) that are combined as a scale to measure a particular concept. It consists of an alpha coefficient with a value between 0 and 1. Values of 0.7 or above indicate that the questions combined in the scale are internally consistent in their measurement (Saunders, et al., 2019, p. 518).

Descriptive Statistics

Descriptive statistics are used to describe and summarize the data in a more compact form and can be presented in tables, charts, and other graphical forms. They aid understanding of the features of a specific data set and allow patterns to be discerned that are not apparent in the raw data. The main purpose of descriptive statistics is to provide a summary of the samples and the measures of the data (Collis & Hussey, 2021, p. 210).

Descriptive statistics are used to explore data in a univariate analysis. The methods we are going to use are simple statistical models, which will help us describe the data. We measured mean as a measure of central tendance and standard deviation as a measure of dispersion (Collis & Hussey, 2021, p. 217).

In statistics, correlation refers to an association between two quantitative variables (thus excluding those measured on a nominal scale), and it measures the direction and strength of any linear relationship between them. The correlation coefficient is measured within the range –1 to +1. The direction of the correlation is positive if both variables increase together, but it is negative if one variable increases as the other decreases. The strength of the correlation is measured by the size of the correlation coefficient: 1 represents a perfect positive linear association, 0 represents no linear association, and −1 represents a perfect negative linear association (Collis & Hussey, 2021, p. 251). If you have parametric data for two continuous variables, you can use Pearson’s product-moment correlation coefficient (r) to measure the linear association between the variables. A continuous variable is a ratio or interval variable measured on a scale where the data can take any value within a given range (for example, turnover or assets but not the number of employees) (Collis & Hussey, 2021, p. 255).

For data collected from a sample, you will need to know the probability of your correlation coefficient or one more extreme (larger) having occurred by chance alone. If this probability is very low (usually less than 0.05) then the relationship is usually considered statistically significant (Saunders, et al., 2019, p. 615).

Multiple Regression

Linear regression is a measure of the ability of an independent variable to predict an outcome in a dependent variable where there is a linear relationship between them. We used multiple regression analysis to find out the relationship between independent variables (perceived value, dependence, status, and skepticism) and dependent variables (attitudinal loyalty and behavioral loyalty). In a simple regression model, the outcome in the dependent variable is predicted by a single independent variable, while in a multiple regression model, it is predicted by more than one independent variable (Collis & Hussey, 2021, p. 262).

For data collected from a sample, there is also a need to calculate the probability of the regression coefficient having occurred by chance alone. For sample data, most statistical analysis software will automatically calculate the significance of the coefficient of multiple determination or one more extreme occurring by chance. A very low p-value (usually less than 0.05) means that your coefficient or one more extreme is unlikely to have occurred by chance alone (Saunders, et al., 2019, p. 618).

The coefficient of determination (represented by r2) and the coefficient of multiple determination (represented by R square) can both take on any value between 0 and +1. They measure the proportion of the variation in a dependent variable that can be explained statistically by the independent variable or variables (Saunders, et al., 2019, p. 616)

The absence of correlation between two or more independent variables (collinearity or multicollinearity), as makes it difficult to determine the separate effects of individual variables. The simplest diagnostic is to use the correlation coefficients, extreme collinearity being represented by a correlation coefficient of 1. The rule of thumb is that the presence of high correlations (generally 0.90 and above) indicates substantial collinearity (Hair et al. 2014). Other common measures include the tolerance value and its inverse, the variance inflation factor (VIF). Hair et al. (2014) recommend that a very small tolerance value (0.10 or below) or a large VIF value (10 or above) indicates high collinearity (Saunders, et al., 2019, p. 621).

3.3.4 Qualitative Data Collection and Interview Guide

Selecting the Interviewees and Conducting the Interviews

For the qualitative part of our thesis, a semi-structured interview method seemed to be the right option from an interpretive approach. Thus, this research was conducted using one-to-one, semi-structured interviews, which means they were between one of us and a single participant, and although we followed an interview guide, there was flexibility in the interviews to be open to surprises. This type of interview may be performed in person, via phone, or online (Saunders, et al., 2019, p. 441). The sequence in which we asked each participant to address these issues relied on the discussion and data we got. We conducted the interviews with an understanding that the interview's setting or other factors and surprising answers can influence the interview’s focus and that our research topic can be modified as participants' perspectives or the study context may reveal new themes. We decided to take each one of the interviews online with the tool zoom, and the license for it was provided by Umeå university.

The primary data were collected through 7 semi-structured qualitative interviews, and the interview guide was constructed based on relevant themes we identified in the literature on loyalty programs and inspired by the theoretical framework by Kim et al. (2021). This meant that we had prepared questions, yet using this method allowed us to adjust the sequence and flow of the conversations and handle planned topics depending on what each person said. Thus, we were able to cover the different subjects, and we were also able to have deeper discussions and elaborate on emerging findings when we felt that this was needed.

We selected our interviewees based on a non-probability sampling which is in line with the qualitative tradition. The selection of the interviewees focused on the research questions and the depth of the insights people could give. All of these interviews were performed in the largest Reward company attached to an important airline in Mexico, and the main reason for this is that one of us had the opportunity to work at a rewarding company and was able to get in contact with people related to this industry, this aspect allowed us to be able to give important and relevant insights to our study. Then, based on a snowball technique, we were able to receive names of other people in the company that could provide information that would be helpful to our study. The interviewees have different positions in the company: analysts, leaders, managers, and directors from different areas like Analytics, Retail, New products, Financial entities, Business Intelligence, and Credit Cards- all of them were able to provide insights about the role of cryptos in loyalty reward programs. Interviewing people holding different positions allowed us to receive different perspectives.

We aligned ourselves with the informed consent principles. All of the interviewees were informed about the purpose of the research and how the data will be used, and all of them consented and accepted being recorded. Once they accepted, we asked them to agree one more time once the recording had started to have proof of agreement. We also decided to anonymize their responses all personal data were not included as well as respondents' confidentiality was ensured.

Table 2. Qualitative List of Interviewees

#	Position of Interviewer	Years of Experience in Reward Programs	Method of Interview	Length of Interview	Date of Interview
1	Head of Customer Relationship Management	4	Digital meeting	36:42	April 18, 2022
2	Business Intelligence Specialist	2	Digital Meeting	26:57	April 19, 2022
3	Revenue Management Leader	3.5	Digital Meeting	34:25	April 19, 2022
4	Leader of Analytics and Product	9	Digital Meeting	37:13	April 20, 2022
5	Key Account Manager Retail Partners	3	Digital Meeting	44:20	April 21, 2022

6	Leader of Acquisitions (Credit cards)	7	Digital Meeting	33:34	April 22, 2022
7	Key Account Manager Financial Entities	2	Digital Meeting	48:59	April 23, 2022

3.3.5 Qualitative Analysis

We analyzed our data based on a thematic analysis (Saunders et al., 2016, p. 579) which is often used for the analysis of qualitative material. This method allowed us to identify patterns in the data and to come up with relevant themes that helped us address our research questions. Because qualitative research relies on writing field notes, interview transcripts, and documents, it quickly builds a big, unwieldy database (Bryman & Bell, 2011, p. 571). Searching for themes in transcripts or field notes is a frequent qualitative data analysis technique. Identifying themes typically uses ambiguous criteria in frequency of episodes, words, phrases, etc. A theme is more likely to be identified the more often its coding phenomenon happens (Bryman & Bell, 2011, p. 624).

The analytical process is described in the following. All the interviews were conducted orally in Spanish, as this is the native language of the people working at this company located in Mexico, and all of them were video and audio-recorded. Once the interviews were finished, they were transcribed first in Spanish using the Tool Dictate in Microsoft Office Word. This tool could identify the right comments and dialogs about 80% to 85% of the time. Recordings were listened to again to ensure that what was written matched with the actual interview. These changes in the transcription were done manually. Additional to this some local expressions were also changed and adapted to be understood, as the next step was a translation from Spanish to English. For example, a word that means water can have very different meanings like “With careful” due to local expressions, which are not found in dictionaries, yet are widely used in the population of Mexico. The final result was a transcript summary (Saunders, et al., 2019, p. 649) in Spanish. The next stage was a translation using the online tool Google translate. Again, the transcription was read to see if the ideas and concepts were correctly translated, and new manual changes were made to match the ideas recorded in Spanish.

The interview results were analyzed depending on the different thematics and patterns we identified when coding. We first tried to gather phrases and statements that were relevant to our questions and created codes, and then we tried to see the commonalities between them to create the themes based on Bryman and Bell (2011). As a result, we produced 4 main themes. The first one, which involved the expertise of the interviewees, was about the role that a loyalty reward program should have. The second one is about the meaning, importance, and definition of loyalty. The third and fourth were about the role of cryptocurrencies in reward programs and the third point specifically about the issues and concerns with a focus on skepticism and attitudinal loyalty. The fourth theme was about the role of cryptocurrencies in reward programs with a specific focus on the benefits that can bring mainly in perceived value and status.

Table 3 shows the iterative coding of the interviews, which after further analysis, led us to the final themes and sub-themes presented in the findings.

Table 3 List of Themes from Qualitative interviews (Own creation, 2021)

Themes	Sub-themes	Illustrative quotes
Background	Experience in Loyalty reward programs	“I worked at a Loyalty reward company for 9 years until 2021, my last position as Leader of Product and analytics” (Expert4, 2022)
	Expertise and knowledge in cryptos	“I am a 3 or 4 out of 10 regarding knowledge in cryptocurrencies. I don`t think I`m an expert, but I have had approaches to this topic” (Expert7, 2022)
Loyalty	Role of reward programs	“The role is in the administration of all the data of the clients to generate loyalty in them and that they feel not only one more client, but a different client.” (Expert5, 2022)
	Meaning of Loyalty in Reward programs	“In a consumer when wanting to buy a good or service. His first intention is to be with this company or with this product. The user has a certain emotionality towards it.” (Expert4, 2022)
Cryptos in Reward programs	Substituting, coexisting, or a redemption option	"There are different intermediaries through which you can buy cryptocurrencies and you have your wallets there, so I think that how they could exist there would be more a matter of bonuses for acquisition and preference for that intermediary." (Expert5, 2022)
Main benefits of cryptos in a Reward Program	New consumers	“Right now the majority of our members are over 40 years old. So, maybe cryptocurrencies, which is something that attracts a lot of attention to young people, could expand our market.” (Expert3, 2022)
	Variety of reward redemption	“You are no longer limiting the loyalty program. You can now be freer, you can transact in g not only in your country but in other parts of the world where those cryptocurrencies are accepted.” (Expert4, 2022)
	Expiry of points	“I think it would be a better experience, the fact that points expire always ends in a bad experience (Expert6, 2022)
	Transferability / Freedom of point use	“It sounds very cool, and it sounds very nice as a partner, but as a company, I see it as a huge risk. How many fraudulent accounts are you going to have?” (Expert3, 2022)
Main Concerns of cryptos in a Reward Program	Volatility of cryptos	“I think that the fact that you do not know how much they will be worth tomorrow is quite complicated for the user It is unclear” (Expert5, 2022)
	Brand damage	“Be very careful in that explanation because there is a reputational risk.” (Expert1, 2022)

	External factors	“You are looking for something that is not regulated and that is sometimes anonymous” (Expert1, 2022)
	Breakage / Profitability	Specifically the financial aspect, it is known that loyalty programs breakage or points that are not used but that companies have already paid you when you are a loyalty program, that is profit for you ” (Expert6, 2022)

3.3.6 Ethical Considerations

When creating a survey design, a general ethical issue “is that the research design should not subject those you are researching to the risk of embarrassment, pain, harm or any other material” (Saunders, et al., 2019, p. 213)

The philosophical underpinnings of ethical research clearly show that a researcher's actions might lead to competing and contradictory ethical perspectives. There are two major and opposing philosophical positions: deontological and teleological. A deontological viewpoint is centered on following norms to govern the behavior of researchers. Acting beyond the rules, in this opinion, should never be justified. At which rules are insufficient or challenged, they must be reassessed and, if necessary, amended. (Saunders, et al., 2019, p. 253)

The teleological viewpoint, on the other hand, contends that determining whether an act of activity is justified or not will be judged by its effects, rather than by a set of preconceived rules. This would include determining whether the advantages of doing an act exceed the negative implications of doing so. However, a simple comparison of the advantages of one group and the expenses of another is unlikely to give a clear solution to such an ethical problem. (Saunders, et al., 2019, p. 254)

When analyzing and reporting data, privacy, anonymity, and secrecy must be maintained. Primary data should not be fabricated or manipulated, nor should findings be fabricated. Findings should be presented completely and properly, regardless of whether or not they contradict anticipated results. The same rules apply to secondary data, for which the source or sources must also be recognized. To guarantee the correctness of the study report and any other result, analyses, and their ensuing interpretations must be thoroughly inspected and any necessary modifications made. (Saunders, et al., 2019, p. 258)

We ensure that all of the questions selected in the survey, including the ones with open answers and interviews, have a low risk of committing any unethical matter in our research. The survey has been conducted with primary data. We ensured to have a low risk of embarrassment, pain, or harm to any f the persons answering. Also, the only manipulation of the answers was the timing of the answer, so that confidentiality when analyzing can be achieved.

4. Empirical Findings

To answer our research question, we conducted a mixed-method study. In this section, we present the findings of this study in the following manner. First, we provide information about the demographics and the descriptive statistics. Second, the findings of the quantitative analysis and the regressions are provided. Third, we engage with our qualitative material, present the main findings from our thematic analysis and show how the findings from this part of our study further shed light on the research questions in focus.

4.1 Demographics

The survey had a total of 162 unique answers. The first four questions were about the background and demographics of the respondents, asking about their gender, age, occupation, and main country of residence in their life. For these four questions, we are analyzing the data on descriptive statistics. The approximate time to answer the complete survey was between 11 and 16 minutes. The timetable for gathering answers in the survey was 20 days, from April 27th, 2022, until May 16th, 2022

The answers from males and females were similar, with the majority of answers from men 83 responses which is 51% of the sample, 76 responses were from female respondents, which is the equivalent to 47% of the sample, and 3 respondents identified with a different gender or preferred not to answer this question, which is 2% of the sample.

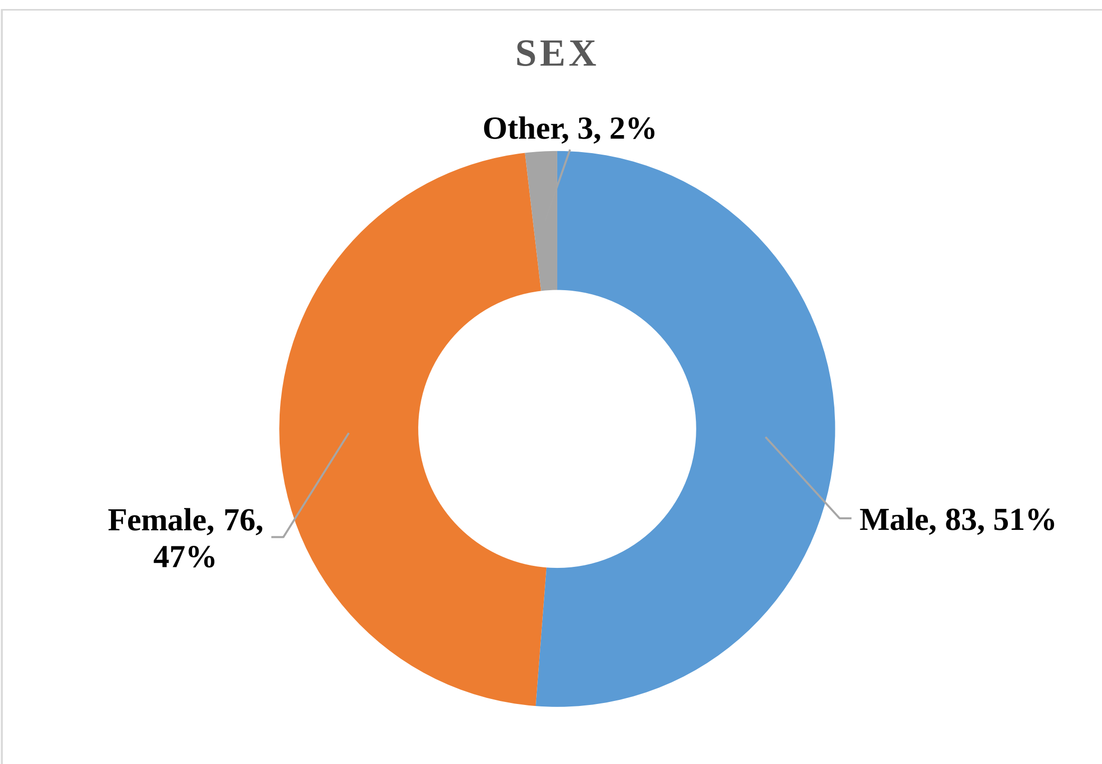

Figure 3. Gender distribution

The second question related to age had the majority of answers in people in their 20s and then in their 30s. The younger range of people was between 18 to 22 years. 28 answers were gathered in this range, which is 17% of the sample. 72 answers were from people between 23 to 30 years old, which is 45% of the sample. Respondents in the range of 31 to 40 years old had 40 answers, which represented 25% of the sample. The survey was targeted to people we believe were interested in the topic and also in digital forums that are more prone to be visited by these age ranges of people. We also had older respondents of 40 or more years; 22 answers were gathered by this group which represented 13% of the sample.

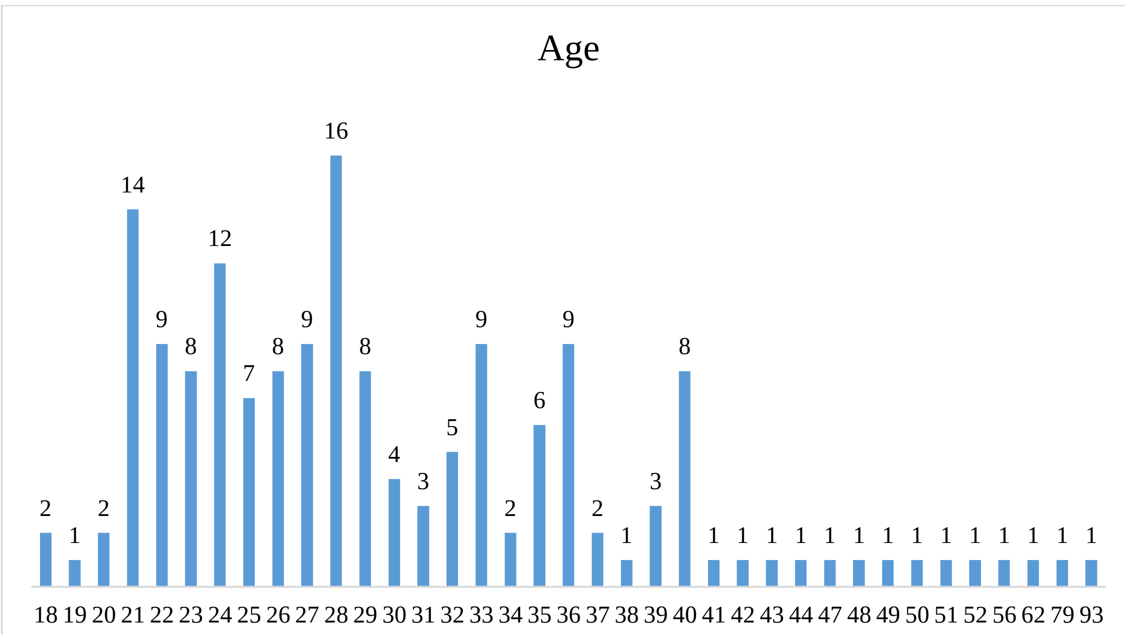

Figure 4. Count of Answers by Age

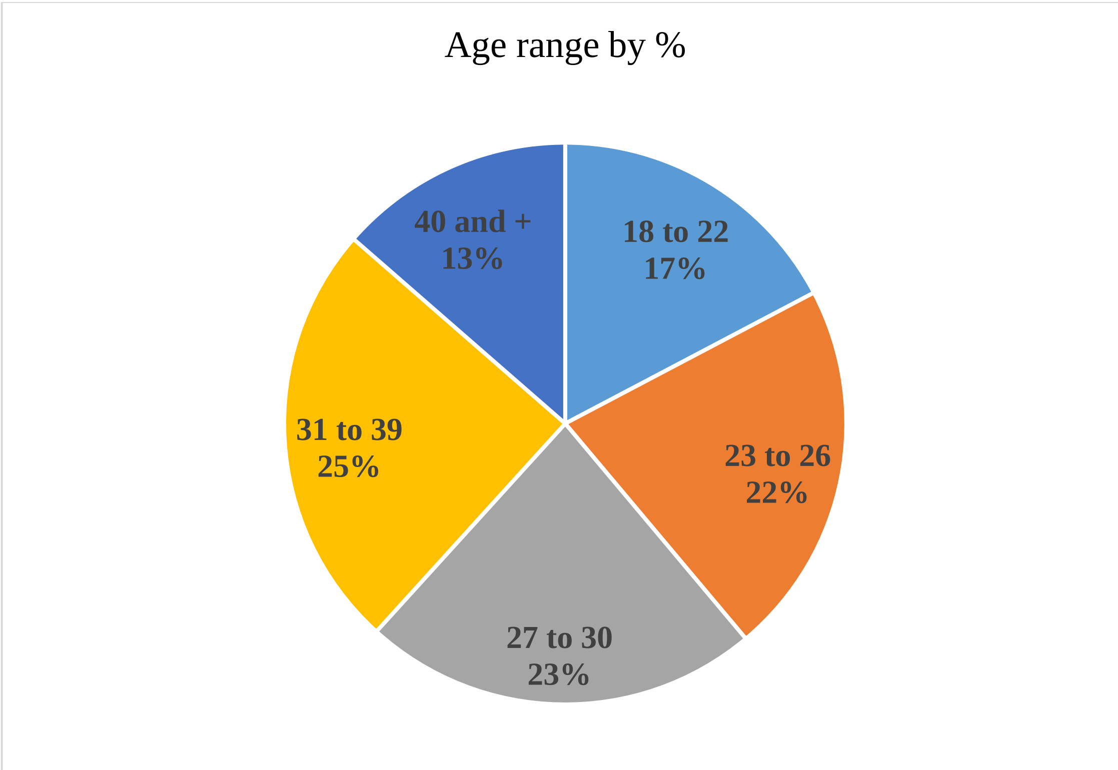

Figure 5. Age Range Percentage of Respondents

In the third question, we asked, "What is your home country? (Or the one where you have lived most of your life)." This question was written like this as we are currently living in Sweden, but we are from Mexico and Sri Lanka. We believe that our answers could represent more our country of origin and not Sweden, where we are temporarily located. We believe that other students and other respondents could be in a similar situation, and it was best to analyze the information this way. The answers had the country written, and we gathered them in different regions for analysis purposes. The majority of answers came from America, with 63 answers, which represented 39% of the sample. Asia with 48 answers which represents 30% of the sample, in third place Europe with 46 answers which are 28% of the sample, and five answers or 3% of the sample came from other regions, three of those answers came from Africa, one from Australia and one who didn't want to answer.

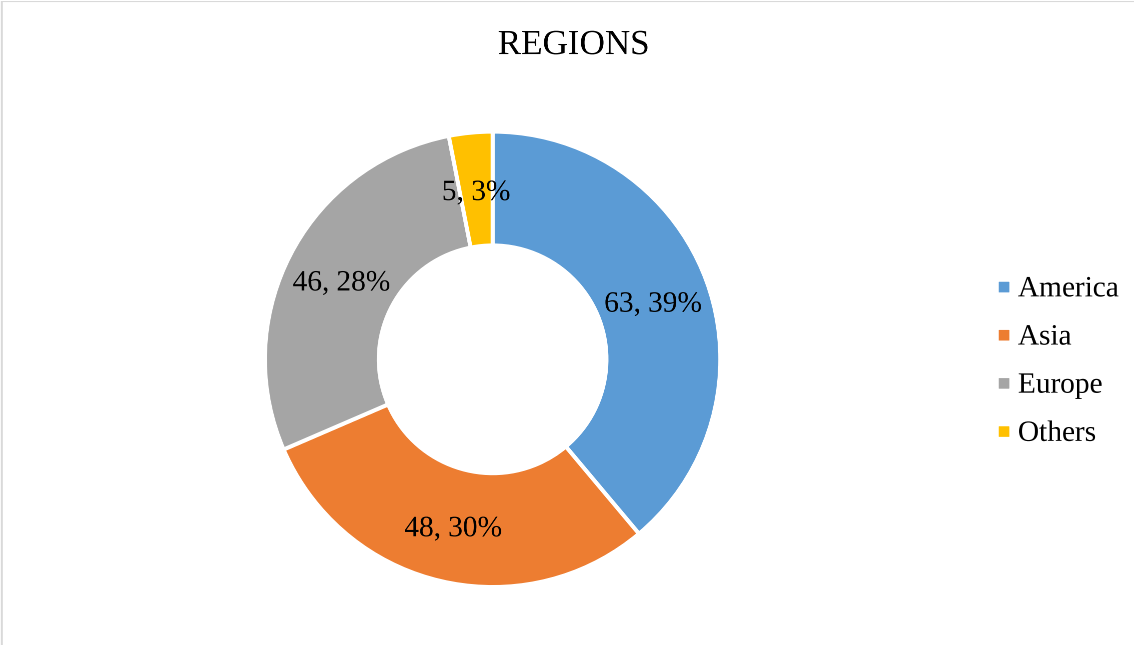

Figure 6. Respondents' Regions

In the fourth question, we can see that the majority of the respondents are working full time, 68 of them, which is 42% of the total sample, close to them with 65 respondents, the students represent 40% of the sample, self-employed respondents or entrepreneur have 13 answers, representing 8% of the sample, there are 9 respondents with a part-time job, representing 6% of the sample and there is a misrepresentation in the unemployment or retired segment with 7 answers, which is 4% of the sample. The majority of answers came from the '20s and 30`s age range, the reason why most of the respondents have a full-time job, part-time job, or are self-employed. When we take these three segments together, they represent 56% of the survey sample.

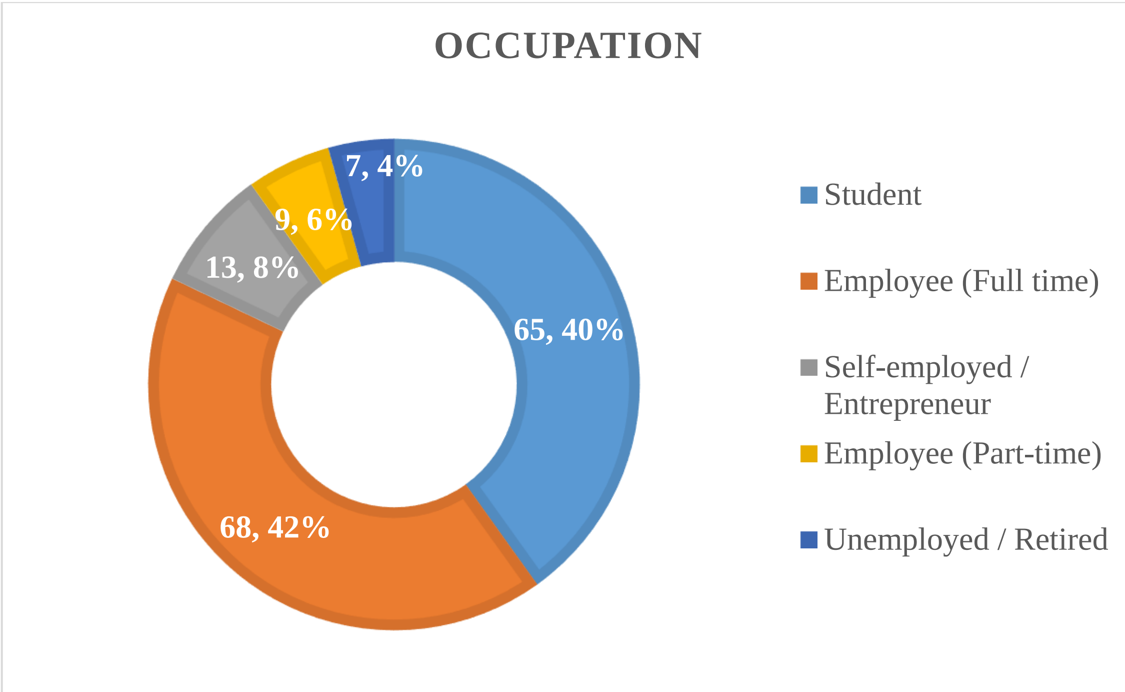

Figure 7. Respondants occupation

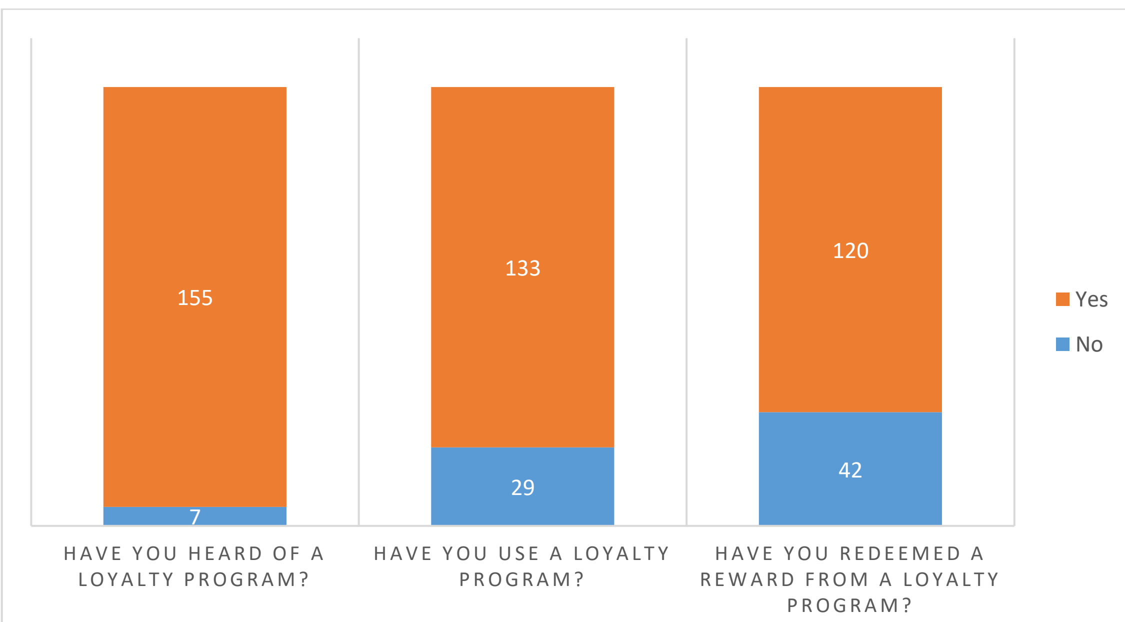

Figure 8. Loyalty program usage

4.2 Cronbach’s Alpha

Cronbach’s alpha coefficient is one of the most widely used tests for checking the internal reliability of multiple-item scales. Each item is correlated with every other item that relates to the construct across the sample, and the average inter-item correlation is taken as the index of reliability. (Collis & Hussey, 2021, p. 256). Values of 0.7 or above indicate that the questions combined in the scale are internally consistent in their measurement (Saunders, et al., 2019, p. 518). We applied Cronbach’s Alpha test in our study, and the results show that alpha is above 0.7 and which indicates the internal reliability of multiple-item scales.

Table 4 Cronbach's Alpha

Variables	Cronbach's Alpha
Attitudinal Loyalty	One item
Behavioral Loyalty	.806
Perceived Value	.769
Dependence	.754
Status	One item
Skepticism	.760

4.3 Descriptive statistics

4.3.1 Mean and standard deviation

Table 5 Mean and standard deviation

	Mean	Std. Deviation
Attitudinal Loyalty	3.4444	1.77281
Behavioral Loyalty	4.5031	1.76359
Perceived Value	4.8169	1.75287
Dependence	4.3272	1.70615
Status	4.8272	1.86694
Skepticism	4.1605	1.63773

Using our perceived value, dependence, status, skepticism, and loyalty constructs, we measured the mean and standard deviation. Our survey scale was from 1 to 7. 1 was “totally disagree” or “not important” at all, and 7 was “totally agree” or “extremely important.” So our mean and standard deviation were from 1 to 7. The mean of the data was above 4 except for attitudinal loyalty. The attitudinal loyalty mean was 3.4. So overall results are agreed or important as the mean is above 4 constructs.

The standard deviation ranged from 1.6 to 1.8. Status has the highest deviation as some would be more concerned with privileges but others least. Skepticism has the lowest deviation on average our respondents were moderate, thinking about volatility and security of crypto reward program. Based on the above results, we can see that respondents have positive responses to a crypto-based loyalty program.

4.3.2 Pearson correlations

Table 6. Pearson Correlations

Correlations						
	Attitudinal Loyalty	Behavioral Loyalty	Perceived Value	Dependence	Status	Skepticism
Attitudinal Loyalty	1					
Behavioral Loyalty	.205**	1				
Perceived Value	.325**	.390**	1			
Dependance	.569**	.327**	.617**	1		
Status	.239**	.427**	.444**	.359**	1	
Skepticism	.561**	.386**	.504**	.630**	.354**	1
**. Correlation is significant at the 0.01 level (2-tailed).						

Correlation measures the direction and strength of any linear relationship between variables. The correlation coefficient ranges from positive 0.205 to 0.630. Therefore, both variables increase together, and it indicates a positive linear association with the other variable (Collis & Hussey, 2021, p. 251). However, attitudinal loyalty has the least correlation with behavioral loyalty, and skepticism has the strongest positive linear association with dependence.
The probability of coefficient is less than 0.01, and therefore the correlation is significant in our study.

5. Findings from our Quantitative Analysis

5.1 Regression 1: Cognition and Emotion elements of crypto effects attitudinal loyalty

We performed the first multiple regression analysis to measure the effect of perceived value, dependence, status, and skepticism on attitudinal loyalty. In this analysis, the independent variables were perceived value, dependence, status, and skepticism, and the dependent variable was attitudinal loyalty. Based on the SPSS ANOVA table results below, we have obtained a significant regression analysis where $F=26.08$ and $p<0.001$.

According to the model summary results below, R-value indicates the correlation coefficient was equal to 0.632, which indicates a positive correlation between variables. However, the adjusted R Square is 0.399 that indicates 40% of the attitudinal loyalty is explained by the independent variables. According to the coefficient table below p-value was below 0.05 for two independent variables (95% confidence level). That means dependence and skepticism independent variables were statistically significant. However, perceived value and status independent variables are not statistically significant as the p-value is higher. The beta coefficient of dependence, status, and skepticism was positive, which means there was a positive effect on attitudinal loyalty. Perceived value had a negative beta which indicated that there was a negative effect on attitudinal loyalty.

Regarding the multicollinearity indicators, the VIF values varied between 1.285 and 2.075, while the tolerance values varied between 0.482 and 0.778. Thus, in this regression analysis, the VIF values were below 5 and the tolerance values were larger than 0.10, and we can therefore consider that there was no multicollinearity issue in this regression. This was indicated from the correlation coefficient also, as there was no correlation above 0.9.

Table 7. Model Summary: Attitudinal loyalty is explained by perceived value, dependence, status, and skepticism

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.632[a]	.399	.384	1.392
a. Predictors: (Constant), Skepticism, Status, Perceived Value, Dependence				

Table 8. ANOVA: Attitudinal loyalty is explained by perceived value, dependence, status, and skepticism

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	202.000	4	50.500	26.081	<.001[b]
	Residual	304.000	157	1.936		
	Total	506.000	161			
a. Dependent Variable: Attitudinal Loyalty						
b. Predictors: (Constant), Skepticism, Status, Perceived Value, Dependence						

Table 9. Coefficients: Attitudinal loyalty is explained by perceived value, dependence, status, and skepticism

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.483	.384		1.257	.211		
	Perceived Value	-.115	.084	-.114	-1.369	.173	.551	1.815
	Dependence	.425	.093	.409	4.595	<.001	.482	2.075
	Status	.016	.067	.017	.241	.810	.778	1.285
	Skepticism	.384	.088	.355	4.344	<.001	.573	1.746
a. Dependent Variable: Attitudinal Loyalty								

5.2 Regression 2: Cognition and Emotion elements of crypto effects behavioral loyalty

We performed a second multiple regression analysis to measure the effect of perceived value, dependence, status, and skepticism on behavioral loyalty. In this analysis, the independent variables were perceived value, dependence, status, and skepticism, and the dependent variable was behavioral loyalty. Based on the SPSS ANOVA table results below, we have obtained a significant regression analysis where F=13.96 and p<0.001.

According to the model summary results below, R-value indicates the correlation coefficient was equal to 0.512, which indicates a positive correlation between variables. However, the adjusted R Square is 0.262 that indicates 26% of the behavioral loyalty is explained by the independent variables. According to the coefficient table below p-value was below 0.05 for two independent variables (95% confidence interval). That means status and skepticism independent variables were statistically significant. However, perceived value and dependence independent variables are not statistically significant as the p-value is higher than 0.05. Beta coefficient for perceived value, status, and skepticism were positive, which means there was a positive effect on behavioral loyalty. Dependence variable had a negative beta which indicated that there is a negative effect on behavioral loyalty.

Regarding the multicollinearity indicators, the VIF values varied between 1.285 and 2.075, while the tolerance values varied between 0.482 and 0.778. Thus, in this regression analysis, the VIF values were below 5, and the tolerance values were larger than 0.10, and we can therefore consider that there was no multicollinearity issue in this regression.

Table 10. Model Summary: Behavioral loyalty is explained by perceived value, dependence, status, and skepticism

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512[a]	.262	.244	1.53377
a. Predictors: (Constant), Skepticism, Status, Perceived Value, Dependence				

Table 11. ANOVA: Behavioral loyalty is explained by perceived value, dependence, status, and skepticism

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	131.412	4	32.853	13.965	<.001[b]
	Residual	369.336	157	2.352		
	Total	500.748	161			
a. Dependent Variable: Behavioral Loyalty						
b. Predictors: (Constant), Skepticism, Status, Perceived Value, Dependence						

Table 12. Coefficients: Attitudinal loyalty is explained by perceived value, dependence, status, and skepticism

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.519	.423		3.588	<.001		
	Perceived Value	.165	.093	.164	1.780	.077	.551	1.815
	Dependence	-.006	.102	-.005	-.054	.957	.482	2.075
	Status	.267	.073	.282	3.634	<.001	.778	1.285
	Skepticism	.222	.098	.206	2.278	.024	.573	1.746

a. Dependent Variable: Behavioral Loyalty

In the following, after we present the findings from our analysis of the rich qualitative material we collected, we provide a discussion on the results of the above regressions and elaborate on how this study and its findings contribute to prior research. We will discuss whether the hypotheses are supported by the above results as well as highlight how the qualitative part of the study contributed to addressing our research question.

6. Findings from our Qualitative Analysis

Further, we conducted a thematic analysis of our semi-structured interviews that uncovered a few important themes and supported us in answering our research questions. The findings from the qualitative part of our study allowed us to gain insights into the role of cryptos in reward programs from the company side (which complements the insights we got from the customers through our quantitative study).

6.1 Defining the role of a reward program

First, the interviewees emphasized the role that a reward program plays. Therefore, an emerging theme was related to how they defined a reward program and how they discussed its value for the firm. The reason for the existence of a loyalty reward program can be different from a user's perspective than from someone in the reward industry. Many people in the business agree that recurrency is something necessary to capture from a reward program "*A program must fulfill the function of encouraging the recurrence of the member or consumer what you can perform in a range of different brands. Assuming all products are competitive, the differentiator is the loyalty program. So one of its main functions has to be that the partner experiences a reward for what they were already going to do and that you, as a brand, are capturing this recurrence or next purchase from the user.*" (Expert1, 2022)

This recurrency leads to retention, which is one way of measuring loyalty (Bowen & Chen, 2001, p. 213) *"They perform a super important function, and that is the retention and loyalty of already captured customers."* (Expert2, 2022) *"What the loyalty program needs to do with members is to generate a bonus so that the member buys again with the same company, and how do you generate that loyalty? Giving some kind of tangible benefit to the user for keeping the purchases with the same brand."* (Expert3, 2022)

In addition to recurrence, our interviewees highlighted that personal emotions towards a brand are a key goal for a reward program: *"Build customer loyalty. It is to increase the recurrence in the transaction with the company in question or in a coalition network with affiliated companies. Attach him emotionally. I do believe that it is a very sensitive point that cannot be left behind. There is an emotional bond between the company and the client. The user should feel rewarded. When the user feels rewarded, it is much easier for him to feel close to the brand, and therefore the recurrence in this transaction would be greater and greater."* (Expert7, 2022).

Once a user becomes a frequent user and has emotional attachments regarding a certain brand, it is important to understand the reason for this. The right information and insights of these users make a loyalty program financially viable. *"I believe that a loyalty program has at least two roles. One, the most obvious, is to reward people with the highest value and the highest frequency who can transact with a certain company or for a certain product. So how can you reward their loyalty or their recurrence? Giving you certain benefits. But also another of the roles that I find very interesting and that should be paramount among loyalty programs is being able to get to know these customers more* *thoroughly, that is, putting a name and surname on a transaction so that it is not just a number and using all that information about knowing your customers who are loyal and who have a certain recurrence to be able to make much more personalized strategies and optimize the resources of the loyalty program"* (Expert4, 2022) As mentioned by many interviewees, it is the responsibility of the reward program to link the right knowledge from data with the feelings of that user and create a unique service: *"The role of a loyalty program from my point of view is in the administration of all the data of the clients of a company for the use of incentives, for the use of differentiating benefits and that those differentiators ultimately become motivators. of frequent purchase, of raising an average ticket, of generating that loyalty with the client and that they feel not only one more client but a different client."* (Expert5, 2022)

With the recurrence, emotional attachment, and correct insights, the reward program gives a unique experience to the user, something different from other experiences, brands, services, or products. This was a common element in almost all our interviews: "*Through the loyalty program, a certain preference of the clients is achieved. I believe that there is not necessarily 100% loyalty today., I believe that there is not a person who always looks for the same brand. It is no longer something that happens, but I think that with a loyalty program, what you suddenly achieve is with this differentiator, you achieve that the person prefers to take one brand over others."* (Expert6, 2022).

6.2 Loyalty Matters

A second theme we identified is associated with how they discussed the importance of customer loyalty. So, the concept of a reward program is different from a user's perspective than from someone working in that industry. The same thing happens with the idea of loyalty; it is interesting to see that most of the experts in reward programs think that loyalty is related to the consumption of a specific service or brand: *"That customers consume your brand or decide to go for your brand regularly, that the majority prefer to turn to see you first, before exploring other options, being the top of brand minds."* (Expert6, 2022). *"What I believe is that it has to do with an even emotional issue in a consumer when wanting to buy a good or service. His first intention is going to be with this company or with this product; he has a certain emotionality towards it."* (Expert4, 2022)

But as noted by several interviewees, which was a surprising result for us, loyalty also goes beyond consumption. It is related to something bigger, to an attachment that also includes social media and even a positive mental impact that creates the user a sponsorship of a product or service and not a mere consumer of it: *"From the point of view of a company focused on reward programs, the meaning is to have the customer captive, the customer consuming your products, your services, even your content. It's not just about going back and buying at the company, but they also follow us on our networks, consume our content, watch our commercials, to achieve, that the client feels part of..."* (Expert7, 2022). Thus, recommending the program is considered by our respondents a key manifestation of loyalty and explains why loyalty matters. The loyal user will recommend the program to other potential users, which can increase the customer base and facilitate deeper commitments to the firm: *"It is a customer who genuinely has a different activity than a new customer, has more frequency, buys with greater recurrence, has a higher ticket and the interaction he has with the brand on social networks, that he does follow them, also invites friends to join the program, makes positive comments about it. This is how we see a loyal customer"* (Expert5, 2022)

Prioritization is also a key element of loyalty as if a firm is the first option of a user, regardless of the price, the firm is a step closer to loyalty: *"I think it goes hand in hand with people's purchasing preference, so beyond the price, the customer decides that I will be with the brand because of the quality of the service that has been offered and because of the link that you generated with the brand."* (Expert2, 2022)

As mentioned in the definition of a reward program, data analytics and insights are a relevant part. They are an option to measure loyalty, as loyalty can be emotional or transactional *"You would have to measure it with the recurrence of user purchases, you would have to measure it with the NPC that you are surely familiar with, right? How much would you recommend it? And you'll have to measure it with a spending share "against the competition."* (Expert1, 2022)

Overall, the interviewees highlighted the importance of loyalty and further elaborated on how loyalty can be increased. An emerging theme was about design elements and how those can trigger certain emotions, which in turn help in enhancing the effectiveness of the loyalty reward program. In particular, the interviewees provided in-depth answers on the role of cryptocurrencies as a reward type of currency. This is discussed in the following.

6.3 The role of Cryptocurrencies in Loyalty Reward Programs

6.3.1 Concerning issues & Skepticism

In our interviews, it became evident that there are opposite points of view regarding the future of cryptocurrencies. As cryptocurrencies are a relatively new subject, there`s the possibility that cryptocurrencies will be an important part of the future. *"In the long term, the image that cryptocurrencies have is super positive, so, although today they are seen as a relatively risky investment, I believe that in the long term, the growth and increase in positive belief in cryptocurrencies can give a very positive boost to the value of the program."* (Expert2, 2022)

But other interviewees see cryptocurrencies in reward programs with certain skepticism regarding how cryptocurrencies will be involved. As they highlighted, the replacement of the regular points for cryptocurrencies has certain risks that firms need to take into account.

"I don't know if they could replace the points because in the end, Cryptocurrency serves as a payment currency. In the end, you do something to earn this currency, as I see the points, more like a cashback , as a reward that is given to you for your purchase, for your spending, in the end, as we have regulated this currency, it is to be used In different businesses, with cryptocurrencies, you can do absolutely everything. You can pay for

absolutely everything, well, the objective that has been given to the points is that they are used for much more specific things to mention something, a flight, a hotel, a car rental or some other experience " (Expert5, 2022)

One of the main risks related to the use of cryptocurrencies is the volatility of price in cryptocurrencies. Cryptocurrencies have the peculiarity of extremely high and persistent volatility that exceeds the volatility of other vital assets like equities and gold (Walther, et al., 2019). This has also been a key theme in our interviews: *"Faced with a business issue, a complexity would be all the possible volatility it could have because it exists."* (Expert1, 2022)

From our analysis, it appeared that the volatility and the perception of risk associated with it, come attached to the general knowledge of the users regarding cryptocurrencies *"I think the damage is very easy; it is the ignorance of the people, of the general public about cryptocurrencies and the volatility of cryptocurrencies."* (Expert3, 2022). Also, it`s related to a common issue in reward programs which is the equivalency of points: *"At the member's experience level, it's bad* (Expert5, 2022) (Expert5, 2022). *"As some of our interviewees noted, t*he lack of knowledge can lead to complexity *" Wow! I think it goes a little hand in hand with the above, it makes the program a little more complicated. If suddenly a loyalty program is complicated and this for the user, well, it's going to be more complicated, for example, the user knows that the flight is worth 5 points, you will have to be looking for when your cryptocurrencies are worth 5 for the flight you want. So I think it gets more complicated"* (Expert7, 2022).

Only in one case volatility was seen to have a positive potential impact, due to the transparency of the worth of the reward, as today usually points are not transparent in the worth they have in the market. *"The reputation that many loyalty programs have earned is that they do not give much visibility to an equivalence of points, and the fact that you do not know how much this point is equivalent to makes it much more complicated. I think that lack of visibility has earned the programs a bad reputation for misleading advertising and cryptocurrencies, no, cryptocurrencies have been transparent, it is known that volatility is rampant, but in the end, there is an equivalence, it is known how much they are worth. In the end, you know that it can go up, and down, that it depends on many factors, so yes, I definitely think that it is a much more relevant purchase motivator than points.* (Expert5, 2022)

Further, an escalated change in the reward programs seems like an option to start using cryptocurrencies. If the new market reached is worth it, the reward company will be a success, but in the end, it is about profits and numbers. *"It will not apply to everyone. There will be people who if you tell them hey, we are going to introduce the Cryptocurrency, you are going to have a New Market, you are going to reach more users, there is going to be part of your base that is going to like it, but there are going to be those who don't, There are going to be those who are going to say I'm keeping the Premier Points, I don't like this anymore, I don't understand it, that's a fact. The million-dollar question is: Yes, it's worth it, right?* (Expert7, 2022)

Several of our interviewees mentioned, though, that the fear of losing the current users, for a potential gain of new users is constant in the reward programs, *"The fluctuation and how volatile cryptocurrencies can become could scare some clients, that impacts the stability of the company, so I think that I am a user who has 10,000 Premier points, which are cryptocurrencies, but they are very volatile, so suddenly tomorrow I have 4000. A lot of people don't know how to hold on to that flow and would probably try to redeem everything. I think the process could be a bit unstable there."* (Expert2, 2022)

In our interviews, a possible solution to protect the company was also mentioned: to adapt certain "locks" in the program. These locks would protect the user from certain changes and the company from reputational and financial damage. *"I think that what could be done is that a user cannot transfer, put a block or a lock so that they cannot transfer the absolute 100% of their Premier Points to cryptocurrencies because they have to be protected in some way, if it is transferred absolutely everything, maybe, if the value of the cryptocurrency increases, it will be appreciated, well that's it, well maybe it will give them 2 flights in first class, but if tomorrow things change, well then they have a padlock that protects them, and they also continue to have something in Premier Points. That's why I insist, I don't think it can replace it, I think they should learn to live together and seek always to have a lock on what the years tell us where cryptocurrency is going, because it is still something very new and very scarcely or not at all regulated and opinions continue to be very mixed and are very drastic. This is either very bad and a big fraud or it is a very good thing."* (Expert7, 2022)

As part of the main concerns in a reward program, the business model is an important one, with breakage, which is a simple formula of the total of points that have not been spent divided by the total of points issued. (McEachern, 2014). *"Specifically the financial aspect, it is known, not just for this company, that loyalty programs, breakage or points that are not used but that companies have already paid you when you are a loyalty program, that is profit for you "* (Expert6, 2022) Today breakage is an important income for the programs, and cryptocurrencies could jeopardize this income, mainly because of expiry, as today, almost all reward programs have an expiry date for points or miles and cryptocurrencies wouldn`t. *"It is valuable, but at the same time, you generate more liabilities as a company because the breakage is an additional income that the company has for the points that expire, it is not an income as such, but rather you get rid of the liability. Let's remember that the points for the company, the points that the partners accumulate, become like a liability that we owe to the partner that we eventually have to pay when redeemed. So, the fact that they never expire, is like generating a liability that is going to get bigger"* (Expert3, 2022)

The financial impact of the reward programs in case of no expiry is significant, up to 20% of their income. *"I actually see cryptocurrencies as a method of loyalty because the point of loyalty is quite limited, and in the end, cryptocurrencies are global currencies. Regarding the validity, if we were talking about cryptocurrencies, instead of loyalty points, it is good for customers, and it is bad for the company because we have something called breakage, and we win because it is just like a net margin that the program keeps and in all the programs it is typically between 15 and 20%, it is quite representative, so I think that there it would affect the company."* (Expert5, 2022) This means that the new users or the growth in the active ones should be at least 20% of the income of a rewarding company.*"Of the points that expire, the cryptocurrencies at the time of purchase, well, they do not expire, but when you have the points, all the points that are not used and expire, generate a return for you."* (Expert4, 2022)

Our analysis of the interviews suggests that it`s not just about losing the profit from breakage. There could also be a potential extra cost associated with fraud and administrative fees: *"It depends on where the risk lies, if the risk is completely the company's, I think the company will not want to absorb it, thinking specifically about breakage and also the issue of fraudulent accounts, those points that would now be cryptocurrencies, the company would have to register or manage them."* (Expert3, 2022) Even if cryptocurrencies are a success, the lack of control of how those cryptos are going to be spent is something to worry about for the reward companies. *"For the rewards program, if the cryptocurrency appreciates and it is the success of the century, it is unfortunate because they cannot control it and it is a loss, they are no longer receiving that financial aspect, after 2 years (breakage)."* (Expert7, 2022)

6.3.2 Concerning Issues & Attitudinal Loyalty

The third theme identified in interviews is attitudinal loyalty, which makes a user choose a brand because the user has positive views of it. Cryptocurrencies have divided opinions and characteristics. One is that cryptocurrencies might make the user experience more complicated, and because of that, the reward program adds complexity of use to the users. This worries the industry, as a complex reward program could scare other users: *"You must have your loyalty program very well-founded on issues that the user understands, if you start mixing a loyalty program that the user does not understand with a cryptocurrency issue that they cannot understand at first, you are going to become very complicated. One of the main limitations would be the complexity."* (Expert1, 2022) As cryptocurrencies are something new, it is important to communicate and not make things more complicated for the user *"Yes, they have too many rules that people don't understand, it's a reality then, making it more complicated, I think it could put the use of the program at risk"* (Expert7, 2022)

Interviewees also noted that the reward program should focus on its main target, and keep an escalated change when bringing cryptocurrencies. A fast or extreme change in the reward program could scare the main users*: "Complications? The understanding, clearly, and I don't know how they use some regions, but as just this opening that I could understand, because I think that the company and I'm going to talk about it, is a program that is very focused on people who are over 45 years old. The most valuable users are over 45 years old. I don't know what this transition might be like for that type of user, so I think one of the risks is that if your audience isn't young, you can scare them away."* (Expert1, 2022)

Further, it was mentioned that the free will of users is important, and it`s that free will the one that creates a user to believe in a brand, yet, even if everything is done legally well, that doesn`t mean that the user can have a bad experience, because cryptocurrencies have such volatility and are so new, there is a risk for the brand, reputational damage could exist *"I think you have to appeal to free will, to this decision-making capacity of the user where you tell him, this is at your own risk. I do not know today with the regulations that the company has, that there are so many restrictions, there would be because of the company name but in this first instance, it would be necessary to say: Hey, I am offering it, and there is some term and condition that you are accepting that the company is oblivious to the variations that may exist. Because surely it can happen. And here be very careful in that explanation because there is a reputational risk."* (Expert1, 2022)

The education of the user appeared to be key. In order to avoid possible reputational damage, the user has to be educated, but also the partners or brands associated with a reward program is essential that everyone can still understand the reason of the existence of a reward program and how cryptocurrencies are involved *"It is fundamental and extremely important to raise awareness of how cryptocurrencies work for the end customer, I think it is equally or more important that business partners understand what function they have and what the objective of the program is, which is to increase average ticket and transactionality, that customers are more attracted to the brand. It would have to be explained."* (Expert2, 2022) If the case is that cryptocurrencies are the next important element in a reward program, it`s important for a company to rely on other factors to have another uniqueness, that is not just the fact of having cryptocurrencies, as any good idea is usually copied and renovated by competitors*: "Imagine that the competition begins to accept cryptocurrencies as a form of payment, then the value of the loyalty program for your brand is lost, which in this case is The Company, in this case, my cryptocurrencies, which I generate with The company if I go and spend them with the competition, I think it misses the point of the loyalty program."* (Expert3, 2022)

6.3.3 Concerning Issues & behavioral loyalty

Freedom of redemption is an advantage for the user, but there is a conflict for the company, as today, one of the pillars of any reward program is to bring you back with the rewards in the same ecosystem of brands or companies where those points were earned: *"One of the pillars that the company uses, is the non-transparency of the points. I think that something basic to a loyalty program is that you cannot use what you earn everywhere. It is a loop, where you use the brands again and continue to have a good experience within the same brands. I think that with a cryptocurrency, you would open up the possibility, and that aspect would be lost, because then I stop consuming the brands because as the cryptocurrency I can exchange it in more places, I can meet others that are not necessarily part of the ecosystem of a loyalty program, So I think it would be very radical. I say no. Specifically in the example of this company, one because of the non-transparency of our points and 2 because I think they can lose the axis of what a loyalty program is, of making you come back with the same brands."* (Expert6, 2022)

The cryptocurrencies will open many new possibilities for redemption, they no longer need to redeem their rewards in the same ecosystem of the company: *"In this term of using cryptocurrencies, we could see it as if you are giving money to your clients, so when* *you give them money, it is implicating you, it is implying a cost to you by giving them the money, which they can use in other places, you lose that relevance. from the point of view of a loyalty or experience program, for example. Many partners or potential partners who approached the company were interested in entering the company ecosystem to reward their consumers, so that their products were relevant and that their products could also be purchased with points, since it means that the company is going to pay to those companies. When you have the concept of giving cryptocurrencies to clients, you lose that power of negotiating agent to attract other partners , and other alliances. Because you can no longer guarantee. that cryptocurrencies are going to be used within your same ecosystem."* (Expert4, 2022)

At first, the company can have an industry advantage, as the leading company that allows you to have the freedom of redemption, so if a user had to make a purchase and there are two options, one that limits the user and one with freedom of use, this is a great differentiator from the rest of reward programs. *"Accumulating points could begin to be seen in an obsolete way. All loyalty programs or many places where you go, everywhere you go, there is a loyalty program that gives you points, then suddenly you are immersed in an ecosystem of points and points and of many loyalty programs that you can no longer identify one. Loyalty means giving a differentiated treatment to these clients, and if everyone starts to give a differentiated treatment, well, nothing anymore, nobody treats you differently, then I think that cryptocurrencies could come to replace the points like this new reward that the programs of loyalty and that it generates, will again generate this interest or hook. Let's say that people may find points boring or irrelevant, but maybe accumulate cryptocurrencies instead of points. They find it more interesting."* (Expert4, 2022)

6.3.4 Possible benefits & perceived value

The fourth and last theme found in the interviews is related to the positive aspects that cryptocurrencies can bring to the users and the company; being aligned with what the consumers want is essential: *"Yes, I think the main benefit is innovation. It is to be able to give the user an alternative that is very aligned with the current trend. In financial matters that is essential."* (Expert1, 2022)

One of the perceived values with cryptocurrencies involved in a reward program is the freedom of transferring points, which is not necessarily something that will benefit the company. Still, the chance of improving the value perception of a reward program increases for the user *" For the user, it is a benefit: I do what I want with my cryptocurrencies, on the one hand, I think it is difficult for a loyalty program to give a benefit over which they have no control, the loyalty program has no control over the cryptocurrencies or how they will appreciate or how they will depreciate, or what the user wants to do with them, so that is a benefit for the user, having freedom and it is a disadvantage for the loyalty program. So, the fact that one user is transferring cryptocurrencies to another, I think they don't like it, they don't like it at all, because they don't have control and because they can't even know if they are going to be used within* *the coalition companies that could do some promotion that encourages redemption with cryptocurrencies."* (Expert7, 2022)

This specific point highlights a new question to reward companies. Can I bring more loyalty perception to users by giving them more freedom when choosing a reward? *"You can use those cryptocurrencies within other ecosystems that no longer have anything to do with your loyalty program, so you are no longer limiting the loyalty program, you can now be a little freer, because you already have a currency that you can transact in other places, including not only in your country or your region, but in other parts of the world where those cryptocurrencies are accepted. You generate more innovation, it means being at the forefront and you can generate more consumer interest in your program and, therefore, in the products promoted by your loyalty program."* (Expert4, 2022)

The new perception for the user is better freedom of choice when redeeming a price. If the reward program can be on the user's head as the program that allows them to gain something that can be used anywhere without many limitations, then the possible limitations of income from redemption in the reward program ecosystem even though they would be lost, they could potentially be overcome by the new income of users choosing the reward program that doesn´t have restriction in the rewards An interviewee elaborated: *"I find it very interesting, and I think it could be a deal-breaker. Because most likely, when you create your own currency in the loyalty program, you are limiting it to your universe, if you, for example, are playing Mario Kart and then you grab the coins and everything, you are in that universe generating wealth. When you enter a global and digital theme, where that reward is universal and has no borders, then there may be a deal-breaker with some brands because then you are no longer guaranteeing that, within the loyalty ecosystem, at the time of reward, that comes back to you, but as you say, it can go anywhere else so, can there be a deal-breaker for someone who is looking for a loyalty program? I call the concept closed and open, in this matter, the closed one is: you accumulate points with my brand of Mr. Frogs cups and with Mr. Frogs you redeem it. That is a closed program. Open is like our company, you accumulate with the company, you can redeem points in the company but also with other brands. But then, at the moment that your currency is no longer a theme created by yourself, if it is not universal, then many brands could say I don't fit it, but there would be others that could say, it suits me. From the point of view of the companies, I think that can happen. A transition where some stay and others leave."* (Expert1, 2022)

This freedom is great for the user, and definitely something new for the company that has to be talked about with the actual partners of the ecosystem. An interviewee said: "There *are some restrictions, such as accumulating and spending your points within the same partners that we already have, that is, I can't spend my points on Amazon, for example, which would be incredible, but you can't. In that sense, the partners, who are the ones who pay the points, would not agree very much. They would not like the idea at all."* (Expert3, 2022)

6.3.5 Possible benefits & Status

The uniqueness that cryptocurrencies can bring to the reward program, can give a certain status that the company was missing to give to a certain target. An interviewee explained: *"The benefit, being pioneers in this, would be something very innovative, which would attract many new generations, for example Right now the majority of our members are over 40 years old. So, maybe cryptocurrencies, which is something that attracts a lot of attention to young people, could expand our market."* (Expert3, 2022) The data has to be analyzed, yet it seems that a young population could be attracted by this new type of reward program, as mentioned in another interview:
"It is possible to gain more loyalty from cryptocurrencies in younger markets, subject to knowing more statistical data and demographics, even of cryptocurrencies, but I do think that cryptocurrencies are more in use by younger audiences and at least in the company, because that is something that often took a lot of work, reaching new generations, reaching younger audiences. In fact, I think that in many industries it is also like a constant problem, of how to reach younger audiences without products being perceived as older or more obsolete, perhaps from an innovation narrative" (Expert4, 2022)

Different mindsets of different target groups are a potential new market, and this is something that our interviewees consistently highlighted: *"The factor that hits us the most, yes, is age, because people who are older are very afraid of investing in something that is so volatile, instead of a young man of 20, 25, they are interested in that market, They see it as easy money, so they would be very attracted to a loyalty program that could accept cryptocurrencies."* (Expert3, 2022)

Usually, tiers in a rewarding company are a level of status; incorporating cryptocurrencies in those status levels is a potential new way of praising the frequent users. Also, it`s a unique way to complement what already exists in the program *"I think there are 2 very interesting concepts because, on the one hand: If we are talking about innovation, most likely, you could reward those tiers with a plus of cryptocurrencies. which may be contradicted by the fact that they are people who understand the loyalty program in a classic way. So I think you could start generating in another group of users, a topic where tiers do exist through cryptocurrencies. You know? So I think you can play in an issue where cryptocurrencies complement what already exists. And on the other hand, you can generate a differentiator with these tiers through crypto."* (Expert1, 2022)

Further, to be part of a tier, a user needs to be a loyal user, that is because only frequent users can be part of a tier; cryptocurrencies help the program to attract new targets that are loyal, which also means profitability to the program. An interviewee explained: *"Thinking about a new loyalty program design, the group that today are the high accumulators are the highest tiers, who are older people, so I think my focus would go to younger people, to mitigate that the People's purchasing power is initially unbalanced when a new program takes off, I think that would also help a little more so that people accept more and that the program's Target Market is defined . I think it would be much easier for younger generations to accept the idea than older generations."* (Expert2, 2022)

6.4 Interview concernings outside the design and psychological elements

Our analysis of the interviews revealed 4 different themes which are aligned with themes that prior research has focused on. Yet, the nature of this type of interview allows the interviewer to talk about other important aspects if they seem relevant. During the 7 interviews, some interesting topics came out:

Perceptions are fundamental, yet there is a previous factor that has to be taken into account, and where the users and the companies have no interference, the regulations of each country regarding cryptocurrencies could potentially allow or deny their usage in a reward program *"When you get into these international policy issues, if crypto is really classified as a type of currency, at least in Mexico, the type of reason how your company is constituted is limited to certain operations, for example, it cannot carry out operations of loan of points, the company would have to change its company name. So, when incorporating cryptocurrencies, companies would have to make an evaluation of how they are legally constituted to be able to offer those services."* (Expert1, 2022)

The interviews also highlighted that it is possible to incorporate cryptocurrencies into a Reward program, with some general concerns, some of them related to infrastructure: *"Physically, it is not possible right now to move to an all technology. It is a transition issue because we are just with a limitation at the industry level so that everything is digital. However, I believe that in this matter, both can coexist."* (Expert1, 2022) To create the digital and technological change in a rewarding company, is possible, just perhaps not immediately *"What loyalty programs lack the most is the technological capacity and also the financial model. I think that most programs manage margins, so I don't think it could be viable because of these 2 points, mainly because of technology."* (Expert5, 2022)

Today, once the points are expired, the company doesn`t need to maintain a profile of the customer who lost the points, this depending on the company usually happens in 1 or 2 years, but with a reward or asset that is not controlled by the reward company, the administration of the database could be a problem.*"I also think it would open up the option for there to be a huge base, I don't even know if this could become a burden on the active member, members who are active because they have the points, but who are not really active because they are not accumulating more, then you would have 2 customer profiles: Those who do use it and continue to accumulate and those who used it. And there was that money. And they aren't going to use it, they don't know how to use it, they don't keep accumulating, and you can't do anything with that money, so it's very ambiguous, I think. Definitely, it represents letting go of an additional income that loyalty programs use today, the banks themselves do. If in BBVA, you do not use your points in a certain amount of time, they take them away from you, and that budget is returned to the company then. "* (Expert7, 2022)

7. Discussion

In this section, we discuss the results of quantitative and qualitative analysis and how our findings support, extend, or question prior research findings.

7.1 Regression 1

We conducted the multiple regression analysis to measure the relationship between independent variables of perceived value, dependence, status, skepticism, and the dependent variable of attitudinal loyalty. We chose a 95 percent confidence level to test the hypotheses, which means that the minimum criteria for significance (p-value) are equal to or below 0.05($p<0.05$). Results show that the dependence independent variable has positively affected attitudinal loyalty($\beta=0.43,p=<0.001$). Skepticism independent variable has positively affected attitudinal loyalty($\beta=0.38,p=<0.001$). Loyalty programs are ripe for innovation that would make them easier to use (Stansbury & Hill, 2017). However, perceived value and status are not statistically significant as p-values are higher than 0.05. Perceived value has a negative effect on attitudinal loyalty but it is not statistically significant($\beta=-0.11,p=0.17$). Status has a positive effect on attitudinal loyalty, but status is not statistically significant($\beta=0.01,p=0.81$). Therefore, hypotheses H1b and H1d are confirmed that they are supported. However, hypotheses H1a and H1c are not confirmed or not supported as they were not significant. A very low p-value (usually less than 0.05) means that your coefficient or one more extreme is unlikely to have occurred by chance alone (Saunders, et al., 2019, p. 618).

7.2 Regression 2

Our second regression analysis results show that independent status variables positively affect behavioral loyalty($\beta=0.26,p=<.001$). (Steinhoff & Palmatier, 2016) surveyed actual airline customers and included multiple rewards in their study. They found that status positively affected loyalty ($\beta=0.07$, $p=.05$). We could see that crypto-based status is more significant in behavioral loyalty than in previous studies. Skepticism independent variables positively affect behavioral loyalty. Perceived value of cryptos has no significant influence on behavioral loyalty. Perceived value is significant at 0.10 significance level. However, the prior thesis also showed that there is a significant perceived value influence on behavioral loyalty. “The development of premium loyalty relates to repurchase intention, positive word of mouth, and cross-buying, while inertia loyalty will not influence any behavioral intention (Gounaris, et al., 2007, p. 80) Dependence was not statistically significant.

7.3 Revised Conceptual Model

We performed two regression analyses to see whether independent variables, perceived value, dependence, status, and skepticism, had a significant effect on attitudinal loyalty and behavioral loyalty separately. However, the results show that some independent variables do not have a significant effect on dependent variables, and some independent variables have a significant effect on dependent variables. The summary of the hypothesis testing results was as follows.

Table 13 Summary of hypotheses

	Hypotheses	Conclusion
H_1a	Perceived value of cryptos has a significant influence on attitudinal loyalty.	Not Supported
H_1b	Dependence of cryptos has a significant influence on attitudinal loyalty.	Supported
H_1c	Status of cryptos has a significant influence on attitudinal loyalty.	Not Supported
H_1d	Skepticism of cryptos has a significant influence on attitudinal loyalty.	Supported
H_2a	Perceived value of cryptos has a significant influence on behavioral loyalty.	Not Supported
H_2b	Dependence of cryptos has a significant influence on behavioral loyalty.	Not Supported
H_2c	Status of cryptos has a significant influence on behavioral loyalty.	Supported
H_2d	Skepticism of cryptos has a significant influence on behavioral loyalty	Supported

Based on the results we have revised the conceptual model as follows.

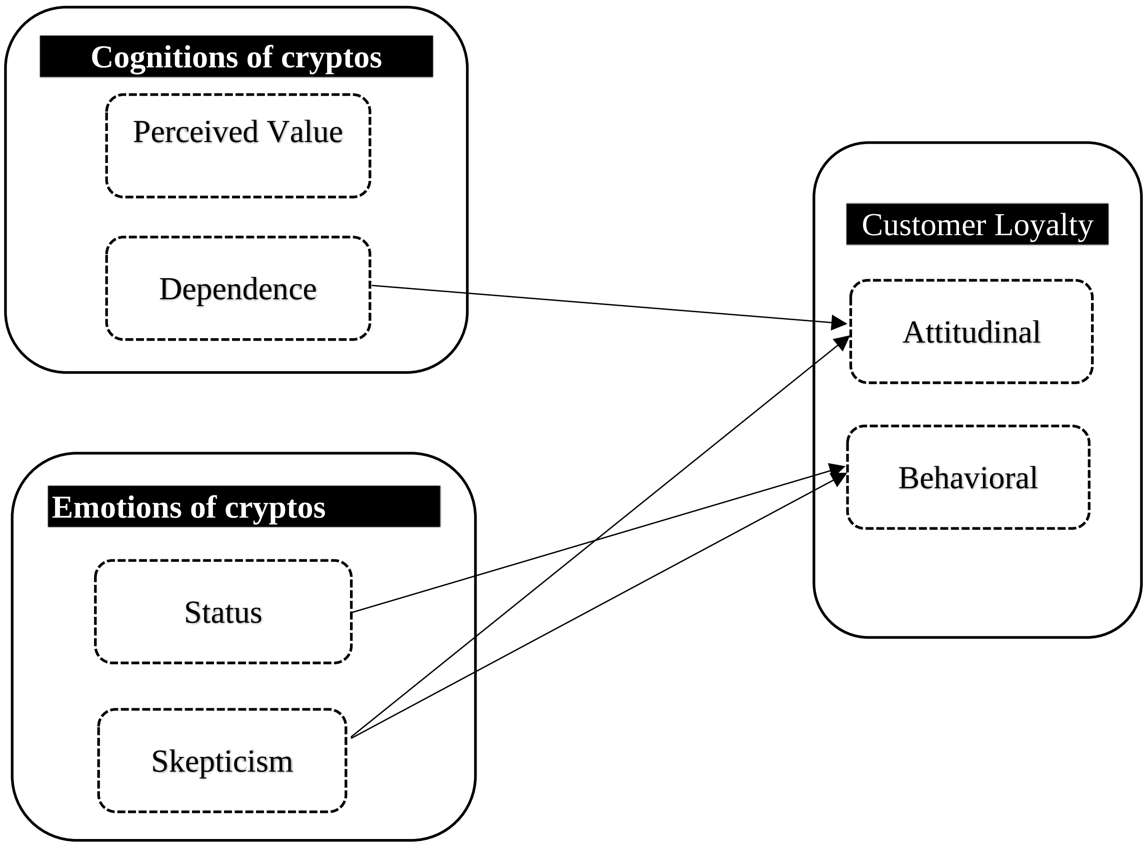

Figure 9. Revised Conceptual Model

The revised conceptual model concludes what cognitions and emotions regarding cryptos affect customer loyalty which is in line with prior research confirming their views (Kim et al., 2021). An important extension is that we focused on cryptos as a unique design element and more specifically, on the emotions and cognitions associated with cryptos, while prior research has a more linear view looking at psychological elements as mediators. Based on our findings, dependence and skepticism had a significant influence on attitudinal customer loyalty, which also supports what prior research has said (Kim et al., 2021). Further, status and skepticism had a significant influence on behavioral customer loyalty. However, perceived value did not show a significant influence on customer loyalty, which questions the framework and suggestion made by Kim et al. (2021).

7.4 Discussing the insights derived from interviews

Design elements are, according to prior research, important (Kim, et al., 2021). Especially since those trigger emotions and cognitions that are crucial for injecting loyalty (Oliver, 1999). The findings from our qualitative part of the study contribute to this body of literature by uncovering different emotions that influence loyalty (perceived value and skepticism, which is in line with prior research). Also, our study and our findings extend this body of research by showing that cryptos are a unique design element, which prior research paid limited attention to.

In Figure **1**. An integrative conceptual framework of loyalty program effectiveness, we can see that the design element is relevant to the type of reward. As we can see from the thematical analysis, reward loyalty has relevance for both the user and the companies involved in reward programs. Loyalty programs are becoming a key element in boosting a company's profit. When a company implements a loyalty program, the goal is to increase the level of loyalty among existing customers. By focusing on high-value market sectors, these initiatives hope to improve customer connections. Increased customer loyalty leads to increased repeat business, more purchases, word-of-mouth advertising, and the retention of current customers, all of which contribute to a rise in sales and, ultimately, in total income and profit (Khan, 2014) This process of loyalty could not exist without a type of reward to the user. (Khan, 2014)

The attraction of a new target user might be achievable with this new type of reward, and a young audience could be viable (Expert4, 2022), a target between 20 to 25 years old. An interviewee said: "*they are interested in that market. They see it as easy money, so they would be very attracted to a loyalty program that could accept cryptocurrencies"* (Expert3, 2022). This also matches the challenges that reward programs have found when tru¡ying to attract young people (Expert4, 2022)

The emotions found in the psychological elements that are linked to the design elements play a key role in having an effective loyalty reward program. (Figure 1). In the case of Skepticism, which was present during the thematical analysis, we found that skepticism can hinder loyalty. The unknown path that cryptocurrencies bring creates a risky environment for the companies (Expert2, 2022) This unknown path brings questions to the reward program, some of them related to the main function of the company and hot cryptocurrencies and the skepticism that surrounds it can have a negative effect in the company (Expert5, 2022)

Considering that one of the options to measure loyalty is with a behavioral measurement, specifically purchase repetition (Bowen & Chen, 2001) the skepticism that cryptocurrency volatility brings into the equation of Loyalty reward programs can lead to a lower loyalty. Some users won't like the idea or just won`t understand it, and they will not use the program and stop the repetitiveness in purchasing (Expert7, 2022)

Continuing with emotions, contrary to skepticism which can hinder loyalty, perceived value can enhance it. As we saw in the previous paragraph, one of the measures for loyalty is related to repeating a purchase, but there is another one that is related to the willingness to recommend a service or a product. Many companies utilize a Net Promoter Score to measure it (Fisher & Kordupleski, 2019). It seems that the perceived value can positively affect loyalty either by recommendation or by repeating a purchase. Freedom of choice when choosing a reward, as well as transferability, has a positive effect on the user (Expert7, 2022). The reward program is in charge of recruiting new users, yet if the user sees no value, no matter how much effort in communication is made, there is no possible future in the program. The companies depend on their users recommending the program to other people. This is intrinsically said when new targets, probably young, would join the program. (Expert3, 2022)

Moreover, we would like to highlight a unique approach we adopted. Qualitative research is important because while prior research pays attention to the customers or the users, our study uncovers what people from the firms think about the reward programs and how the users could benefit or be affected, also the importance and definitions of loyalty differ from the ones users have. The concerns and possibilities entailed by using cryptocurrencies

Prior research talks about how the Automation of the way we pay for products and services is beginning with a new type of encryption. The new electronic payments system's structure may affect personal privacy and illicit payment usage. This new payment system should accommodate these contradictory interests. (Chaum, 1983).

Further, it has also been discussed that retailers are leveraging their loyalty programs with crypto and luring consumers back to their shops by giving digital currency as prizes. Building on our findings, we suggest that blockchain technology could be utilized for incentive programs. Blockchain-based rewards systems, for example, may monitor and distribute rewards points, discounts, or other loyalty program advantages. Furthermore, blockchain technology may be used to authenticate customers and prevent fraud. Because it is liquid and worldwide, cryptocurrency is quickly becoming the most desired digital reward (Fernández, 2022). Blockchain might allow fast redemption and exchange for numerous loyalty point currencies on a single platform for users managing several loyalty schemes. A blockchain revolution threatens all loyalty programs, but the tourism sector is likely the most susceptible. Travel loyalty programs are often complicated and multi-currency; program points might even vary by trip component (flight, vehicle rental, hotel, eating), resulting in fragmented point collecting and some points never being cashed. Even accumulating enough points to obtain a significant reward might be tough for the typical individual (Stansbury & Hill, 2017)

The prior research has fallen short of incorporating an emerging asset, which is cryptocurrencies, and the influence they have on loyalty. The findings from our qualitative interviews show that this emerging asset has already become part of the agenda of different firms offering loyalty reward programs. This new asset has the potential to increase loyalty in certain consumers and change the way companies work and relate with their users.

To conclude our discussion, we would like to highlight that we paid attention to the criteria suggested by Lincoln and Guba (1985) regarding assessing the trustworthiness of our qualitative study, which are *transferability, dependability, credibility,* and *confirmability.*

8. Conclusion

8.1 General Conclusions

Firstly, based on our conceptual model and its hypotheses, we wanted to investigate how cryptocurrency as a design element in reward program influence customer loyalty. We took into account cognitive and emotional elements associated with cryptos and investigated their relationship with attitudinal and behavioral loyalty.

Secondly, we were able to study insights about cryptocurrency-based loyalty programs based on our interviews with rewarding company specialists. After collecting all of the essential data and critically analyzing it in conjunction with the information gained from other authors, we can now answer the research questions to satisfy the study aim. We can now have a better answer to our study questions based on the data..

Based on our conceptual model and hypothesis results dependence and skepticism have a significant influence to attitudinal loyalty while status and skepticism are influences to behavioral loyalty. Eggert, et al., 2015 determine that customer skepticism impairs the effectiveness of status endowment. However, the relationship between endowed status and customer skepticism can be mitigated if companies adopt design characteristics to exploit the potential of endowed status as a loyalty-enhancing tool. (Henderson, et al., 2014) key findings based on field experiments that differential effects of customer engagement depend on the customer's intrinsic loyalty profile. That is a habit, dependence, and relationship-based intrinsic loyalty.

	Hypotheses	**Conclusion**
H_1b	Dependence of cryptos has a significant influence on attitudinal loyalty.	Supported
H_1d	Skepticism of cryptos has a significant influence on attitudinal loyalty.	Supported
H_2c	Status of cryptos has a significant influence on behavioral loyalty.	Supported
H_2d	Skepticism of cryptos has a significant influence on behavioral loyalty	Supported

At the same time, we have concluded that several of the pre-established characteristics that we examined in conjunction with those stated above do not have a significant influence on customer loyalty. These characteristics are perceived value in attitudinal loyalty and behavioral loyalty, Status on attitudinal loyalty, and Dependence on behavioral loyalty. Dependence which relates to how customers rely on the loyalty program of a company, Status which relates to the perception of holding an elevated position or rank within the firm's customer hierarchy and Skepticism which relates to the customers' feeling of suspicion incurred by attributing the motive of a company to a persuasion attempt has emerged as a critical factor in achieving Customer Loyalty, which relates to the customer attitudes aligned with a series of purchase behaviors that systematically favor the focal company over competitors. Decisions about the rewards' currency design strongly influence customer perceived value (Kim, et al., 2021). Our study shows that the perceived value of cryptos has no significant influence on both attitudinal and behavioral loyalty. However, perceived value is significant at a 0.10 significance level with behavioral loyalty. (Eggert, et al., 2015) qualitative study reveals customer gratitude and customer skepticism as psychological processes through which endowed status affects customer attitudinal loyalty. However, our study shows that status of cryptos has contradicting view on the above findings as status does not influence attitudinal loyalty.

	Hypotheses	Conclusion
H_1a	Perceived value of cryptos has a significant influence on attitudinal loyalty.	Not Supported
H_1c	Status of cryptos has a significant influence on attitudinal loyalty.	Not Supported
H_2a	Perceived value of cryptos has a significant influence on behavioral loyalty.	Not Supported
H_2b	Dependence of cryptos has a significant influence on behavioral loyalty.	Not Supported

8.2 Theoretical contributions

In three ways, our research adds to the existing literature on loyalty programs. First, we demonstrate empirically how a design feature may affect both favorably and adversely consumer loyalty. In this approach, we respond to requests for empirical data on the importance of design features (and the cognitions and emotions connected with them) in research (Kim et al., 2021).

According to empirical analysis and field survey (Nunes & Drze, 2006) concerning cognitions of phycological elements stated that people with artificial advancement toward a goal show greater persistence toward achievement, increasing the likelihood of reward redemption and decreasing the completion time. Our research extends these affirmations by taking into account cryptos as a design element

Second, we respond to a request for ideas on how to improve loyalty programs via innovation (Stansbury & Hill, 2017). We enhance past studies in particular by demonstrating that by incorporating cryptocurrencies and the logic of blockchain technology into loyalty programs, creative innovation may emerge, and consumer loyalty can be increased. As a consequence, cryptocurrencies are proposed as a crucial design feature, which is a unique part of our research. Our research emphasized the essential importance of customer loyalty and cryptocurrency, especially in loyalty incentive programs focusing on travel, airlines, hotels, and retail. This backs up and reinforces previous studies that emphasized the importance of design features in loyalty programs. Program loyalty influences buying behavior, while corporate loyalty influences the customer's decision to visit a supplier (Evanschitzky, et al., 2012). According to the empirical findings of (Liu, et al., 2015) financial rewards do not always prompt positive emotion when the amount is less than expected. In such a case, verbal acknowledgment evokes greater appreciation.

Third, we continue to promote research into the critical role of psychological factors in increasing loyalty. We specifically add to a large body of research on important drivers of client loyalty, which include design and psychological components. (Burnham, et al., 2003) According to the findings of the research, one of the primary drivers of procedural, financial, and relational switching costs was breadth of usage (dependence). All three factors influenced consumers' willingness to remain with the supplier, with the financial switching cost having the least impact. Our research also shown that reliance has a major impact on attitudinal loyalty. Empirical investigation and a poll of (Eggert, et al., 2015) demonstrate that depending on the context (gratitude/skepticism), mixed effects of status endowment occur; the impact may be mitigated by freedom of choice, closeness to status accomplishment, and views of the worth of preferential treatment. Cryptocurrency status yields comparable findings since it has a major effect on behavioral loyalty.

8.3 Practical Implications

Our study provides several practical implications. Only two countries accepted cryptocurrency as official currency, and there are countries where cryptocurrency is restricted or illegal. Also, our findings provide clear-cut guidelines and learnings for firms that want to innovate and change the design of their loyalty reward programs. Cryptocurrencies seem to be a novel design element, and practitioners can look at our findings to get inspired about how cryptocurrencies can be used and, overall, how the technology of blockchain can alter existing processes. In addition, our recommendation to practitioners is to be alert about not only the possibilities but also the negative role that cryptocurrencies can play. Thus, it offers helpful recommendations for loyalty reward programs to interact with their consumers in a new opportunity of reward, which is cryptocurrencies, and how cryptocurrencies may lead to developing customer loyalty in the long run.

Because our research uses a mixed-method, companies in the loyalty reward industry can benefit from the user information in our quantitative survey. They can implement or search deeper into certain demographics and certain user behaviors, companies in this sector can realize that cryptocurrencies as a design element of a reward program can potentially impact and add customers to a certain market sector that has not gotten the best loyalty perception from reward programs, but also companies can realize that there is a challenge regarding the emotions of customers about the volatility of cryptocurrencies, this skepticism can play a key role in loyalty perception if cryptocurrencies and reward programs are combined.

Very importantly, with the qualitative interviews, companies can access data that is also concerning to them and cannot be shown from the quantitative user perspective. Finding people in the loyalty reward industry with that many years of experience and with different roles in the industry provides a unique approach and guidelines in the future of cryptocurrencies and loyalty reward programs. The volatility of cryptocurrencies also plays an important role here, as skepticism from the company's point of view is attached to the profitability and monetary value of a reward program. The concerns of people working in the industry are, in the end, all related to profits, freedom of redemption, transferability of points, and breakage are key topics to have in mind in the industry, but if cryptocurrencies bring new customers or more transactions from the current ones and those new transactions or new users compensate the losses of breakage, transferability of points or freedom of redemption, then cryptocurrencies can be an important element to consider in a reward program.

8.4 Societal Implications

Beyond the academia, cryptocurrencies have a potential effect of revolutionizing the perception of loyalty in users of reward programs today many elements are attached to behavioral loyalty, in which the user is loyal, not because they want to, but because they have no other option, this is the case of the expiry of points, transferability of points and freedom of reward choice.

Without expiry in the new type of reward, the user has the possibility of saving this reward for as long as they want and accumulating this reward without a limited timeframe, for example, a frequent supermarket user who accumulated cryptocurrencies in a store in the USA, who later moved to live to another country for several years, could go back to the USA after living abroad for many years and still have the reward there.

The transferability and the freedom of reward could allow a change from behavioral loyalty to attitudinal loyalty, where the user chooses a brand or, in this case, a reward program, not because they have no other choice, but because they want to this would create the perception of loyalty to improve as the user would be free to do anything with the cryptocurrencies, they could be redeemed or transfer without the current locks that the industry has. This could forever revolutionize and impact the industry. Given the volatility of cryptocurrencies, however, we also highlight that they can also trigger major instabilities.

8.5 Limitations and Future Research

There are a few limitations to this study. First, due to time constraints, we gathered survey data using social media platforms. 100 respondents (62%) were below 30 years of age, and 40% of respondents were students. Secondly, the proper conceptual model will allow us to relate the factors of the study and collect the right kind of information from the sample of the population. We have prepared the questionnaire concerning traditional loyalty and crypto loyalty in addition to demographic questions. However, in our study, we were unable to directly relate each question to behavioral and attitudinal loyalty before releasing the survey questionnaire, and this is mainly due to the design of the questionnaire. At the same time, we were still able to provide important insights.

Finally, our study opens new paths for future research on the intersection of cryptocurrencies and loyalty reward programs. Our study calls for a closer focus on design elements of loyalty reward programs and on how cryptocurrencies can complement (or even substitute) points and other monetary (or not) aspects not only in the context of reward programs but also in other settings. For instance, our findings can be relevant for other settings such as hotels and retail, where cryptos can play an even bigger role. Also, given the challenges associated with cryptocurrencies, future research can examine how those challenges can be battled. We believe that our study may contribute to a new focus in the reward section, with the reward type that cryptocurrencies can evolve. In the emotion part, compared to prior research (Kim et al., 2021), we showed that a key role was played mainly by status and skepticism, which need to be prioritized to optimize customer loyalty. Future research should pay attention to how such optimization can take place. Further, we should suggest that further research should involve the cryptocurrency users and consider other psychological design elements of cognition and emotions. Overall, we hope this thesis can spark and foster new constructive discussions among future scholars regarding how cryptocurrencies affect customer loyalty in different contexts.

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Appendixes

Appendix 1: Survey Questionnaire

Demographic

1. What gender do you associate yourself with?
    a. Female
    b. Male
    c. I prefer not to say
    d. Other
2. Date of birth
3. What is your native country? (Or the one where you have lived most of your life)
4. What is your current occupation/employment situation?
    a. Employee (Full time)
    b. Employee (Half time)
    c. Student
    d. Self-employed /Entrepreneur
    e. Unemployed
    f. Retired
    g. Other

Traditional Loyalty

5. In short words, a Loyalty Reward Program usually gives away Points/Miles that can later be redeemed for rewards. The loyalty program tries to increase customer loyalty to the company that runs it, increasing the number of customers who repurchase a product or service. A common example of some business that have these are: airlines, hotels, supermarket chains, credit cards and other retailers. Please answer a yes or no to the following questions:
    a. Have you heard of a Loyalty program before?
    b. Have you use a loyalty program before?
    c. Have you redeemed a reward from a loyalty program?
6. Have you use any of the following reward programs in the last 24 months (Choose none or up to 6 answers)
    a. Airline
    b. Retail (Non-Supermarket)
    c. Credit Card
    d. Hotel Chain
    e. Supermarket or Convenience Store
    f. Other
7. What is the name of the reward program that you use the most?
8. I have used or being involved in a reward program for... 0 years to 10 or more years
9. Thinking on the reward program that you use the most, answer the following questions being 1 totally disagree and 7 totally agree.

a. In general, I’m a frequent user of the program
b. I perfectly know how the program works
c. I would recommend this reward program to family and friends

10. What is the one main reason for using your main reward program? For those who don`t use any reward program, name only the main reason for not using one.
11. Rate the importance of these factors when using a reward program (1 for Not Important at all and 7 for extremely important)
    a. Easiness of gaining points/miles
    b. Variety of options to redeem the points/miles gained
    c. Expiry of points / Miles
    d. Short times from gaining a point/mile to redeem them
    e. I believe my reward is valuable
    f. If I`m a frequent user of a reward program (Like tiers in airlines), I should have more privileges than a regular user

Crypto Loyalty

12. In a few words, a cryptocurrency is a tradable digital asset or digital form of money built on blockchain technology that only exists online and can circulate without the need for a central monetary authority such as a government or bank. An example of this is Bitcoin, Dogecoin, or Ethereum. Please answer a yes or no to the following questions: Please answer a yes or no to the following questions:
    a. Have you heard of cryptocurrencies before?
    b. Have you used cryptocurrency before?
    c. Would you be interested in earning cryptocurrencies in a Loyalty reward program?
13. Thinking about cryptocurrencies, answer the following questions being 1 totally disagree and 7 totally agree.
    a. In general, I’m well aware of how cryptocurrencies work
    b. Cryptocurrencies storage security should be at the same level than cash in banks
    c. I prefer to have my cryptocurrencies stored in the reward program instead of a personal digital wallet
    d. I believe cryptocurrencies will be an important part of the future in the next 20 years
    e. I`m willing to accept more risk in value volatility from the cryptocurrencies earned in a reward program compared to my savings
    f. I believe at some point; cryptocurrencies could substitute cash
14. Rate the importance of different factors in a possible reward program that uses cryptocurrencies (1 for Not Important at all and 7 for Extremely important)
    a. Cryptocurrencies will never expire
    b. Cryptocurrencies would expand the options and varieties of rewards (rewards could be redeemed in many other places other than the business where they were accumulated)
    c. Cryptocurrencies could be transferred or sold to anyone unlike many other reward programs

Appendix 2: Interview Questionnaire

1. Background related to Loyalty programs
    a. Where do you have work experience in Loyalty reward programs?
    b. Name of previous and current positions
    c. Years of experience
2. What is the role of a Loyalty reward program?
3. What is the meaning of loyalty from the reward point of view?
4. Have you heard of the term cryptocurrency?
    a. No matter the answer, we provide a short description like we do on the quantitative survey: In short words, a cryptocurrency is a tradable digital asset or digital form of money built on blockchain technology that only exists online and can circulate without the need for a central monetary authority such as a government or bank. An example of this is Bitcoin, Dogecoin, or Ethereum.
    b. What is your expertise and knowledge in cryptocurrencies?
5. Do you think cryptocurrencies could fit or exist in a loyalty reward program?
    a. Could cryptocurrencies substitute points or miles in a reward program?
    b. Could they coexist with regular points or miles?
    c. Could cryptocurrencies be an option of reward or redemption for regular points or miles?
    d. Could cryptocurrencies coexist in any other process of a reward program?
6. If cryptocurrencies were involved in a reward program
    a. What are the main benefits?
        i. From the company or business point of view
        ii. From the user's point of view
    b. What are the main concerns?
        i. From the company or business point of view
        ii. From the user's point of view
7. There are some key factors that would change the way the user of a loyalty program perceives and uses the program, from the company's point of view. Please explain the concerns and benefits of these topics:
    a. Expiry of points
    b. Transfer and/or sell of points to other users
    c. The High volatility of value of cryptocurrencies
8. Usually, the loyalty reward lifecycle starts with earning points or miles in a specific company and redeeming those points or miles in that company or in one that coexists in the program, but with cryptocurrencies the possibility of earning a reward in one company and redeeming the reward in one outside this lifecycle or outside the program increases.
    a. What are the main benefits and concerns of this?
    b. What happens with the partners of the reward program?
9. Main Benefits and concerns with heavy use users like the ones with tiers in airlines vs low frequent users of the program
    a. Is there a niche or segment of customers more willing to accept or refuse cryptocurrencies?

10. Is it possible to gain more loyalty through a reward program by having or using cryptocurrencies?
11. General comments, other important ideas, suggestions, or conclusions regarding cryptocurrencies and loyalty reward programs

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