Consumer Behaviour in the New Digital Economy: Timely Challenges Concerning Consumers Engagement with New Digital Products

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DOCTORAL THESIS

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This thesis is about consumer behaviour in the framework of the new digital economy. Before discussing that, I would like to draw your attention to the people who made this thesis possible.

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Abstract

In recent years, many disruptive new digital products have entered consumers' everyday lives based on the latest technological achievements, all emerging from the new digital economy. Although these digital products are, and will, strongly influence consumers' behavioural patterns, there remain unresolved questions and challenges that have yet to be resolved. Therefore, the primary objective of this thesis is to shed light on this issue by exploring how consumers evaluate, choose and engage with digital products originating from the new digital economy. This goal has been targeted in three studies that address key topics that have aroused increased interest in the new digital economy framework. First, food delivery services are rapidly changing the food industry and the way people consume. Study 1, explores how consumers deliberately buy from and 'support' these companies, despite knowing that they engage in unethical business practices. Second, investment-based crowdfunding is becoming increasingly widespread and has attracted considerable interest from private investors. Study 2, therefore, investigates the factors that shape private investors' adoption behaviour towards those platforms. Third, cryptocurrencies have emerged and become tempting investment objects for consumers. Yet, many people have made heavy losses on cryptocurrency investments. Study 3, explores the mechanisms underlying consumers' increased cryptocurrency engagement. As a result, Study 1 demonstrates that moral decoupling enables consumers to offer continuous support for companies involved in unethical conduct. Study 2 shows that the variables from the unified theory of acceptance and use of technology 2 and the task-technology-fit model explain private investors' adoption behaviour. Finally, Study 3 demonstrates that external evoked fear-of-missing-out appeals affect consumers' cryptocurrency engagement. This PhD thesis addresses three relevant, context-specific phenomena in consumer research, contributing to the nascent stream of literature from a marketing perspective within the scope of the new digital economy.

Keywords: New digital economy; consumer behaviour; on-demand delivery services; investment-based crowdfunding; cryptocurrencies.

Resumen

En los últimos años, múltiples nuevos productos digitales disruptivos, basados en los últimos avances tecnológicos, han entrado en la vida cotidiana de los consumidores, todos ellos surgidos de la nueva economía digital. Aunque estos productos afectan al comportamiento del consumidor, todavía quedan cuestiones pendientes y retos por resolver. El objetivo principal de esta tesis es arrojar luz sobre este tema explorando cómo los consumidores evalúan, eligen y se comprometen con los productos digitales procedentes de la economía digital. Este objetivo se ha concretado en tres estudios, los cuales abordan temas que han suscitado un reciente interés académico y empresarial. En primer lugar, los servicios de entrega de alimentos están cambiando rápidamente la industria alimentaria y la forma de consumir de las personas. Así, el estudio 1 explora cómo los consumidores compran y 'apoyan' deliberadamente a empresas de entrega de comida que están implicadas en conductas poco éticas. En segundo lugar, el crowdfunding basado en la inversión está cada vez más extendido y ha despertado un interés considerable entre inversores privados. Por ello, el estudio 2 investiga los factores que determinan el comportamiento de adopción de los inversores privados hacia plataformas de crowdfunding. En tercer lugar, las criptomonedas se han convertido en activos de inversión altamente atractivos para los consumidores. Sin embargo, muchos consumidores han sufrido grandes pérdidas en sus inversiones en criptodivisas. El estudio 3 explora los mecanismos que explican el engagement de los consumidores con las criptodivisas. Como resultado, el estudio 1 demuestra que la disociación moral permite a los consumidores ofrecer un apoyo continuo a las empresas de entrega de comida implicadas en conductas poco éticas. El estudio 2 muestra que las variables de la teoría unificada de aceptación y uso de la tecnología 2, junto con el modelo de ajuste entre tecnología y tareas, explica el comportamiento de adopción de los inversores privados en plataformas de crowdfunding. Por último, el estudio 3 demuestra que los estímulos que evocan "fear-of-missing-out" explican el nivel de engagement de los consumidores hacia las criptodivisas. Esta tesis doctoral aborda tres fenómenos relevantes dentro del contexto de la investigación en comportamiento del consumidor, y contribuye a la incipiente corriente de literatura que aborda este fenómeno desde una perspectiva de marketing en el ámbito de la nueva economía digital.

Palabras clave: Nueva economía digital; comportamiento del consumidor; servicios de entrega a la carta; crowdfunding basado en la inversión; criptomonedas.

Resum

Nous productes digitals, tecnològicament disruptius y sorgits de la nova economia digital, han entrat a la vida quotidiana dels consumidors en els darrers anys. Tot i que aquests productes digitals influeixen i tindran una gran afectació en els patrons de comportament dels consumidors, queden preguntes i reptes sense resoldre que encara requereixen respostes. Per tant, l'objectiu principal d'aquesta tesi és aprofundir en aquesta qüestió, tot explorant com els consumidors avaluen, trien i es relacionen amb els productes digitals provinents de la nova economia digital. Aquest objectiu s'ha centrat en tres estudis, tots ells abordant temes que han despertat un interès creixent en el nou marc de l'economia digital. En primer lloc, els serveis de lliurament de menjars preparats estan canviant ràpidament la indústria alimentària i la manera de consumir de les persones. L'estudi 1, per tant, explora com els consumidors compren i donen 'suport' deliberadament a empreses implicades en conductes no ètiques, tot i saber que porten a terme aquest tipus de conducta. En segon lloc, el crowdfunding basat en la inversió, s'està generalitzant cada cop més i ha despertat un interès considerable inversors privats. L'estudi 2, per tant, investiga els factors que configuren el comportament d'adopció dels inversors privats cap a aquestes plataformes. En tercer lloc, les criptomonedes han sorgit i s'han convertit en objectes d'inversió temptadors per als consumidors. No obstant això, molts consumidors han patit grans pèrdues en inversions en criptomoneda. L'estudi 3, per tant, explora els mecanismes subjacents a l'augment del compromís criptogràfic dels consumidors. Com a resultat, l'estudi 1 demostra que el desacoblament moral permet als consumidors oferir suport continuat a les empreses implicades en conductes no ètiques. L'estudi 2 mostra que les variables de la teoria unificada de l'acceptació i l'ús de la tecnologia 2 i el model d'ajustament de la tecnologia de la tasca expliquen el comportament d'adopció dels inversors privats. Finalment, l'estudi 3 demostra que les apel·lacions externes de por a perdre's alguna cosa afecten el compromís dels consumidors amb la criptomoneda. Aquesta tesi doctoral aborda tres fenòmens rellevants i específics en el context de la investigació del consumidor, tot contribuint a la literatura des d'una perspectiva de màrqueting en l'àmbit de la nova economia digital.

Paraules clau: Nova economia digital; comportament del consumidor; serveis de lliurament sota demanda; crowdfunding basat en la inversió; criptomonedes.

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Chapter 1

1. Introduction

Chapter 1 introduces the topic of the PhD thesis and presents its structure and content.

1.1 Consumers in the new digital economy

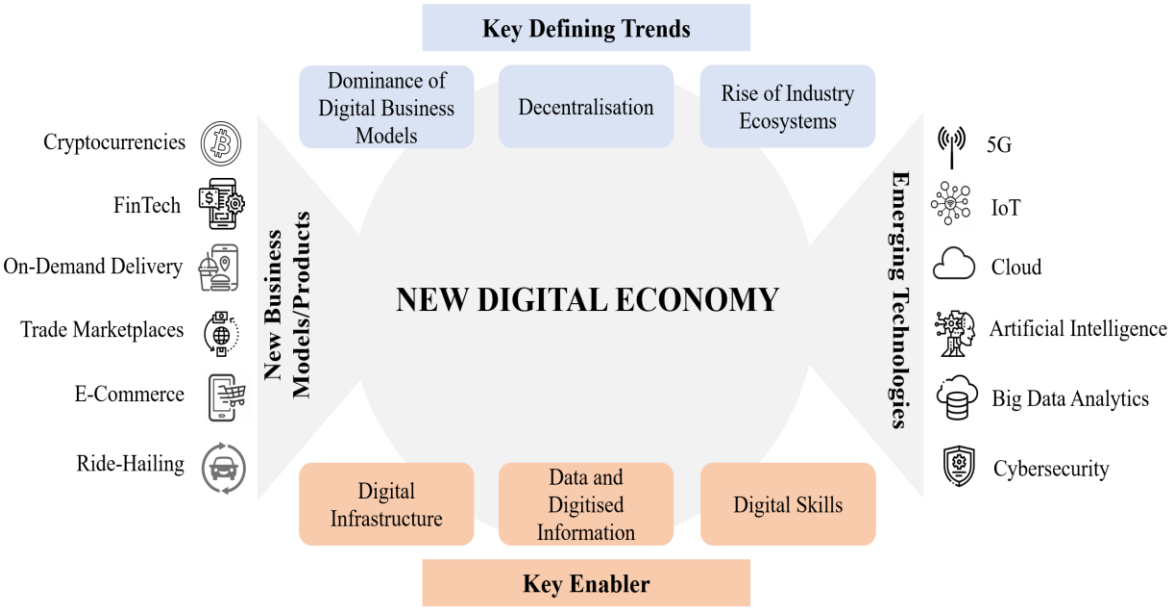
A mythic aura surrounds the soar and swoon of the “new economy”. The term originally stems from the late 1990s and early 2000s, and refers to a buzzword that depicts the shift from an economy focused on commodity production, to one focused on services using innovative and new technologies (Beyers, 2002; Gordon, 2000). In other words, it referred to the change driven by information and communication technology, particularly by the internet (Farrell, 2003). Therefore, back in 2000, technology radically transformed societies, organisations and consumers’ daily lives, as they now had access to, for instance, smartphones, web browsers, social media and new healthcare applications.

Since then, the global economy has undergone a digital transformation at breakneck speed. Based on these initial developments, the new economy recently evolved to be a digital revolution or, in other words, the new digital economy of the Millennium. This new paradigm is composed of even more advanced, data-driven and disruptive digital products based on digitised information and knowledge (Chen & Wang, 2019). According to the Organisation for Economic Co-operation and Development (OECD), the digital economy encompasses all economic activities dependent on or particularly enriched by digital inputs, including digital technologies, infrastructure, services, and data. This more general scope refers to all producers and consumers who utilise digital inputs in their economic actions (OECD, 2020). Hence, the digital economy covers the economic activity that results from countless daily online connections and transactions among people, businesses, devices, machines and data (Chen, 2020). These transactions are enabled by technologies that have resulted in process and business model innovations whose design, diffusion, and value appropriation characteristics may differ from a few years ago or even from the pre-internet era (Sorescu & Schreier, 2021). In fact, if one considers the digital economy as encompassing all activities that use or are facilitated by digitised data and information, then it is essentially the entire economy (Chen, 2020).

The new digital economy is taking shape and undermines conventional notions about how economic growth is promoted, how businesses are structured, organisations interact, and, most significantly, consumers obtain services, information and goods (Li et al., 2020). The emergence of the new digital economy is characterised by key trends, key enablers, emerging technologies, as well as new business models and

products that differ significantly from the new economy back in 2000, as illustrated in Figure 1.1.

Figure 1.1. Scope and characteristics of the new digital economy.



Source: On the basis of OECD (2020) and OECD (2020a).

From a business perspective, the new digital economy constitutes new opportunities for organisations (Teece, 2018). They can increase their productivity and revenues alongside opening up new markets through digital channels, services and applications. Most importantly, it is also a meaningful change from the consumer perspective, as many new digital products increasingly put the consumer at the centre and often offer instant access and gratification. For instance, the appearance of ride-hailing services' such as Uber or Cabify significantly transformed consumers' mobility. Instead of chasing down a taxi on the street or waiting for a transportation service, they allow consumers to hail rides from any location with real-time location tracking, providing door-to-door convenience and automatically transacting payments (Min et al., 2019). Another good example is Amazon, which exposes consumers to a vast product assortment and provides cutting-edge customer experience and instant delivery, significantly outperforming conventional retailers (Janson, 2020).

Yet, those examples are not the only ones that portray the importance, as well as the extent, of the new digital economy. Digitised information and knowledge continuously grow, while technology simultaneously becomes more advanced and sophisticated. Thus, the magnitude of the new digital economy is further shown by the evolvement of more recent digital products such as food delivery services (Glovo and Deliveroo), FinTech (Kickstarter and Wefunder) and even cryptocurrencies (Bitcoin and Ether). Most consumers have at least heard of, or experienced encounters with, these recently evolved digital products.

At the time of writing, the spending on digital technologies and services worldwide is projected to reach US$ 1.8 trillion in 2022 and forecast to reach US$ 2.8 trillion in 2025 (Sava, 2022). To illustrate the scale of these numbers and to make them more tangible, these expenditures are higher than the gross domestic product (GDP) of mature European countries, such as the GDP of Spain, which was projected to be around US$ 1.4 trillion in 2021 (Urmersbach, 2022).

The self-reinforcing process of increasing digitised information, knowledge and advances in technologies enable the upspring of increasingly digital products (Brynjolfsson & Collis, 2019). It is precisely from this problem, to recapitulate this thought, that the motivation for this doctoral dissertation has arisen. Consumers are confronted with an increasing number of digital products originating from the fabric of the new digital economy at ever shorter intervals. These new products, which appear very tangibly in everyday life and continue to grow, strongly influence the behaviour of

consumers and, by and large, entire societies. Nevertheless, many aspects of how consumers evaluate, choose and engage with digital products in this environment and how they access and utilise them are still understudied (Sorescu & Schreier, 2021).
Consequently, to close this gap in the marketing research literature, this thesis aims to explore how consumers assess, select, engage and utilise some particular digital products stemming from the new digital economy. Specifically, this thesis has focused on three different areas in the framework of the new digital economy that has attracted particular public interest in order to make the greatest possible positive contribution to both research and society. The first area focuses on consumers' interactions with the recently evolved on-demand delivery services (ODDS). The second area investigates consumers' interaction with investment-based crowdfunding platforms (IBCP). Finally, the third area focuses on consumers' engagement with cryptocurrencies (cryptos).

1.2 The new digital economy: Recent phenomena and unresolved questions and challenges

The tremendous technological advances made possible by the new digital economy have created a multitude of new and disruptive digital products. Although they enable novel and beneficial opportunities for organisations and consumers, they strongly influence consumers' behaviour in the same way industrialisation did back in the day. Especially some of these new digital products have recently received particular public interest and attention (e.g. Perrin, 2021; Schmidt, 2020; Sumagaysay, 2020). However, regardless of the benefits that these new digital products provide to the economy and, most importantly, to consumers, they also bring significant unanswered issues and challenges that have yet to be resolved (e.g. de Ruyter et al., 2022; Hervé et al., 2019; Matute et al., 2020).
First, one example that has received great attention, and will continue to do so, is the phenomenon that reflects how the world, and its food consumption patterns, are changing drastically. A few years ago, restaurant-quality meal delivery was still limited to specific places and foods. Nowadays, the global food industry and the way people consume food has radically changed (Sumagaysay, 2020). The mix of changing consumer expectations and the advent of appealing, user-friendly digital platforms have unlocked the rise of ODDS. These services, which involve food distribution services that act as an intermediary between restaurants and customers, continue to

expand. As of now, for instance, Uber Eats is already available in over 6,000 cities in 45 countries and continues to prosper (Uber, 2022). Not least, the lockdowns and physical distance requirements early on in the pandemic gave this industry an enormous boost (Ahuja et al., 2021). The revenue in the ODDS segment in Europe is projected to reach up to US$ 43 billion in 2022 and is expected to show an annual growth rate (Compound Annual Growth Rate (CAGR) 2022-2026) of 9.88%, resulting in a projected market volume of up to US$ 63 billion by 2026 (Statista, 2022).

Despite the fact that ODDS constitute a large industry that significantly impacts consumer behaviour and the food industry itself, scholars only recently started to investigate this domain (e.g. Belanche et al., 2021; Dsouza & Sharma, 2021). Actually, the growth of many digital services in the new digital economy is sometimes based on ethically questionable business models, and consumers often seem to favour convenience over morality. For instance, despite their global success story, ODDS faced a vast amount of criticism for their labour practices, based on exploiting regulatory and legal loopholes to maximise profits (Sawers, 2019). In addition, these companies have frequently been criticised for imposing controversial working conditions on their couriers (‘riders’) (Kaminska, 2019). Although these transgressions are given broad coverage by the media and addressed by consumer activist groups (Chau, 2019), consumers’ demand for ODDS is soaring (Lee & Lee, 2020), which suggests that many consumers ignore this negative information in the media.

Accordingly, there is limited knowledge on the essential question of how consumers deliberately buy from and ‘forgive’ transgressing companies exposed as engaging in immoral activities. Current literature on moral psychology and consumer behaviour has started to pay attention to specific mechanisms to explain individuals’ support for unethical conduct in the consumer setting (Chen et al., 2018; Finsterwalder et al., 2017). Yet, the literature still presents some essential gaps and challenges that need to be addressed to better understand consumers’ deliberate engagement with companies involved in unethical conduct (Haberstroh et al., 2017). Especially there is a crucial need for a better understanding of such behaviour and recent calls from the literature related to consumers’ support for companies in the growing ODDS context (Matute et al., 2020). Consequently, this thesis included it as the first research subject in the framework of the new digital economy.

Second, in addition to the change in how people consume food, many new services are evolving within the new digital economy that potentially enhances consumers’ and

societies' welfare. For instance, the uprising of the digital economy has had an enormous impact on how new and small companies are financed - and crowdfunding has been at the forefront. In recent years, crowdfunding has emerged to become an essential source of funding for entrepreneurs who are increasingly financing their ventures by attracting lesser amounts of money from large groups of individuals (Moritz & Block, 2016). In fact, crowdfunding is the progression of crowdsourcing and can be viewed as community-enabled financing for entrepreneurs and ventures. This new phenomenon enabled numerous start-ups to become globally successful. One example is Oculus, a massively popular virtual reality headset that received funding through crowdfunding, which was later bought by Meta (former Facebook). Or Volocopter, today one of the world's best-known air taxi manufacturers, also received its first funding from crowdfunding campaigns (Drost, 2021). Therefore, crowdfunding platforms have been some of the most successful digital platforms (Chandna, 2022), which is also displayed in the global crowdfunding market value of over US$ 12 billion in 2020, and its forecast to double by 2027, growing at a CAGR of 11% (Statista, 2021). While crowdfunding is still young, these nascent industries are helping diversify the start-up ecosystem and especially open up new opportunities for consumers. This is because, besides providing a new channel through which entrepreneurs can raise funds to undertake innovative projects, they emerged to be a profitable investment alternative for consumers (Rossi & Vismara, 2018).

The initial crowdfunding model was popular for non-profit organisations (donation-based crowdfunding) or companies that could pre-sell a product (reward-based crowdfunding). Investment-based crowdfunding has been recently adopted by entrepreneurs and ventures to attract consumers to acquire a company share, with the expectation of financial remuneration (Cumming et al., 2019). Consumers' interest in IBCP is an emerging phenomenon as they appear to be a profitable investment alternative for non-institutional investors (Roth, 2020; Yasar, 2021). As the existing literature mainly focused on donation or reward-based crowdfunding (e.g. Liu et al., 2018; Ryu & Suh, 2021), research only recently started to pay attention to IBCP (e.g. Lukkarinen, 2020). Therefore, despite consumers' growing interest in these platforms, contemporary literature is still embryonic (e.g. Herrero et al., 2020; Zhang et al., 2020). Furthermore, in the investment-based domain, scholars predominantly considered trust or risk related theoretical perspectives (Liang et al., 2019). Accordingly, to date, the factors that shape consumers' adoption of this investment alternative have still not

been fully determined. Obtaining a better understanding of consumer behaviour in the investment-based crowdfunding context represents an essential issue (Ferretti et al., 2021). Therefore, this second study aims to address this research gap by analysing the factors determining private investors' IBCP adoption. It thus constitutes the second research subject in this thesis in the framework of the new digital economy.

Third, another recent phenomenon that has drawn increased attention from scholars, entrepreneurs, regulators and the general public is cryptos (Giudici et al., 2020). Cryptos are digital financial assets for which a decentralised cryptographic technology guarantees ownership and transfers of ownership. They are becoming a part of the fabric of digital transactions, and their underlying technologies pledge to offer solutions in many kinds of business processes (Tredinnick, 2019). Cryptos are seen as one of the most critical future tech trends, potentially reshaping the financial landscape (e.g. Fang et al., 2022; Mendoza-Tello et al., 2019). Most importantly, cryptos are now being considered by many consumers as a supposedly viable investment alternative. For instance, recent reports found that 16% of Americans have invested in, traded or used cryptos (Perrin, 2021). They offer trading around the clock and a new medium of exchange and store-of-value that typically uses a transparent and safe decentralised data storage ledger (i.e. blockchain). The exponential rise and volatility in the price of cryptos, and thus potential monetary gains, has heightened consumers' interest in these assets (Edwards et al., 2019). Consumers' interest in cryptos is further illustrated by their market capitalisation, as it has more than tripled in the last two years and, in sum, there are about 10,000 cryptos as of 2022 – a drastic increase from just a few digital coins in 2013 (de Best, 2022; de Best, 2022a).

Despite consumers' unprecedented interest and engagement in crypto investments, it is essential to highlight that these assets are highly volatile and expose consumers to extensive risks (Anastasiou et al., 2021; Morris, 2022). Several examples show how consumers got hooked on high-risk trading with cryptos and incurred substantial losses, threatening their financial well-being (Edwards et al., 2019; Kale, 2021). Furthermore, recent scholars show that, specifically, young consumers show addictive behaviours to crypto trading (Mills & Nower, 2019). The current literature stresses the timely issue of consumers' adverse decision-making with financial assets (Cox et al., 2020), particularly with cryptos (Mills & Nower, 2019), as they continue to cause financial hardship for many consumers. Albeit the potential adverse effects on consumers' wealth, many questions and issues concerning consumers' engagement

with cryptos are still unresolved. Empirically oriented research only recently started to pay attention to this focal matter (e.g. Härdle et al., 2020). The literature suggests consumers increasingly use social networks and online platforms to get information about potential investment opportunities (Shiva & Singh, 2020). Furthermore, practitioners started to use appeals on trading platforms to trigger consumers' curiosity and subsequent trading (Kale, 2021). In this line, previous scholars indicate that consumers' fear-of-missing-out (FOMO) might play a critical role in consumers' decision-making in the crypto context (Delfabbro et al., 2021). Yet, despite policymakers showing an increased interest in addressing this issue and recent calls from the literature related to more responsible and resilient marketing (e.g. de Ruyter et al., 2022), the literature has not started to look deeply into this issue. Accordingly, this thesis included it as the third research subject in the framework of the new digital economy.

1.3 The research objectives of this dissertation

As explained in the previous sections, numerous aspects of how consumers interact with digital products stemming from the new digital economy are still understudied (Sorescu & Schreier, 2021). Therefore, this dissertation aims to shed light on this timely issue from a marketing perspective. It seeks explore how consumers assess, select, engage and use digital products originating from the new digital economy. More narrowly, this dissertation pursues the following research objectives in the skeleton of the new digital economy.

First, this dissertation aims to contribute to the limited knowledge that exists on the essential question of how consumers deliberately buy from, and 'support' companies involved in unethical conduct. The dissertation specifically aims to shed light on this question in the context of ODDS. By doing so, this work looks to address the current gaps in the literature by merging the research stream on moral decoupling, negative emotions and personality traits. Specifically, it aims to:

- Illustrate how moral decoupling is the psychological mechanism that allows consumers to support companies that are involved in unethical conduct.
- Explore how engaging in moral decoupling allows consumers to feel less guilty when purchasing products from companies involved in immoral conduct.

- Extend the moral decoupling model by exploring how the influence of moral decoupling on purchase intention is affected by personal traits, specifically, empathic concern and moral identity.
- Examine how the moral intensity of unethical conduct affects consumers' engagement in moral decoupling mechanisms.

Second, this dissertation aims to shed light on the limited knowledge that exists on the essential question of what factors shape investor adoption of IBCP. By doing so, this work intends to address the current gaps in the literature by primarily merging the research stream of the unified theory of acceptance and use of technology 2 (UTAUT2), task-technology-fit (TTF) model, perceived network externalities and trust. Specifically, it aims to:

- Analyse the underlying factors that influence private investors' IBCP adoption.
- Provide a comprehensive viewpoint of the underlying factors by elaborating a conceptual model that integrates the UTAUT2 and TTF model.
- Extend the UTAUT2 and TTF model by incorporating perceived network externalities and trust and explore its effect on private investors' IBCP adoption behaviour.

Third, this dissertation aims to shed light on the essential question of why consumers are increasingly investing in volatile and risky assets and, more precisely, the mechanisms underlying such behaviour. The dissertation aims to provide an initial understanding of this phenomenon by focusing on the crypto context. By doing so, this work plans to address the current gaps in the literature by merging the research stream on FOMO, affective processes and personal traits. Specifically, it aims to:

- Analyse how external evoked FOMO appeals can influence consumer investment intention.
- Explore whether affective processes mediate the relationship between external evoked FOMO appeals and consumer investment intention.
- Investigate how personal traits, specifically impulsivity, affect FOMO appeals influence on consumer investment intention.
- Explore FOMO appeals strong and lasting effects on consumers' investment intention and how communication messages can reduce these effects.

1.4 Overview and structure: Three building blocks in the new digital economy framework

This dissertation includes three empirical studies in the framework of the new digital economy, focusing on delivering implications for marketers and policymakers. Even though the studies diverge in their perspectives (on-demand service vs. FinTech vs. digital currency) and their resulting context-specific implications, they all aim at identifying the positive effects of marketing for society as a whole and the consumers as an individual. More narrowly, all three studies and their research objects belong to the new digital economy framework, as they all originate from recent advanced, sophisticated and disruptive digital developments. Therefore, they are all concerned with enhancing the current understanding of how consumers engage with these recently evolved new digital products. This is in line with recent calls for marketing research to tackle socially relevant issues and contribute to a better understanding of newly developed phenomena (Campbell & Winterich, 2018; de Ruyter et al., 2022; Hervé et al., 2019). Table 1.1. provides an overview of the three context-specific empirical articles in this dissertation.

The following section introduces the three studies in more detail, shows how they address the thesis objectives and summarises their empirical findings. After this brief preview, the thesis presents the entire studies in chapters 2, 3 and 4. To conclude the thesis, chapter 5 is dedicated to offering the work's most important conclusions and the theoretical and practical implications for marketing research, managers and policymakers. In addition, a critical analysis of the study itself will be carried out, showing its main limitations and suggesting potential future lines of research that will allow progress to be made with consumer research in the new digital economy framework. To address the first objective of this thesis, study 1 is introduced:

Study 1: That's wrong...but it's good! How moral decoupling allows consumers to feel less guilty about supporting companies involved in unethical conduct

If it is Uber's gig workers facing morally unacceptable working practices, or the Volkswagen emission fiasco, moral wrongdoings of businesses are a continuing reality for consumers. Although these transgressions are covered by the media and are addressed by consumer activism, numerous companies remain successful (e.g. VW's

record profits in 2019) instead of facing boycotts. Therefore, it is imperative for scholars, managers and policymakers to understand how consumers decide not to penalise these behaviours and keep on supporting such companies (Orth et al., 2019). Accordingly, investigating this phenomenon in the emerging and controversial ODDS context might yield interesting insights.

Hence, this study demonstrates that moral decoupling helps consumers to support companies involved in unethical conduct. Moral decoupling is a psychological separation process by which individuals selectively dissociate judgements of morality from judgements of performance in order to support wrongdoers without compromising their own moral standards (Bhattacharjee et al., 2013). The study further shows that the selective process of separating moral and performance judgements reduces consumers' feelings of guilt in the purchase decision. It finds that guilt partially mediates the influence of moral decoupling on purchase intentions in such a way that dissociating moral and performance judgements diminish feelings of guilt, which in turn facilitates consumers buying intentions. The study's results further show that personality traits, empathic concern and moral identity, explain how moral decoupling affects consumers' willingness to support companies involved in unethical behaviour. Finally, it reveals how the moral intensity of a company's misconduct affects consumers' activation of moral decoupling processes. This is, high perceived moral intensity of companies' unethical behaviours reduces consumers' engagement in decoupling mechanisms.

This article that constitutes chapter 2 has been published in the Journal of Marketing Management on the 14th of March 2022 (Impact factor in 2022: 4.707, Q2 in Business and Q2 in Management[1]; 2 Stars in 2021[2]). To address the second objective of this thesis, study 2 is introduced:

Study 2: Investors' acceptance and use of investment-based crowdfunding platforms: An integrated perspective

In recent years, crowdfunding has emerged as a valuable alternative funding source for entrepreneurs and ventures forming new projects. Crowdfunding became publicly

[1] Based on Journal Citation Report (JCR)
[2] Based on Academic Journal Guide (AJG)

known through reward and donation-based crowdfunding models, such as Kickstarter, Indiegogo and GoFundMe. Both are open calls to many individuals over online platforms for financial resources in the form of monetary contributions; however, the former is in exchange for rewards, and the latter is donation based. In both types of crowdfunding, social and civic motivations prevail (Yang et al., 2020). More recently, investment-based crowdfunding emerged. With this model, backers (or investors) are principally financially motivated, which is in contrast to reward or donation-based crowdfunding. Although investment-based crowdfunding has aroused the interest of a growing number of scholars, the factors that determine consumers' adoption of this investment alternative have still not been fully determined.

Therefore, this study integrates the UTAUT2 and TTF model as baseline models and extends this further with perceived network externalities and trust. The results illustrate that consumers' adoption of IBCP can be explained by performance expectancy, effort expectancy, facilitating conditions, habit, network externalities, trust and the task-technology-fit. The findings primarily inform platform providers with valuable insights on encouraging backers to adopt these platforms. To address the third objective of this thesis, study 3 is introduced:

Study 3: CRYPTO-MANIA: How fear-of-missing-out drives consumers' (risky) investment decisions

Consumers' boredom with lockdowns and free-fee trading platforms initiated a historic trading engagement that made financial markets the new place of pilgrimage for spending money (Martin & Wigglesworth, 2021). Specifically, the purchase of digital assets, particularly cryptos, has seen rapid expansion in recent years, spurred on during the pandemic by millions of consumers. However, this new digital investment product raises some concerns. For instance, contemporary scholars suggest that crypto investments are similar to high-risk addictive behaviours, such as online gambling (Mills & Nower, 2019) and that consumers often invest more money than they can afford (Delfabbro et al., 2021). Additionally, these assets often face periods of extreme bubbles and have significant volatility, thus having an increased probability of price crash risk (Anastasiou et al., 2021). Yet, many consumers continue to invest despite the well-known hazards associated with crypto investments and the potential adverse effects on consumers' wealth. This happens, albeit the crypto market has

crashed several times, causing losses of billions of dollars (Ponciano, 2021). Thus, although consumers increasingly engage in crypto investments and accordingly make financial decisions that potentially jeopardise their wealth, the question of why consumers are conducting such behaviour and the underlying mechanisms remain unaddressed.

Therefore, this study demonstrates that external evoked FOMO appeals are the underlying mechanisms influencing consumers' crypto engagement. Furthermore, the study reveals that FOMO appeals directly and indirectly via affective processes influence consumers' investment intention. It further depicts that this effect is moderated by personal traits and shows FOMO's substantial and lasting impact on consumers' investment intention. Finally, the study indicates how communication messages can counter the affective state generated by external evoked FOMO appeals.

To put it into a nutshell, all three empirical articles of this PhD thesis in the framework of the new digital economy are displayed in Table 1.1.

Table 1.1. Overview of the three context-specific empirical articles in the new digital economy framework.

Consumer Behaviour in the New Digital Economy: Timely Challenges Concerning Consumers Engagement with New Digital Products.			
Chapter	2	3	4
Title of the Article	That's wrong... but it's good! How moral decoupling allows consumers to feel less guilty about supporting companies involved in unethical conduct	Investors' acceptance and use of investment-based crowdfunding platforms: An integrated perspective	CRYPTO-MANIA: How fear-of-missing-out drives consumers' (risky) investment decisions
Overarching Research Objective	To contribute to the essential question of how consumers deliberately buy from, and 'support' companies involved in unethical conduct in the ODDS context	To provide a holistic viewpoint of the essential factors that shape private investors adoption of IBCP	To provide an understanding of why consumers are increasingly engaging in crypto investments and the mechanisms underlying such conduct
Methodology Applied	Quantitative	Quantitative	Quantitative
Research Design	Experiments and survey design	Survey design	Experiments and laboratory study
Data Collection	Data collected from students, Amazon Mturk and Netquest (panel)	Data collected from Amazon Mturk and Quopinion (panel)	Data collected from students and Amazon Mturk

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Chapter 2

2. That's wrong...but it's good! How moral decoupling allows consumers to feel less guilty about supporting companies involved in unethical conduct

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Chapter 2 constitutes the first article in this thesis. It aims to contribute to the question of how consumers deliberately buy from, and 'support' companies involved in unethical conduct, focusing on the ODDS context.

The article that comprises chapter 2 has been published in the Journal of Marketing Management on 14th March 2022.

Reference:
Friederich, F., Matute, J., Palau-Saumell, R., & Meyer, J-H. (2022). That's wrong...but it's good! How moral decoupling allows consumers to feel less guilty about supporting companies involved in unethical conduct. *Journal of Marketing Management*. https://doi.org/10.1080/0267257X.2022.2042361

2.1 Abstract

Consumers often continue to support companies involved in unethical conduct. Yet, a theoretical understanding of such behaviour is lacking. This study aims to demonstrate that moral decoupling enables consumers to offer continuous support for companies involved in unethical conduct by reducing feelings of guilt in the purchase decision. It further intends to explore how personality traits moderate the influence of decoupling mechanisms on purchase intentions and to show how the moral intensity of misconduct affects consumers' activation of moral decoupling. Four empirical studies were conducted, revealing that decoupling explains purchase intentions both directly and indirectly through guilt. The study also shows that consumers' empathic concern and moral identity moderate decoupling processes. High moral intensity of unethical conduct diminished engagement in moral decoupling.

Keywords: Moral decoupling; unethical conduct; ethics; emotions; individual differences.

2.2 Introduction

Unethical business conduct represents a dilemma for customers. While corporate misconduct may lead consumers to punish companies by spreading negative word of mouth, performing complaint behaviours or boycotting (Trautwein & Lindenmeier, 2019; Xie & Bagozzi, 2019), many consumers actually decide not to penalise these behaviours and keep on supporting such companies. This happens even though individuals frequently admit the immorality of such action (Haberstroh et al., 2017). In this regard, when consumers are strongly motivated to maintain a relationship with a brand, they may seek shelter in different moral reasoning mechanisms to justify their continued purchases of these brands. These mechanisms, known as moral disengagement (Bandura, 1999), represent a set of psychological processes by which consumers can justify actions that actually deviate from their moral standards.

Current literature on moral psychology and consumer behaviour has started to pay attention to these mechanisms in order to explain individuals' support for specific immoral conduct in the consumer setting (Chen et al., 2018; Finsterwalder et al., 2017; Tsarenko & Tojib, 2015). While in the past this phenomenon was traditionally explained via moral rationalisation (Bandura et al., 1996), these processes bear the risk of compromising the individual's moral standards, which consumers typically try to protect in the long run (Thøgersen, 2004). Alternatively, moral decoupling has recently been introduced to explain how individuals support unethical conduct (Bhattacharjee et al., 2013). Moral decoupling represents a psychological separation process by which individuals selectively dissociate judgements of morality from judgements of performance in order to support wrongdoers without compromising their own moral standards (Orth et al., 2019).

Despite recent advances in explaining consumers' continued support for immoral companies (Haberstroh et al., 2017), current research on moral decoupling still presents some essential gaps and challenges that need to be addressed in order to better understand the reasons underlying this phenomenon. For instance, previous studies show that people's reactions to unethical conduct may depend on their personal differences (Wang et al., 2017). Such differences in consumers' goals, values and norms could explain how they react to organisational misconduct by engaging in psychological processes to separate moral- and performance-related aspects of such conduct (Lindenmeier et al., 2012). While previous research has explored how morality

and human values explain individuals' pro-social and sustainable behaviours (Watkins et al., 2016), little is known about how personal values relate to the specific activation and the effectiveness of decoupling mechanisms in moral conflicts (Matute et al., 2020). This is especially relevant in the consumer setting because, to preserve their moral selves, decoupling requires consumers to selectively separate moral judgements from evaluations about a company's product or service performance (i.e. product or service quality). To fill this gap, this study explores two personality traits from the moral psychology literature – empathic concern and moral identity (Campbell & Winterich, 2018) – as contingent variables in explaining how decoupling affects consumers' willingness to support companies involved in unethical conduct. Both traits have been shown to play a significant role in explaining consumers' ethical beliefs and pro-social behaviours (Chowdhury & Fernando, 2014), which illustrates their potential leverage in the moral decoupling context.

Furthermore, previous studies acknowledge that emotions could play a relevant role in explaining the engagement in moral reasoning mechanisms to justify acceptance of unethical conduct (Cowan & Yazdanparast, 2019). In general terms, moral disengagement facilitates individuals' engaging in unethical conduct without experiencing negative affect. However, it is still unclear how moral decoupling may suppress negative emotions in purchasing decisions. In this sense, guilt represents a critical emotion in self-regulation processes by helping consumers to recognise that moral standards have been violated (Tangney et al., 2007). As decoupling involves morally condemning the company without further behavioural consequences, this mechanism might act as a suppressor of guilt when consumers are faced with ethical misconduct by companies. Hence, this study posits that introducing guilt is pivotal to better understand how consumers engage in decoupling to enable them to deliberately support companies involved in immoral conduct without compromising their own moral standards.

Finally, it remains unclear whether, and, if so, how the moral intensity of a company's unethical conduct might impact the activation and effectiveness of decoupling mechanisms. Moral rationalisation can be more difficult to justify when unethical conduct represents high moral risks for consumers. This is because it explicitly requires consumers to condone the violation (Bhattacharjee et al., 2013). Conversely, the influence of the moral intensity of a company's unethical conduct on moral decoupling is not so straightforward. Decoupling requires individuals to condemn

moral violations and, simultaneously, support the transgressor. Therefore, the moral intensity of unethical conduct might be relevant for the occurrence of decoupling processes. This is because severe unethical conduct may dampen the effect of decoupling since it can compromise consumers' moral standards and depress their willingness to use such mechanisms to justify their support (Chen et al., 2018; Wang & Kim, 2020). Accordingly, this study explores how the moral intensity of unethical conduct determines the likelihood of consumers' engaging in decoupling processes to justify their purchase intentions (Lehnert et al., 2015).

In sum, this study aims to contribute to the limited knowledge that exists on the essential question of how consumers deliberately buy from and 'support' companies involved in unethical conduct. To do so, it extends the moral decoupling model (Bhattacharjee et al., 2013) by proposing that the influence of decoupling on purchase intention is affected by personal traits, specifically, empathic concern and moral identity. In addition, the study explores whether engaging in decoupling allows consumers to feel less guilty when purchasing products from companies involved in immoral conduct. Finally, the study examines how the moral intensity of unethical conduct affects consumers' engagement in decoupling. The context of the study focuses on ODDS. ODDS involve food distribution services that act as an intermediary between restaurants and customers. While these services are nowadays rapidly changing the global food industry (Sumagaysay, 2020), organisations in this business frequently face massive amounts of criticism for their labour practices. Their couriers often face badly paid and unstable working conditions, based on exploiting regulatory and legal loopholes to maximise profits (Sawers, 2019). Although these questionable practices are given broad coverage by the media and are addressed by consumer activist groups (Chau, 2019), many consumers ignore this negative information and continue to buy from ODDS (Lee & Lee, 2020).

2.3 Moral reasoning strategies and unethical conduct

The literature on moral psychology identifies two moral reasoning strategies that explain why individuals support actors involved in immoral conduct. These strategies are moral rationalisation and moral decoupling. The former is derived from the moral disengagement theory and involves a self-regulatory process by which individuals apply strategies to justify unethical conduct by reconstruing immoral actions into less

immoral ones (Bandura et al., 1996). It allows individuals to relieve the tension between the desired outcomes and their moral standards by justifying the immoral acts (Bandura, 1999). When rationalising, individuals exercise different moral disengagement mechanisms to justify unethical conduct. For instance, attribution of blame constitutes one mechanism where individuals justify their unethical conduct against others who have put themselves in this position. In this process, individuals portray antisocial conduct as a forced reaction and view the victim as deserving bad treatment (Bandura et al., 1996). Rationalising an unethical conduct requires individuals to convince themselves that supporting the wrongdoer is consistent with their moral standards (Bhattacharjee et al., 2013). Therefore, different rationalisation processes share one significant limitation because moral evaluations are densely tied to the self, and individuals attempt to maintain a positive view of themselves (Aquino & Reed, 2002).

Given these limitations, recent advances in moral psychology have focused on moral decoupling as a potential competing mechanism. Moral decoupling represents a psychological process in which individuals selectively separate performance from morality judgements (Bhattacharjee et al., 2013). By employing decoupling processes, individuals perform a dissociation between a performance judgement and a moral judgement, by which the unethical conduct is condemned, hence allowing them to continue to support companies involved in unethical conduct (Haberstroh et al., 2017). As such, decoupling does not require individuals to tolerate inadequate behaviours and allows them to feel less pressure to compromise their moral standards (Bhattacharjee et al., 2013). Examples of moral decoupling have frequently been applied in contexts connected to celebrities' unethical conduct (e.g. Finsterwalder et al., 2017; Lee et al., 2016). For example, when Tiger Woods was involved in extramarital affairs, fans tended to admit that his behaviour was immoral, but argued that his private life should not influence their evaluation of his performance. Recent studies reveal that decoupling better predicts individuals' supportive behaviours towards unethical conduct than rationalisation (Chen et al., 2018; Haberstroh et al., 2017; Matute et al., 2020; Orth et al., 2019).

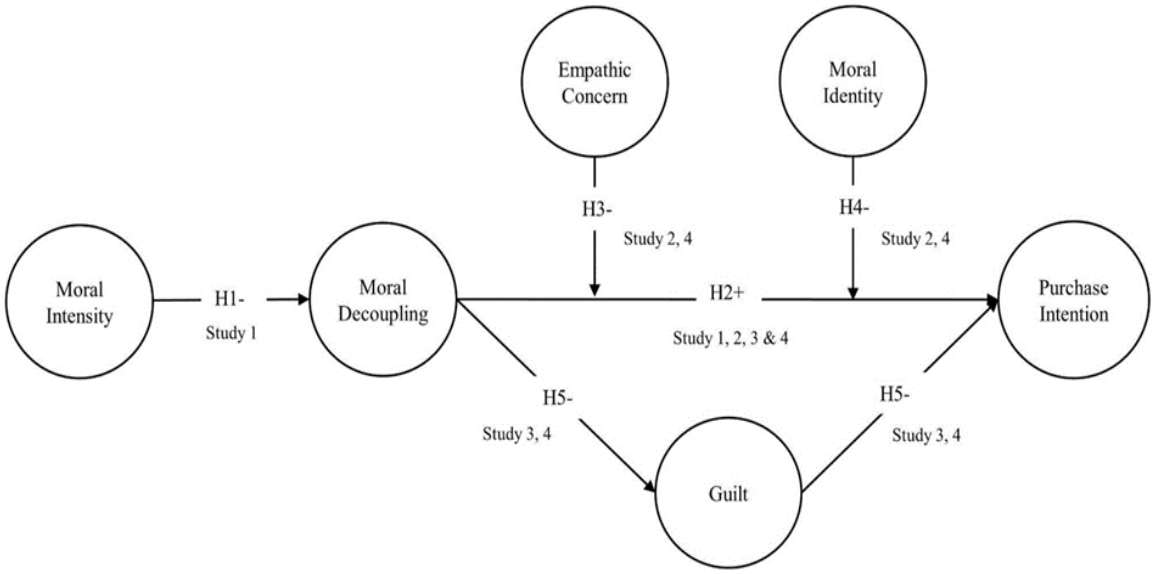
Moral decoupling has also been recently applied to the marketplace setting (Haberstroh et al., 2017; Hur et al., 2018; Septianto et al., 2020), suggesting that consumers justify their support for organisations involved in unethical conduct by engaging in dissociating mechanisms, rather than by rationalising such conduct

(Matute et al., 2020). Since decoupling is a selective process separating moral and performance judgements, individuals employing these processes focus their judgements on the company's performance criteria (Chen et al., 2018). In the context of ODDS, where consumers can easily choose from multiple service providers, consumers' evaluation of the company's performance is crucial in determining their final decisions (Belanche et al., 2021). Therefore, decoupling mechanisms might appropriately explain consumers' support for companies involved in unethical conduct as those companies still present a good performance. As a result, moral decoupling is expected to be the psychological mechanism used to help consumers justify their intention to purchase from companies that engage in ethically reprehensible actions.

2.4 Empirical studies

Four studies were conducted to accomplish the goals of this research. The first study (experiment) examines how the intensity of a moral violation impacts consumers' willingness to decouple and tests the influence of decoupling on individuals' purchase intentions. It also explores whether moral decoupling mediates the impact of moral intensity on consumers' purchase intentions. Study 2 (experiment) examines how personality traits interact with decoupling in explaining consumers' purchase intentions towards companies involved in unethical conduct. Study 3 (experiment) tests whether supporting a company involved in unethical conduct reduces consumers' feelings of guilt when moral aspects are decoupled from performance elements. Study 4 (online survey) builds on these results by testing a comprehensive model that includes the moderating influence of personality traits, and the mediation effect of guilt, in the relationship between moral decoupling and purchase intentions. Figure 2.1 shows the proposed model and hypotheses tested in these four studies.

Figure 2.1. Conceptual model.



2.4.1 Study 1: The effect of moral intensity on moral decoupling and purchase intentions

The first study tests whether the moral intensity of an unethical conduct influences moral decoupling. The effect of moral decoupling on purchase intention is also examined. Further, the study explores how moral decoupling mediates the effect of moral intensity on purchase intention.

Previous studies have indicated that performance-related and more severe transgressions significantly influence participants' activation of moral reasoning strategies (e.g. Bhattacharjee et al., 2013; Haberstroh et al., 2017; Lee & Kwak, 2016). This effect is especially straightforward in moral rationalisation processes, since rationalising immoral conduct requires individuals to chastise the immoral actor (Bhattacharjee et al., 2013). However, when decoupling, individuals dissociate morality and performance judgements and are able to support immoral conduct while simultaneously condemning the unethical action. Thus, the role of moral intensity in decoupling could be ambiguous, since decoupling explicitly requires condemning the unethical action, independently of the severity of the immoral conduct. Nonetheless, extreme violations might dampen this effect since consumers will jeopardise their moral standards. Following recent research, this study posits that consumers are less likely to dissociate performance evaluations from moral judgements if they perceive the unethical conduct to be relevant, severe or large in terms of social magnitude (Chen et al., 2018; Matute et al., 2020; Wang & Kim, 2020). It conceives moral intensity as the 'extent of issue-related moral imperative in a situation' (Jones, 1991, p. 372) and follows the framework of Lehnert et al. (2015) by conceptualising the intensity of the unethical conduct in terms of the perceived magnitude of the consequences, the probability of effect and its temporal immediacy. In this sense, extremely intense immoral conduct is expected to lead consumers to reduce their decoupling activity as high ethical violations become too strong to separate them from performance. Hence, it is proposed that:

H1: The moral intensity of unethical conduct influences consumers' engagement in moral decoupling such that high (low) moral intensity reduces (increases) moral decoupling.

As explained, moral decoupling is positively connected to an individual's purchase intention (Lee & Kwak, 2016; Orth et al., 2019). Purchase intention captures the objective intention a consumer has to buy a product, whether it is a service or a good, and is frequently employed as a measure to foresee the next purchase (Morwitz & Schmittlein, 1992). Individuals engaging in decoupling mechanisms separate their moral and performance judgements about the transgressor, which will help consumers to support companies involved in unethical conduct, thus increasing purchase intention (Matute et al., 2020). Accordingly, it is proposed that:
H2: Moral decoupling positively influences individuals' purchase intentions towards companies involved in unethical conduct.

Design and procedure: A between-subjects experiment with two conditions representing high and low moral intensity transgressions was conducted. Participants were placed in a fictional situation involving a gathering at a friend's house, followed by the possibility of using the application of a new fictional ODDS to order food online. Participants were then randomly exposed to the moral intensity conditions, using a newspaper article in which the fictional ODDS was the target of recent societal controversy (appendix A). In the low moral intensity condition, the ODDS was accused of engaging in a small number of irregular recruitment tactics (affecting 5% of the staff), a short period of tax evasion due to these practices and a low estimated social and personal impact on the workers and society. In contrast, in the high moral intensity condition, the ODDS was accused of engaging in a large number of irregular recruitment tactics (affecting 90% of the staff), a long period of tax evasion and a high estimated social and personal impact on the workers and society. Afterwards, the study's measurements were collected. We recruited 231 existing consumers of ODDS in an online experiment using Amazon MTurk. Ten respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 221 consumers. The demographics indicated that the respondents had a mean age of 40 years (SD=11.40) and that 58% of them were male.

Measures, coding and reliability: After the respondents had been assigned to their respective conditions, participants submitted scores on moral decoupling with a three-item measure (e.g. 'Negative media reports about ODDS should not affect our view of the company's performance') adapted from Bhattacharjee et al. (2013), purchase

intentions with a two-item measure (e.g. 'It's very likely that I will buy on ODDS platforms again') adapted from Putrevu and Lord (1994), moral rationalisation with a three-item measure (e.g. 'It's okay to use these types of labour practices') adapted from Bandura et al. (1996) and Bhattacharjee et al. (2013), and moral evaluation with a two-item measure (e.g. 'I find it immoral to use ODDS') adapted from Orth et al. (2019). Additionally, one item measured the frequency of usage of ODDS ('I often use ODDS'). All items were measured using a 7-point Likert scale. All scales achieved high reliability (Cronbach's alpha was >0.7; see appendix B). The two-item constructs purchase intention (ρ=.91) and moral evaluation (ρ=.83) achieved acceptable values using the Spearman-Brown coefficient. We tested the manipulation using an independent samples *t*-test on the moral intensity scale ($M_{HighMoralInt.}$=5.42, SD=.93; $M_{LowMoralInt.}$=3.84, SD=1.38; *t*(219)=10.22; p<.001, r=.55[3]). In order to check whether or not consumers consider it morally wrong to use these services, moral evaluation was examined. A one-sample *t*-test on the moral evaluation scale indicated that participants perceived the issue to be immoral, with scores significantly above the scale midpoint of 4 (M=5.09, SD=1.30; *t*(220)=58.07; p<.001, r=.55). Besides, no difference in consumers' moral evaluation ($M_{HighMoralInt.}$=5.15, SD=1.32; $M_{LowMoralInt.}$=4.97, SD=1.25; *t*(219)=1.06; p>.1, r=.06) and frequency of usage of ODDS services ($M_{HighMoralInt.}$=4.68, SD=1.68; $M_{LowMoralInt.}$=4.87, SD=1.55; *t*(219)=1.06; p>.05, r=.09) was found between the two conditions.

Results and discussion: A one-way analysis of variance (ANOVA) was conducted to test hypothesis 1. Results indicated that low moral intensity, rather than high moral intensity, significantly influenced moral decoupling ($M_{HighMoralInt.}$=4.06, SD=1.77; $M_{LowMoralInt.}$=4.88, SD=1.29; F(1,219)=15.48; p<.001, r=.26). Another one-way ANOVA indicated that moral intensity affected purchase intention in a similar way ($M_{HighMoralInt.}$=4.23, SD=2.01; $M_{LowMoralInt.}$=5.16, SD=1.24; F(1,219)=16.92; p<.001, r=.27). In order to test hypothesis 2 in a comprehensive setting, a mediation analysis (Process Model 4; 5,000 bootstrapped samples; Hayes, 2017) was carried out to investigate the mediating role of moral decoupling (M) in the relationship between moral intensity (X) and purchase intention (Y). Results showed a positive and

[3] We used r as a consistent effect size throughout the different analysis techniques. R effect sizes can be interpreted as follows: r < .1 – very small, .1 <= r < .3 – small, .3 <= r < .5 – moderate, r >= .5 – large (Cohen, 1988)

significant effect of moral intensity on decoupling (β=.42, SE=.15, p<.01). When controlling for the mediator, the effect of decoupling on purchase intention was positive and significant (β=.81, SE=.05, p<.001), while the main effect of moral intensity on purchase intention was marginal (β=.18, SE=.12, p>.05). Furthermore, the findings indicated that the indirect effect of moral intensity on purchase intention was significant: (β=.34, SE=.13, CI95[.40,1.17]), revealing a mediation which supports hypothesis 2.

The results of study 1 suggest a negative effect of moral intensity (element of transgression) on consumers' engagement in decoupling (H1). If moral intensity is low, participants showed higher levels of decoupling, whereas they displayed lower levels of decoupling in a high moral intensity state. Moral decoupling proved to have a direct effect on purchase intention (H2). Further, decoupling mediated the impact of moral intensity on purchase intention so that higher levels of decoupling led to higher purchase intentions. The primary goal of this first study was to explore under what circumstances moral decoupling is activated to a greater or lesser extent and how it determines consumers' supportive behaviours towards companies involved in unethical conduct in the ODDS context. Hence, its aim was to confirm that decoupling may cease to operate in situations where consumers see their moral standards clearly violated, especially for strong transgressions like those that typically make the news, thus confirming the findings of previous studies (Lee et al., 2015; Matute et al., 2020). Therefore, the results of study 1 set the baseline for the subsequent studies by confirming that decoupling is contingent upon how intense unethical conduct is perceived by consumers. Since the goals of this study focus mainly on understanding how decoupling affects individuals' purchase intentions towards companies involved in unethical conduct by analysing the moderating role of personality traits and the mediation of negative emotions, the influence of moral intensity as an antecedent of decoupling is not included in subsequent studies. Experimental designs in studies 2 and 3 place participants in a fictional situation of an ODDS business involved in a high moral intensity situation while, in study 4, participants in an online survey are presented with real news reporting extreme labour conditions (i.e. high moral intensity) suffered by ODDS' couriers.

2.4.2 Study 2: The interplay between moral decoupling and personal traits

The second study aims to explore the interaction of personal traits in the relationship between moral decoupling and purchase intention. Specifically, it explores the moderating influence of empathic concern and moral identity on individuals' decoupling engagement in an experimental setting.

Even though consumers may apply decoupling mechanisms to support companies involved in unethical conduct, not all individuals show homogeneous levels of supportive behaviour. Previous research suggests that this heterogeneity of outcomes of both the engagement in and the response to immorality in the marketplace might stem from personal traits (Campbell & Winterich, 2018; Seriki et al., 2020) that could moderate the effect of moral decoupling on purchase intentions.

Decoupling allows consumers to morally judge companies that exhibit unethical conduct, while still consuming their products. The resulting complexity of separating these judgements makes it hard to predict how personality traits interfere with an individual's willingness to engage in this mechanism. This study identifies and incorporates empathic concern and moral identity, two personal traits that have previously been linked to moral cognition and action (e.g. Erzi, 2020) as potential moderators in the relationship between moral decoupling and supportive behaviours. Both traits were found to be significant predictors of ethical conduct (Aquino & Reed, 2002; Davis, 1983; Hoffman, 2000) and it has been suggested that they moderate the relationship between moral disengagement and unethical conduct (Fang et al., 2020; Wang et al., 2017). Hence, empathic concern and moral identity demonstrate their potential influence in situations where moral conflicts arise.

On the one hand, empathy is defined as the capacity to be concerned about the emotional condition of others, and the magnitude of such concern (Baron-Cohen, 2012). Some individuals are more prone to be perceptive of others' feelings and are less inclined to harm others (Detert et al., 2008). Individuals feel a sympathetic affect, which in turn is a primary motivation of prosocial conduct (Hoffman, 2000). This study incorporates empathic concern as a subdimension of empathy since this dimension is the most relevant when predicting moral behaviours (Cameron & Payne, 2012). Empathic concerns represent feelings of warmth and sympathy, and they are strongly related to other-oriented measures of sensitivity and concerns for other people (Davis, 1983). High levels of empathic concern might translate into less support for companies

involved in unethical conduct, and more specifically if the immoral actions harm individuals. This reasoning is backed by recent empirical evidence showing that empathic concern is strongly related to prosocial behaviour (Pavey et al., 2012). Thus, empathic concern acts as a protective factor that reduces individuals' likelihood of engaging in moral reasoning strategies to support transgressors (Fang et al., 2020).

Accordingly, this study proposes that empathic concern might moderate the direct relationship between moral decoupling and purchase intention. As a buffer to potentially separate moral and performance judgements, empathic concern might weaken the positive relation between moral decoupling and purchase intentions. Individuals with high levels of empathic concern have more benevolent behaviour and are more motivated to behave according to their moral standards and feel self-censure for infringing on these standards. The more self-condemnation they feel for purchasing from companies involved in unethical conduct, the less effective the impact of moral decoupling on supportive behaviours will be (Bussey et al., 2015). This reasoning is consistent with recent research showing the moderating role of empathic concern in moral disengagement, such that the positive effect of moral disengagement on unethical conduct could be decreased at higher levels of empathic concern (Fang et al., 2020).

On the other hand, moral identity is defined as one's self-concept 'organised around a set of moral traits', such as fairness, generosity and honesty (Aquino & Reed, 2002). It acts as a 'kind of self-regulatory mechanism that motivates moral action' (Aquino & Reed, 2002, p. 1423), guiding an individual's perception of right and wrong (Dootson et al., 2016). An individual's moral identity is kept in memory as an intricate knowledge structure composed of moral values, goals, traits and behavioural scripts. Previous studies have shown that moral identity is positively associated with prosocial behaviour and concern for outgroup members (Aquino & Reed, 2002; Winterich et al., 2009). Accordingly, strong moral identifiers are also expected to be less likely to engage in antisocial conduct and might therefore be less inclined to support companies that have acted immorally.

Following this idea, this study proposes that moral identity might moderate the direct relationship between moral decoupling and purchase intention, as moral identity enhances accessibility to knowledge structures that guide self-regulation processes and facilitates individuals' moral behaviours (Hertz & Krettenauer, 2016). Drawing on this reasoning, it can render mechanisms of moral decoupling less effective. The

positive relation between moral decoupling and purchase intentions would therefore be weaker for individuals with higher levels of moral identity. In other words, individuals with high moral identity are more likely to feel a more substantial moral obligation to demonstrate concern for the needs and matters of outgroups (i.e. the riders) than those with low moral identity (Winterich et al., 2009). Further, compared to low moral identifiers, individuals with high moral identities are more likely to extend their 'circle of moral regard' (Aquino et al., 2007) and hence are more willing to take into consideration the suffering that unethical labour practices cause others. Recent studies have supported the moderating role of moral identity in the moral disengagement context, suggesting that the positive link between moral disengagement and unethical conduct could be weaker at higher levels of moral identity (Wang et al., 2017).

As a consequence, this study proposes that the relationship between moral decoupling and purchase intention is moderated by empathic concern and moral identity. Specifically, it is proposed that it will become weaker for individuals who present high moral and empathic concern traits. It is thus proposed that:

H3: Empathic concern moderates the effect of moral decoupling on purchase intentions such that the effects will be weaker (stronger) at higher (lower) levels of empathic concern.

H4: Moral identity moderates the effect of moral decoupling on purchase intentions such that the effects will be weaker (stronger) at higher (lower) levels of moral identity.

Design and procedure: A between-subjects experiment with two conditions (decoupling vs. coupling) was conducted. Before the participants were placed in the same fictional situation as in study 1 (gathering at a friend's house), the personal traits of empathic concern and moral identity were measured. Participants were then exposed to a newspaper article produced by the authors in which the fictional ODDS was the target of recent societal controversy with high estimated impact on society and the workers (appendix A). The respondents were then randomly exposed to the decoupling vs. coupling condition, which was a replication of the manipulation from Orth et al. (2019) (appendix A). We recruited 330 consumers of ODDS in an online experiment using Amazon MTurk. Thirty-one respondents were dropped from the analyses due to having failed attention check questions. The demographics indicated

that the respondents had a mean age of 38 years (SD=11.02) and 60% of them were male.

Measures, coding and reliability: Before the respondents were assigned to their respective conditions, they submitted scores on empathic concern and moral identity. Empathic concern was measured with a six-item scale (e.g. 'When I see someone being taken advantage of, I feel kind of protective towards them') adapted from Albiero et al. (2006). For moral identity, the scale developed by Aquino and Reed (2002) was used. Moral identity consists of two dimensions. The private dimension, internalisation, emphasises the degree to which moral traits are central to one's self-concept, whereas the public dimension, symbolisation, represents the degree to which moral traits are reflected in an individual's public actions (Skubinn & Herzog, 2016). The internalisation dimension has been found to be the more robust predictor (compared to symbolisation) of moral-related attitudes and conduct and was thus applied in this study (Aquino & Reed, 2002; Detert et al., 2008). Participants were first presented with a set of nine adjectives (e.g. caring, compassionate, fair) and then asked to use a five-item scale to rate the degree to which these characteristics represent an essential part of themselves (e.g. 'It would make me feel good to be a person who has these characteristics') (appendix B).

After being exposed to their respective condition, participants then submitted scores on purchase intentions (Putrevu & Lord, 1994), moral decoupling (Bhattacharjee et al., 2013), moral rationalisation (Bandura et al., 1996; Bhattacharjee et al., 2013) and moral evaluation (Orth et al., 2019). Additionally, one item measured the frequency of ODDS usage. The same scales were used as in study 1. All scales achieved high reliability (appendix B). The two-item constructs purchase intentions (ρ=.94) and moral evaluation (ρ=.89) achieved acceptable values using the Spearman-Brown coefficient. A one-sample *t*-test on the moral evaluation scale suggests that the given scenario is perceived as morally wrong, scoring significantly above the scale midpoint of 4 (M=5.44, SD=1.30; $t(298)=72.05$; $p<.001$, r=.54). The findings further indicated a successful manipulation of moral decoupling ($M_{Dec.Condition}$=5.02, SD=1.60; $M_{Coup.Condition}$=4.01, SD=1.80; $t(297)=7.02$; $p<.01$, r=.64). Moreover, moral evaluation was independent of the manipulation (decoupling vs. coupling) ($M_{Dec.Condition}$=5.47, SD=1.31; $M_{Coup.Condition}$=5.45, SD=1.26; $t(297)=1.16$; $p>.1$, r=.06) and no difference in

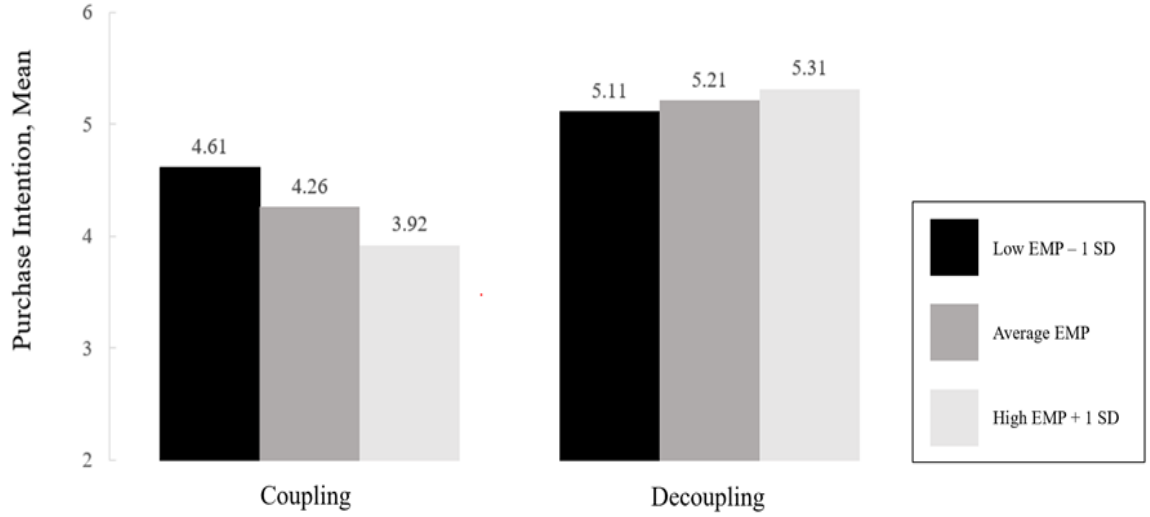
ODDS usage between the two conditions was found ($M_{Dec.Condition}$=4.63, SD=1.87; $M_{Coup.Condition}$=4.10, SD=2.02; *t*(297)=2.33; p>.05, r=.13).

Results and discussion: The results were obtained using an ANCOVA including decoupling as a fixed factor, moral identity and empathic concern as covariates, as well as the corresponding interactions. The analysis indicated that moral decoupling, rather than coupling, significantly influenced purchase intentions ($M_{Dec.Condition}$=5.28, SD=1.32; $M_{Coup.Condition}$=4.20, SD=1.88; F(1,292)=17.34; p<.001, r=.24). Furthermore, moral identity (F(1,292)=2.35; p>.1, r=.09) and empathic concern (F(1,292)=.02; p>.1, r=.00) were found to have non-significant effects on purchase intentions. The interaction effects showed that moral identity (F(1,292)=40.94; p<.001, r=.35) and empathic concern (F(1,292)=6.82; p<.05, r=.15) significantly interact with the decoupling manipulation. Measures were also taken to control for rationalisation (F(1,292)=160.36; p<.001, r=.60).

A further analysis was conducted to better understand the nature of the interaction and main effects (Process Model 1; 5,000 bootstrapped samples; Hayes, 2017). First, the interaction effect of moral decoupling and empathic concern was analysed. This analysis revealed that the main effect of the scenario (decoupling vs. coupling) exerted insignificant effects on purchase intention (β=1.53, SE=.89, p>.05). Empathic concern had a non-significant effect on purchase intention (β=.10, SE=.12, p>.1), whereas the interaction effect showed a significant negative effect on purchase intention (β=-.45, SE=.16, p<.01). Measures were taken to control for moral identity (β=.30, SE=.12, p<.05) and rationalisation (β=.54, SE=.04, p<.001). The moderation probe showed a significant change in the model fit (R2 Change=.02, F(1,293)=7.91; p<.01). To identify ranges of empathic concern scores where the effect on purchase intention was significant and where it was not, a floodlight analysis was conducted (Spiller et al., 2013). Conducting the floodlight analysis over a range of the moderator variable from 1=very low empathic concern to 7=very high empathic concern yields a Johnson-Neyman point for p<.05 (*t*=-2.52) at a value of 4.43. This value indicates that when empathic concern scores were 4.43 or higher, the coefficient for scenario was significantly negative. In contrast, when empathic concern was below the critical value, the coefficient became non-significant. In the sample, 87% of the respondents scored above the significance point.

Figure 2.2 shows that empathic concern amplified the effect of the manipulation. In the decoupling condition, higher levels of empathic concern led to slightly higher purchase intention. In contrast, in the coupling condition, higher levels of empathic concern reinforced the negative relationship between coupling and purchase intention more substantially.

Figure 2.2. Decoupling and coupling in interaction with empathic concern.

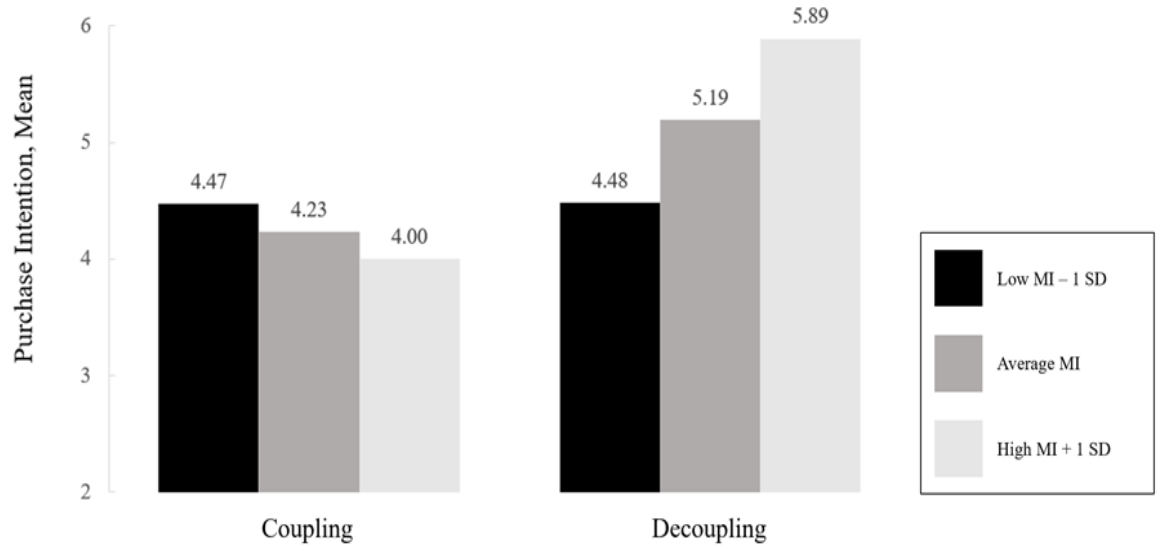


Note: SD=Standard Deviation.

Second, the interaction effect of moral decoupling and moral identity was analysed. The scenario (decoupling vs. coupling) revealed significant positive effects on purchase intention (β=4.65, SE=.87, p<.001). Moral identity also showed significant effects on purchase intention (β=.72, SE=.13, p<.001), whereas the interaction effect displayed significant negative effects on purchase intention (β=-.96, SE=.14, p<.001). Further steps were taken to control for empathic concern (β=-.06, SE=.10, p>.1) and rationalisation (β=.54, SE=.04, p<.001). The moderation probe again showed a significant improvement in model fit (R2 Change=.08, F(1,293)=42.28; p<.001). In addition, a floodlight analysis was conducted. The analysis over a range of the moderator variable from 1=very low moral identity to 7=very high moral identity yields two Johnson-Neyman significance points for p<.05 (*t*=1.96) at a value of 4.31 and for p<.05 (*t*=-1.96) at a value of 5.22. The first value indicates that when moral identity scores were 4.31 or lower, the coefficient for scenario was significantly positive. Also, the second value indicates that when moral identity scores were 5.22 or higher, the coefficient for scenario was significantly negative. In contrast, when moral identity was between the two critical values, the coefficient became non-significant. Results showed that 8% of the responses were below the first significance point, 19% between the significance points and 73% of the respondents scored above the second significance point.

Figure 2.3 shows that moral identity also intensifies the effect of the manipulation. In the decoupling condition, higher levels of moral identity led to higher purchase intention. In the coupling condition, higher levels of moral identity reinforced the negative relationship between coupling and purchase intention.

Figure 2.3. Decoupling and coupling in interaction with moral identity.



Note: SD=Standard Deviation.

The findings suggest that when participants are instructed to couple, empathic concern further decreases purchase intentions. When empathic persons associate morality and performance judgements, their intention to support the transgressor will decrease. As they are empathic individuals, they do not support companies involved in unethical conduct and therefore do not separate morality and performance judgements, which in turn decreases their purchase intentions. When participants were in the decoupling condition, empathic concern seems to have an opposing effect. Hence, when people were instructed to decouple, empathic concern did not weaken consumers' purchase intentions. Estimations further indicate that for participants with a higher moral identity, decoupling enhanced purchase intentions, while it reduced them in the coupling condition. This indicates that moral identity seems to amplify the effect of decoupling in such a way that high moral identity lowers purchase intention when coupling but enhances it in the decoupling condition. This might be due to the fact that a high moral identity paired with a decoupling instruction represents less of a threat to the moral self, thus enhancing purchase intention, while coupling reinforces the focus on ethical behaviour, thus lowering purchase intentions.

In conclusion, study 2 offers further support for the influence of decoupling on purchase intention (H2). The study illustrates the moderating role of empathic concern and moral identity. Although empathic concern and moral identity did not weaken the positive effect of decoupling on purchase intentions (rejecting H3 and H4), both of them significantly reinforced the negative relationship between coupling and purchase intentions. Accordingly, the findings are significant and under the coupling condition both traits work as expected.

2.4.3 Study 3: The interplay between moral decoupling, guilt and purchase intentions

The third study aims to explain how moral decoupling affects purchase intentions by reducing negative emotions. Specifically, this study proposes that guilt mediates the effect of moral decoupling on consumers' purchase intentions.

Moral psychology research suggests that people experience negative emotions when exposed to others' immoral actions (Haidt, 2001). Guilt is a critical emotion in self-regulation processes (Eisenberg, 2000) and is defined as the dispirited and distressed feeling related to recognising that one has violated a relevant moral standard (Kugler & Jones, 1992). Guilt elicits a sense of responsibility for one's actions and is activated

as a form of self-sanction against unethical conduct. It is conceptualised as either a trait or a state (i.e. an individual's predisposition to have a general tendency to feel guilty or as an emotion related to a particular event) (Tangney & Dearing, 2002). Previous studies have identified three types of guilt appeals (Lwin & Phau, 2014). Existential guilt is evoked by the perception that one is existentially better off than others. In contrast, anticipatory guilt is caused before a possible unethical conduct and is evoked when an individual contemplates a violation of values or norms, whereas reactive guilt is experienced after violating an ethical principle (Rawlings, 1970). This study conceptualises guilt as a state rather than a trait. Considering the context of the study, in which consumers deliberately support a company that has acted immorally, reactive guilt is likely to occur.

Consumers' emotions play a significant role in purchasing behaviour, showing that guilt is negatively related to purchase intentions (Ki et al., 2017). While prior research focused on general negative emotions in the moral disengagement context (Seriki et al., 2020), recent studies have introduced the concept in the decoupling setting (Cowan & Yazdanparast, 2019). In the specific case of moral judgements, individuals who cannot exercise decoupling experience more negative emotions, which extend to more negative evaluations on the perpetrator (Cowan & Yazdanparast, 2019). Consequently, by decoupling, consumers might avoid feelings of guilt about purchasing from companies involved in immoral conduct (Chen et al., 2018), because it allows them to simultaneously condemn immorality and to reach the desired outcome of buying from the wrongdoer. The low cognitive elaboration and greater processing fluency inherent in decoupling mechanisms may also account for guilt reduction (Orth et al., 2019). Accordingly, this study argues that decoupling processes suppress feelings of guilt and make consumers feel 'less bad', which in turn extends to increased purchase intentions (Hartmann & Vorderer, 2010). Thus:

H5: Perceived guilt mediates the effect of moral decoupling on the intention to purchase from companies involved in unethical conduct. Specifically, moral decoupling reduces perceived guilt, which will in turn increase purchase intentions.

Design and procedure: The study manipulated moral decoupling representing two conditions (decoupling vs. coupling). In addition, it also manipulated a better and a worse offering in order to determine the robustness of the decoupling effects under different levels of attractiveness of the offer. The better offering contained 30% more

restaurants and food variety, a 15% shorter delivery time, a 20% cheaper price, and a better online reputation than its competitors. We recruited 200 existing ODDS consumers from students of a private university in Spain to participate in an online experiment. Participants were placed in the same fictional scenario as in study 1 (gathering at a friend's house). Participants were exposed to a media stimulus in which the fictional ODDS was the target of recent societal controversy due to the imposition of immoral working conditions. Afterwards, they were exposed to the decoupling manipulation as applied in study 2. The demographics showed that 59% of the respondents were male and had a mean age of 21 years (SD=5.42).

Measures, coding and reliability: After the respondents were assigned to their respective conditions, they submitted scores on moral decoupling, purchase intentions, moral rationalisation and moral evaluation. Additionally, respondents' perceived guilt was measured with a three-item scale (e.g. 'Buying from ODDS makes me feel guilty') adapted from Harvey et al. (2017). Finally, one item measured the frequency of ODDS usage. All scales achieved high reliability (Cronbach's alpha was >0.7; see appendix B). The two-item constructs purchase intention (ρ=.92) and moral evaluation (ρ=.87) obtained acceptable values using the Spearman-Brown coefficient. A one-sample *t*-test on the moral evaluation scale indicated that participants perceived the given scenario as immoral, scoring significantly above the scale midpoint of 4 (M=5.37, SD=1.46; $t(199)=13.23$; p<.001, r=.59). The findings further evidenced a successful manipulation of moral decoupling ($M_{Dec.Condition}$=3.67, SD=1.79; $M_{Coup.Condition}$=3.13, SD=1.35; $t(198)=2.40$; p<.001, r=.62). Besides, moral evaluation was found to be independent of the manipulated moral decoupling condition ($M_{Dec.Condition}$=5.30, SD=1.44; $M_{Coup.Condition}$=5.44, SD=1.48; $t(198)=.68$; p>.1, r=.06). Furthermore, no differences in usage frequency were found among the conditions ($M_{Dec.Condition}$=1.77, SD=.79; $M_{Coup.Condition}$=1.83, SD=.83; $t(198)=.25$; p>.1, r=.04).

Results and discussion: A one-way ANOVA was performed to test the effects of decoupling on purchase intention. The results revealed a significant main effect of decoupling on purchase intention and showed that decoupling rather than coupling increases purchase intentions ($M_{Dec.Condition}$=4.33, SD=1.83; $M_{Coup.Condition}$=3.11, SD=1.52; $F(1,198)=26.61$; p<.001, r=.34). In order to test hypothesis 5, a mediation analysis (Process Model 4; 5,000 bootstrapped samples; Hayes, 2017) was carried

out to further investigate the mediating role of guilt (M) in the relationship between decoupling (X) and purchase intention (Y). Findings indicated that the path from decoupling to guilt was negative and significant (β=-.68, SE=.22, p<.01). When adding the mediator, the direct effect of guilt on purchase intention was negative and significant (β=-.42, SE=.07, p<.001). The main effect of decoupling on purchase intention remained significant (β=.94, SE=.22, p<.001). The indirect effect of decoupling on purchase intention via guilt was also significant (β=.29, SE=.11, CI95[.10,.52]), indicating partial mediation. The results of the analysis are shown in Table 2.1.

In addition, we tested the effects of the attractiveness of the offer in combination with moral decoupling, but no significant changes were observed in the results[4]. This indicates that the effect of moral decoupling on purchase intention does not depend on the attractiveness of the offer.

[4] A two-way ANOVA was performed to test the effects of decoupling and attractiveness of the offer on purchase intention. The results revealed a significant main effect of decoupling on purchase intention and showed that decoupling rather than coupling increases purchase intentions ($M_{Dec.Condition}$=4.33, SD=1.83; $M_{Coup.Condition}$=3.11, SD=1.52; F(1,196)=26.06; p<.001, r=.34). Furthermore, the main effect of the attractiveness of the offer on purchase intention is significant. Specifically, the better offering condition exerts stronger effects on purchase intention ($M_{BetterOffering}$=4.30, SD=1.75; $M_{WorseOffering}$=3.09, SD=1.61; F(1,196)=25.24; p<.001, r=.34). However, no significant interaction effect of decoupling and attractiveness of offer on purchase intention was found (F(1,196)=.71; p>.1, r=.06).

Table 2.1. Results of the mediation analysis.

Mediation (Model 4)								
	M (Guilt)				Y (Purchase Intention)			
Antecedent	Coefficient	SE	*t*	p	Coefficient	SE	*t*	p
X (Moral Decoupling)	-.68	.22	-3.12	.002	.94	.22	4.17	.000
M (Guilt)					-.42	.07	-5.96	.000
Constant	3.51	.15	22.72	.000	4.60	.30	15.56	.000
Indirect effect of X (Moral Decoupling) on Y (Purchase Intention)								
					Effect	BootSE	BootLLCI	BootULCI
M (Guilt)					.29	.11	.10	.52
Model Summary	R^2	.05			R^2	.25		

Study 3 suggests further support for the impact of moral decoupling on purchase intention (H2). Moreover, the study illustrates the partial mediating role of guilt in this relationship (H5). The effects of moral decoupling on purchase intentions as well as the mediation of guilt were robust to the manipulation of the attractiveness of the offer.

2.4.4 Study 4: The interplay between moral decoupling, guilt, personal traits and purchase intentions

The fourth study aims to unite the majority of the previously shown effects by testing a comprehensive model with an online survey. Study 4 proposes that the incorporated personality traits reduce the positive relationship between moral decoupling and purchase intentions, and that guilt mediates the effect of moral decoupling on consumers' purchase intentions.

Design and procedure: A total of 403 ODDS consumers were recruited from an online panel of an independent market research provider (Netquest). The online survey was divided into different blocks. After the filter variables and demographics, the questionnaire went on to assess personal traits, empathic concern and moral identity, which had been introduced in random order. The items measuring the different latent variables were also presented in random order. Next, respondents were exposed to four real headlines and pictures from different online publications involving the immorality of real existing ODDS labour practices and their implications for society. Finally, participants had to submit scores on purchase intentions, moral decoupling, moral rationalisation, perceived guilt and moral evaluation. Additionally, one item measured the frequency of ODDS usage. The scales were the same as in studies 2 and 3 and were also presented in random order to avoid potential bias. The demographics indicated that 53% of the respondents were male and had a mean age of 38 years (SD=10.25). A one-sample *t*-test on the moral evaluation scale suggested that participants perceived the given scenario as immoral, scoring significantly above the scale midpoint of 4 (M=6.43, SD=1.03; $t(402)=124.19$; $p<.001$, $r=.54$).

Partial least square (PLS) structural equation analysis (using software package SmartPLS 3.0) was used to test the proposed model. PLS is a distribution-independent method that is particularly useful when the theoretical basis is not sufficiently advanced (Reinartz et al., 2009). Furthermore, the study's measures behave like composites.

PLS follows a composite-based approach to structural equation modelling, where weighted composites of indicators are used to represent latent variables in the model – regardless of whether the measurement model is specified as reflective or formative (Sarstedt et al., 2016). For the assessment of the hypotheses, PLS with bootstrapping as a resampling technique (subsamples=10,000) was used to estimate the structural model and the significance of the paths.

Assessment of the measurement model: The measurement scales showed adequate composite reliability (CR) indexes exceeding the critical threshold of 0.7 for all variables. Moreover, the Spearman-Brown coefficient of purchase intention (ρ=.90) and moral evaluation (ρ=.83) revealed acceptable values. Convergent validity criteria were also met, since the average variance extracted (AVE) values were above the recommended threshold of 0.5 for all variables (Fornell & Larcker, 1981) and discriminant validity was confirmed by means of the HTMT ratios method (Henseler et al., 2015) (appendix B). To assess common method variance bias related to the use of single, one-time surveys, procedural and statistical methods were applied (Podsakoff et al., 2003). The survey assured respondents confidentiality and anonymity of the data processing to reduce the probability of receiving dishonest responses. Furthermore, participants were told that there were no correct or incorrect answers to avoid social desirability bias. A full collinearity test based on variance inflation factors (VIF) was carried out. The test showed that VIF values were below the threshold of 3.3, which indicates no evidence for the existence of common method bias and collinearity issues (Kock, 2015). Using the HTMT ratios method to confirm discriminant validity also ensured there were no problems concerning the factorial structure of the data. A Harman single-factor test was implemented with EQS 6.1 to explore potential bias. Following this approach, the goodness of fit (GoF) of a measurement model with all the indicators loading on the same single latent construct was substantially inferior to the GoF of the alternative model, where every manifest variable loaded on its corresponding latent variable. This suggests that common method bias was not a problem in this study.

Results and discussion: Path coefficients and R^2 were used to evaluate the structural model, which was found to explain 10.9% of guilt and 30.8% of purchase intention variance. The Stone-Geisser test was employed to confirm the predictive relevance of

the model (Geisser, 1974; Stone, 1974). The Q^2 value of this test for the two dependent variables was positive (Q^2-guilt=.08; Q^2-purchase intention=.26). Table 2.2 shows the results of the structural model. These results revealed that moral decoupling exerted a significant direct effect on purchase intention (β=.24; *t*=3.88, p<.001, r=.21, PCI (.14;.34)), thus supporting hypothesis 2. Consistent with study 3, the results also suggest that the influence of decoupling on guilt was negative and significant (β=-.33; *t*=4.54, p<.001, r=.26, PCI (-.45;-.21)) and an individual's feelings of guilt are negatively related to purchase intention (β=-.35; *t*=6.82, p<.001, r=.37, PCI (-.44;-.28)). Thus, in addition to the direct effect, decoupling also affected purchase intention via guilt (β=.11; *t*=3.67, p<.001, r=.22, PCI (.07;.18)), which supports hypothesis 5. Moral rationalisation was included as a control variable, revealing significant effects on purchase intention (β=.17; *t*=3.30, p<.01, r=.15, PCI (.09;.26)) and non-significant effects on guilt (β=.03; *t*=.40, p>.1, r=.04, PCI (-.11;.11)).

Table 2.2. Results of the structural model.

Direct Relationship	β	*t*-value	p-value
Moral Decoupling → Purchase Intention	.24	3.88	.000
Indirect Relationship	**β**	***t*-value**	**p-value**
Moral Decoupling → Guilt	-.33	4.54	.000
Guilt → Purchase Intention	-.35	6.82	.000
Moral Decoupling → Guilt → Purchase Intention	.11	3.67	.000
Control Relationships	**β**	***t*-value**	**p-value**
Moral Rationalisation → Guilt	.03	.40	.484
Moral Rationalisation → Purchase Intention	.17	3.30	.001
R^2 adj.-Purchase Intention=30.0%; R^2 adj.-Guilt=10.5%; Q^2-Purchase Intention=.26; Q^2-Guilt=.08.			

To test the moderating effects of empathic concern and moral identity, an interaction approach by creating production terms was employed (Henseler & Chin, 2010). Table 2.3 reports the results for the moderating effects. The findings illustrated that the direct effect of moral decoupling on purchase intention was moderated by empathic concern (β=-.12; *t*=2.32, p<.05) which is in line with hypothesis 3. Estimations further revealed that the direct effect of decoupling on purchase intention was not moderated by moral identity (β=-.01; *t*=.18, p>.1), thus rejecting hypothesis 4. Moral identity had a negative, though non-significant, additive effect on the relationship between decoupling and purchase intentions. Order frequency, gender and age were also tested as control variables but did not exhibit any significant effects.

Table 2.3. Results of the moderating effects.

Moderating effect	Two-stages Approach		
	β	*t*-value	p-value
Empathic Concern × Moral Decoupling → Purchase Intention	-.12	2.32	.010
Moral Identity × Moral Decoupling → Purchase Intention	-.01	.18	.428

2.5 General discussion and implications

The interest of practitioners and academics in understanding consumers' reactions to irresponsible organisational behaviour is growing. However, the conceptual development of moral decoupling as a moral reasoning mechanism to explain consumers' support for companies involved in unethical conduct is still in its infancy. To fill this gap in the literature, this research investigates how moral decoupling occurs when consumers face moral dilemmas involving immoral behaviour by companies, and presents three main findings. First, this study finds that morally intense misconduct reduces the likelihood of consumers engaging in moral decoupling to justify their support of companies involved in immoral conduct. Second, it shows that the influence of decoupling mechanisms in purchase intentions can be moderated by personality traits. Third, the study finds that guilt partially mediates the influence of decoupling on purchase intentions, in such a way that dissociating moral and performance judgements reduces feelings of guilt, which in turn facilitates favourable behavioural intentions. The findings of the four studies provide several theoretical and practical implications that are discussed in the following sections.

2.5.1 Theoretical implications

The study adds to the literature concerned with understanding consumers' support for companies involved in unethical conduct by making the following three theoretical contributions. First, despite the positive effect of decoupling on purchase intentions, consumers may face ethical dilemmas when buying from companies involved in unethical conduct (e.g. aggressive labour practices). Particularly, consumers will be less likely to engage in moral decoupling if they perceive the unethical conduct to be of higher moral intensity in terms of magnitude of the transgression, probability of the effect and temporal immediacy. The higher the perceptions of the moral intensity of the unethical conduct are, the more complicated it is for consumers to dissociate performance from morality judgements (Haberstroh et al., 2017; Matute et al., 2020). Hence, while decoupling helps consumers to support companies involved in unethical conduct, high severity of the immoral conduct reduces the probability of occurrence. This suggests that decoupling mechanisms are weakened in their effectiveness in extreme situations where consumers may feel that maintaining their support for the

company may largely question their moral standards. These results extend the current understanding of types of transgression (Lee & Kwak, 2016; Lee et al., 2015) and the subsequent impact on individuals' ethical decision-making in the specific context of the controversial labour practices of ODDS (Lehnert et al., 2015).

Second, the willingness to support a company involved in unethical conduct also depends on consumers' personality. The results of this study show that people differ in the moral foundations they value and how they view ethical breaches (Graham et al., 2009), which significantly affects the effectiveness of decoupling mechanisms in their ability to justify purchases from companies involved in unethical conduct. Specifically, empathic concern attenuates the positive effect of moral decoupling on intention to purchase (study 4). Empathic individuals tend to have more difficulties, for instance, to discount or disregard harm to others, and hence are less likely to engage in moral reasoning strategies (Chowdhury & Fernando, 2014). These findings are in line with those from study 2, as individuals' concern and sensitivity about others significantly reinforced coupling mechanisms, leading to lower purchase intentions. The significant moderating role of empathic concern is especially interesting in the context of peer-to-peer services, since in this type of transaction consumers tend to adopt an 'empathy lens' that increases their perceptions of helping somebody (Costello & Reczek, 2020).

With regard to moral identity, the results of study 4 were partly in line with the findings above, as moral identity negatively (but not significantly) influences the positive relationship between moral decoupling and purchase intentions (Wang et al., 2017). As expected, these findings corroborate the outcome of the experimental setting (study 2), showing that a higher moral identity enhances the negative effect of coupling on purchase intentions (Aquino & Reed, 2002). Since high moral identifiers need to maintain self-consistency between their behaviour and moral identity (Winterich et al., 2013), they associate morality and performance judgements, thus not supporting companies involved in unethical conduct. Surprisingly, in the experimental setting of study 2, where decoupling was manipulated, moral identity increased purchase intentions in the decoupling condition. This means that overall higher moral identity amplifies differences in the manipulation, while a decrease in purchase intention was expected. These unexpected results concerning moral identity might be explained by the different types of studies conducted. When moral decoupling was self-assessed and participants were free to position themselves in a decoupling, coupling or neutral

position (study 4), there was a non-significant negative interaction effect of moral identity and decoupling on purchase intentions. Interestingly, when decoupling was manipulated, a different result was obtained. The positive effect of moral identity on the relationship between decoupling and purchase intention suggests that in certain situations, such as when high moral identifiers are instructed to decouple, their moral traits are overruled, resulting in stronger decoupling effects. Consequently, when high moral identifiers are told to decouple, they may find decoupling a comfortable mechanism to support wrongdoers while still preserving moral standards. This reasoning is in line with Aquino et al. (2009), inferring that situational factors, such as recalling or reading instructions, can decrease the current accessibility of moral identity, which then weakens the motivation to act morally and chastise an unethical conduct. Another potential explanation could be that when people with high moral traits are told to decouple, they might follow the instructions more precisely. As they esteem values such as honesty and fairness (Aquino & Reed, 2002), they might obey the commands addressed to them in order to comply with their moral self-system. Since decoupling allows individuals to 'tip their hats' while 'wagging their fingers' (Bhattacharjee et al., 2013), consumers with high moral traits may feel that they can still preserve moral standards and judge the ODDS as immoral by necessarily dissociating performance and morality judgements. These results complement existing research showing that personal traits affect consumers' engagement in moral reasoning strategies (Fang et al., 2020; Wang et al., 2017) and offer a possible explanation for consumers' profiles and situations where moral decoupling might be more or less effective.

Finally, this research also sheds light on the role of emotions in ethical decision-making (Stöttinger & Penz, 2015). Whereas previous literature only focused on general negative emotions (Cowan & Yazdanparast, 2019), this study has examined the specific role of guilt in mediating the relationship between decoupling and purchase intentions. This study confirms that the separation of performance and morality judgements makes consumers feel less guilty, thereby facilitating the support for companies involved in unethical conduct (Cowan & Yazdanparast, 2019). Guilt is a self-conscious and social emotion that emerges in response to personal failure when a moral dilemma is present in a behaviour (Svensson et al., 2017). As opposed to moral rationalisation, decoupling strategies reduce tensions and feelings of guilt for the consumer because it allows them to still recognise and chastise the immorality of

the company. These mechanisms are highly relevant in consumption settings involving personal interactions. Buyers might experience conflicting feelings by purchasing from certain companies as this might entail supporting a grey labour system that is detrimental to the welfare of its workers. Moreover, the low cognitive elaboration and greater processing fluency inherent in decoupling might also explain the mitigation of guilt. While unethical corporate conduct may elicit negative consumer emotions associated with adverse consumer behaviour (i.e. boycotting) (Lindenmeier et al., 2012), moral decoupling reduces cognitive complexity by dissociating morality and performance and allows consumers to feel less guilty about supporting the transgressor. In sum, this study contributes to existing knowledge by primarily linking moral decoupling to guilt reduction mechanisms. The cognitive mechanisms of decoupling act like a temporary barrier reducing situational guilt and therefore alleviating the tension felt by individuals in moral dilemmas.

2.5.2 Managerial implications

The findings also offer implications for practice. The study states practical inferences for policymakers and non-profit agencies to prevent consumers from supporting companies involved in unethical conduct and for-profit organisations that may help managers protect their businesses in morally ambiguous situations.

First, given that decoupling easily helps consumers maintain their support for companies involved in unethical conduct, non-profit agencies and policymakers should design communication strategies that emphasise the high moral repercussions of the unethical action in order to reduce consumers' engagement in decoupling. Based on the results of study 1, communication activities could concentrate on designing messages focused on the significance of the moral intensity, including the probability of effect (e.g. a high number of irregular recruitment tactics), temporal immediacy (e.g. it is happening now, for a long period) and the magnitude of the consequences (e.g. high social and personal impact). These interventions should centre on messages that remind consumers to couple moral with performance aspects when making purchase decisions. Such messages that promote the link between morality and performance should also make it more difficult for consumers to decouple. Given the moderating role of personality traits shown in studies 2 and 4, non-profit agencies and policymakers should focus on segmenting the market and target reactions to different

groups of consumers. Notably, in the case of ODDS, communication activities could be oriented towards empathic persons, emphasising the harm these companies do specifically to their couriers. The results showed that empathic persons in particular are less likely to disregard harm to others (i.e. social and personal impact on the couriers) and thus engage in decoupling mechanisms to support companies involved in unethical conduct. In this line, similar interventions could be targeted at high moral identifiers. As those consumers are likely to maintain self-consistency between their behaviour and moral identity, communication activities that explicitly direct them to associate performance and morality judgments when considering buying from companies involved in unethical conduct may reduce their purchase intentions.

Second, this study also offers implications for for-profit organisations. Concerning moral intensity, for-profit organisations involved in unethical conduct should try to reduce consumers' perceptions of the severity of their conduct, in order to activate the moral decoupling route. Furthermore, the relevant predictor role of decoupling mechanisms suggests that managers should focus on brand communications highlighting the benefits of the product or service (i.e. performance) and stress the fact that moral and performance features are not inevitably intertwined. Such communication that introduces decoupling activities might be particularly well suited for consumers with high moral identity, as their intention to purchase increases when engaging in moral decoupling activities. Brand communications should thus concentrate on creating messages aimed at inducing highly moral consumers to decouple, as they may feel comfortable using decoupling mechanisms, rather than other reasoning strategies, to justify their support for companies involved in unethical conduct while still preserving their moral standards.

2.5.3 Limitations and directions for future research

Some limitations of this study suggest topics for future research. First, it only investigates one type of unethical conduct. Therefore, the results might not apply to other types of organisational misbehaviours, as consumers respond differently depending on the type of transgression. Future research should therefore explore other types of unethical conduct to determine whether different types of transgression elicit different types of moral responses. For example, in the ODDS context, person-related transgressions (e.g. labour exploitation) could trigger different moral reactions

in comparison to collective-related transgressions (e.g. tax evasion). Depending on the type of transgression, moral traits such as empathic concern could exert a more notable influence on consumers' willingness to decouple. This is especially interesting in the sharing economy, where consumers are more aware of the social connection inherent in peer-to-peer transactions and tend to adopt an empathy lens (Costello & Reczek, 2020).

Second, methodologically, the studies exploring personality traits with decoupling engagement manipulated decoupling in one case (study 2) and measured decoupling in the other (study 4). In the first case, participants were instructed to decouple or couple, employing a binary decoupling measure. Therefore, if individuals are prompted to decouple, which they might dislike, they might exhibit different choices and intentions than individuals with different moral traits who might not feel so uncomfortable about decoupling in order to reach a self-serving moral outcome. As this might account for the outcomes, future research devoted to extricating decoupling effects should consider exploring potential differences in manipulated versus self-assessed effects of decoupling. More specifically, research might further investigate how communications that aim to make individuals decouple could make personal traits, which stem from the moral psychology literature, more or less effective. Significantly, the conflicting results concerning the role of moral identity open up research opportunities to scholars aiming to further investigate how it affects decoupling strategies across different moral dilemmas in consumption situations, above all when instructed to decouple.

Furthermore, consumers' levels of empathic concern and moral identity were considered in this study. However, these may not be the only individual differences possibly influencing decoupling mechanisms. Additional research is needed to examine the potential impact of other individual characteristics so as to gain a more comprehensive understanding of personality traits that affect decoupling and definitive behavioural intentions. We speculate that psychological distance might influence engagement in decoupling. Individuals can perceive distinct levels of social distance by taking a first-person perspective versus a third-person perspective or by distinguishing in-group versus out-group associations (e.g. Kim et al., 2008). An individual's judgement of being similar to the couriers, and hence perceiving them as in-group members, may negatively affect his or her decoupling mechanisms by construing them with a 'close' social distance. In addition, complementary methods for

uncovering latent heterogeneity could also identify diverse customer segments that possess specific personal traits that react differently to moral decoupling. Recent developments in the field of PLS, such as FIMIX-PLS or prediction-oriented segmentation, could be employed to gain further insight into the controversial role of personality traits.

Third, other negative emotions should be considered in the context of decoupling and implying consumer behaviour. Besides the shame and embarrassment that might be triggered in a transgressional context (Lee et al., 2016), or overall measures of negative emotions (Cowan & Yazdanparast, 2019), regret, distress or anger towards the company involved in unethical conduct should be explored to shed further light in this domain. In this sense, other negative moral emotions may lead to different behavioural responses connected to unfavourable brand-related behaviours (i.e. boycotting, spreading negative publicity, etc.) (John & Klein, 2003). Finally, concerning the validity of the results of the study, purchase intentions were considered equivalent to the behaviour finally performed by consumers. Referring to the intention-behaviour gap, future research should consider incorporating a usage behaviour variable as a dependent variable. In addition, to endow the findings with further generalisability, future research should be extended to different countries and cultures. Previous studies suggest that interpretations of moral violations vary across cultures. In this sense, consumers from some specific cultural contexts may be more or less tolerant to brands' unethical conduct, which may trigger different emotional and moral responses (Gibbs et al., 2007). Given these limitations, the study's findings and conclusions should be taken with caution. However, they are expected to stimulate further research in this field.

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Chapter 3

3. Investors' acceptance and use of investment-based crowdfunding platforms: An integrated perspective

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Chapter 3 constitutes the second article in this thesis. It aims to explore the factors that determine private investors' adoption of IBCP.

3.1 Abstract

Investment-based crowdfunding has revolutionised the financial landscape by providing viable investment opportunities for private investors. Nonetheless, only a limited amount of attention has been focused on the factors that actually shape investors' adoption of these platforms. This paper therefore primarily explores investors' adoption of IBCP by employing an integrated model combining different theoretical lenses. The study found that investors' behavioural intentions and use behaviour can be explained by performance expectancy, effort expectancy, facilitating conditions, habit, network externalities, trust and the task-technology-fit. Findings from this study provide platform operators with valuable insights on encouraging backers to adopt IBCP.

Keywords: Crowdfunding; technology acceptance; UTAUT2; task-technology-fit; network externalities.

3.2 Introduction

The use of IBCP is an emerging phenomenon. IBCP are platforms where ventures or project initiators issue equity, debt or contractual instruments to investors in order to raise a specified amount of funds (Rossi & Vismara, 2018). On the one hand, these platforms evolved to be an essential source of capital for project initiators to overcome financial constraints. On the other hand, these platforms emerged to be a profitable investment alternative for non-institutional investors, not least due to the prevalent low-interest environment and dearth of feasible investment options (Roth, 2020). Due to their accelerating rates of growth, these platforms received increasing attention from investors, regulators and policymakers (Yasar, 2021). To date, investment-based crowdfunding has recorded a rapid increase in worldwide initiatives to reach over US$ 280 billion (Schmidt, 2020) and is expected to grow in the coming years owing to the enormous economic benefits it offers.

However, despite private investors' growing interest in these platforms, contemporary crowdfunding literature is still in a nascent stage. Most of the studies analysing crowdfunding platforms have focused on exploring donation-based and reward-based crowdfunding (e.g. Ryu & Suh, 2021; Zhou et al., 2016). Scholars suggest that in these two types of crowdfunding, social and civic motivations prevail, and hence prior studies have neglected the economic motives underlying the backers' investment decisions that characterise IBCP (Shneor & Munim, 2019). In investment-based crowdfunding, backers are principally financially motivated, in contrast to reward-based crowdfunding, where the crowd makes consumption (reward)- or donation-related decisions (Yang et al., 2020). Given these fundamental differences in the nature of IBCP and in the backers' motivations to support a project, current scholars' theoretical accomplishments cannot be transferred to this new context. Although investment-based crowdfunding has aroused the interest of more and more researchers (e.g. Rossi & Vismara, 2018; Yang et al., 2020), the factors that actually shape investors' adoption of this investment alternative have still not been fully determined.

The ongoing process of digitalisation leads private investors to alter their decision-making by reducing personal consultation and assistance services in favour of digital technologies such as IBCP (Ribeiro-Navarrete et al., 2021). Yet, the potential economic advantages of this new technology can only be realised when sufficient

backers adopt it. The literature therefore has yet to conceptualise the factors that underlie investors' acceptance and use of this new technology (Hervé et al., 2019).

To identify the factors that shape investors' adoption of IBCP, the study cannot limit itself to focusing only on backers' perceptions of this new technology. The relevance of a technology to address a user's specific need might significantly shape adoption behaviour. Backers invest, or not, in projects and use these platforms by maximising their expected utilities (Yang et al., 2020). Consequently, the study has to analyse whether IBCP fit the backers' tasks by providing profitable investments.

To fill this gap, this study employs an integrated model composed of the UTAUT2 and TTF as baseline models. These models were considered comprehensive in understanding individuals' technology adoption, not least because of their great explanatory power and completeness as baseline models (Tamilmani et al., 2021; Zhou et al., 2010). Particularly, beyond prior studies considering this framework in the financial services context (Oliveira et al., 2014; Zhou et al., 2010), this study provides a more holistic view to clarify financial technology adoption by incorporating trust and network externalities as additional drivers of investors' adoption of this new technology. In this line, this study differs from those previously conducted by scholars in two critical ways. First, to the best of our knowledge, this is the first attempt to provide a holistic view of the factors influencing investors' adoption of IBCP. Previous studies were mainly focused on reward- or donation-based crowdfunding platforms (e.g. Liu et al., 2018; Ryu & Suh, 2021) or only considered trust- or risk-related theoretical perspectives (Liang et al., 2019). This research, however, draws primarily on the investors' perspective by exploring the underlying factors that influence the adoption of IBCP by backers, and proposes a conceptual model that integrates the UTAUT2 and TTF models. Second, the study further integrates the role of trust and network externalities to comprehensively clarify the adoption of IBCP. Investors in IBCP are exposed to a still uncertain investment environment where high information asymmetries exist and professional gatekeepers are lacking (Moysidou & Hausberg, 2020). Trust was found to play an essential role in determining the adoption of online financial services (Alalwan et al., 2018; Sharma & Sharma, 2019) rather than those associated with human encounters. Therefore, and in line with recent literature suggesting trust to be considered when drawing on information systems usage (Franque et al., 2021), it is critical to incorporate trust in this research model.

Additionally, compared to stock investments, where dividends received are somewhat independent of the number of stockholders, in investment-based crowdfunding, funding goals and subsequent monetary returns can only be achieved with other investors. In this sense, network externalities have a strong influence on technology adoption in the collaborative consumption context, as the utility of these platforms is linked to their number of users (Thies et al., 2018). Therefore, the study incorporated backers' perceptions of network externalities as a crucial construct in IBCP adoption.
The espousal of this conceptual model contributes to the current literature as no such study has been conducted combining the UTAUT2 and the TTF models with the further integration of trust and network externalities to examine technology adoption. Thus, the study represents the first approach to providing a holistic viewpoint of the essential factors that shape the backers' adoption of IBCP by outlining a novel integrated model to enhance the current state of the embryonic literature in this domain.
As a result, the findings of the study primarily identify leverage points that IBCP operators could use to foster a higher adoption of investors and enhance current usage. It further contributes to the provision and allocation of capital for project initiators by delivering insights on how to improve platform operations and investor properties.
The study is organised as follows: Section 2 presents the theoretical background and hypotheses development. Section 3 describes the methodology employed, leading to the empirical analysis in section 4. Section 5 presents the discussion and implications for theory and practice. Finally, the paper ends with future research directions.

3.3 Literature review and theoretical background

3.3.1 Investment-based crowdfunding platforms

Crowdfunding can be viewed as community-enabled financing, stemming from crowdsourcing principles while being adjusted to the fundraising context. Although it began as a means of supporting project initiators with funds for civic motives (Ryu & Suh, 2021), it later evolved towards a viable investment alternative for non-institutional investors (Shneor & Munim, 2019). Scholars have classified the different crowdfunding models into non-investment (e.g. reward- and donation-based) and investment-based crowdfunding models (e.g. equity, lending and real estate-based) (Hervé et al., 2019;

Liu et al., 2018). This study focuses on the emerging investment-based models, that is, equity, lending and real estate-based crowdfunding. These three investment models form the general term of IBCP in this study. In equity crowdfunding, backers become shareholders by purchasing a stake in the project or company. Real estate crowdfunding is similar to the equity model, as backers become shareholders by investing in real estate projects. In contrast, in lending-based crowdfunding, backers provide loans to project initiators and expect to receive the principal plus interest at a later stage (Ribeiro-Navarrete et al., 2021; Yasar, 2021).

3.3.2 An integrated approach to backers' adoption of investment-based crowdfunding platforms

Identifying the factors that influence the use of new technology has been perceived as an essential goal for researchers to make its adoption more attractive (Baabdullah et al., 2019). Because user acceptance of new technologies is complex, integrated models better predict adoption and present a more holistic view of the causal structures underlying behaviour that cannot really be achieved with only one theory (Thusi & Maduku, 2020). In the search for an appropriate model covering almost all the constructs determining investors' adoption of IBCP, the UTAUT2 and the TTF models have been found to be the theoretical foundations for proposing the conceptual model to explain technology acceptance from the backers' perspective (Tamilmani et al., 2021). The primary constructs in the UTAUT2, namely performance expectancy, effort expectancy, hedonic motivation, social influence, facilitating conditions and habits, are proposed as direct determinants of the backers' intention to adopt IBCP. Further, facilitating conditions, habits and behavioural intention were associated with backers' usage of IBCP (Venkatesh et al., 2012). The accounts on IBCP are mostly free, and the transaction fees are not substantially higher than with trading platforms (Hornuf & Schwienbacher, 2017). Therefore, in line with previous scholars (Tamilmani et al., 2018), price value was excluded from the research model as it is less applicable in the investment crowdfunding context, which usually causes no or very little additional financial costs for users.

Besides investors' perceptions about these platforms, the study also explores whether the platforms provide the characteristics that backers require to carry out investments. Therefore, the TTF adoption model was included. The model provides the theoretical

basis for assessing the technology characteristics of the platforms and how they match backers' investment tasks (Oliveira et al., 2014).

The model suggests that the match of the platforms (and the characteristics of the investors' tasks) result in a TTF that is positively linked to backers' crowdfunding usage and performance expectancy. It also indicates that the characteristics of the platforms are positively related to backers' effort expectancy.

As extending the UTAUT2 is specifically theorised to explain technology adoption from the customers' perspective (Venkatesh et al., 2012) and widely applied to explore the acceptance of online financial service technology (Alalwan et al., 2018; Oliveira et al., 2016; Patil et al., 2020), the study further introduced additional constructs for the conceptual model. Specifically, trust has been proved to be a critical factor determining investors' perception when interacting with financial services, especially as IBCP are coupled with high uncertainty due to their peer-based nature and shortage of professional gatekeepers (Moysidou & Hausberg, 2020). Additionally, network externalities present a driving factor for the success of technology in the collaborative consumption framework (Thies et al., 2018). Specifically for the crowdfunding setting, recent research has documented empirical evidence for network externalities (Xu & Zhang, 2018) and thus this research includes network externalities into the model to better reflect the consumer's decision framework. The study posits that the backers' trust relates to backers' behavioural intentions and that perceived network externalities are linked to backers' adoption of IBCP and have a further impact on backers' trust and utility perceptions towards these platforms.

3.3.3 Theoretical foundation – the Unified Theory of Acceptance and Use of Technology 2

Venkatesh et al. (2012) adapted the original UTAUT model for the consumer context, to provide a rigorous framework specifically conceived to explain technology acceptance and usage. The UTAUT2 constitutes a comprehensive and robust theory for predicting an individual's technology acceptance due to its capacity to explain high levels of variance in behavioural intention and use behaviour (Tamilmani et al., 2021; Thusi & Maduku, 2020).

Performance expectancy: Performance expectancy reflects consumers' perceptions of performance improvements using a specific technology (Venkatesh et al., 2012). Regarding IBCP, it depicts the degree to which backers perceive the technology as useful and reflects the perceptions of the utilitarian benefits of using the platforms to invest, such as high monetary returns and unbureaucratic and immediate investment processes. Scholars support the positive impact of performance expectancy on behavioural intentions in various studies related to the adoption of online financial services (Alalwan et al., 2018; Rahi et al., 2019; Thusi & Maduku, 2020). Hence, it is proposed:

H1: Performance expectancy positively influences investors' behavioural intentions to use IBCP.

Effort expectancy: Effort expectancy reflects consumers' perceptions of how difficult it is to use a specific technology (Venkatesh et al., 2012). It captures investors' perceptions of the level of effort required to use the platforms and therefore relates to the extent to which backers believe that the platforms are easy to use and require less effort to learn how to operate. Interactions with online financial services require some level of expertise and skills (Thusi & Maduku, 2020) and therefore it constitutes a notable factor predicting backers' behavioural intentions. Previous studies confirm the impact of effort expectancy on behavioural intentions in the context of online financial services (Alalwan et al., 2017; Rahi et al., 2019). Hence, the study proposes:

H2: Effort expectancy positively influences investors' behavioural intentions to use IBCP.

Hedonic motivation: Hedonic motivation refers to the fun or pleasure derived from using a specific technology (Venkatesh et al., 2012). Previous studies recognised the importance of the construct in explaining why people use online financial services (Baabdullah et al., 2019). In terms of the platforms, the possibility of investing small amounts in innovative and extravagant projects may arouse backers' enjoyment and even a kind of excitement (Daskalakis & Wei, 2017). Therefore, in line with previous literature in the context of online financial service adoption (Alalwan et al., 2017), this study suggests that hedonic motivation significantly impacts users' behavioural intention. Hence:

H3: Hedonic motivation positively influences investors' behavioural intentions to use IBCP.

Social influence: Social influence reflects environmental factors, such as friends' and relatives' opinions on using a specific technology (Zhou et al., 2010). People draw on the opinions of others regarding the intention to use new technology when uncertainty about the novelty is high (Venkatesh & Davis, 2000). Recent literature demonstrates that backers are more likely to invest if they perceive that their social circles are also engaged in fundraising projects (Kang et al., 2016). In line with previous literature in the online financial service context (Slade et al., 2015), the study proposes:
H4: Social influence positively influences investors' behavioural intentions to use IBCP.

Facilitating conditions: Facilitating conditions relate to consumers' perceptions of the resources, skills and support available to perform certain behaviour (Venkatesh et al., 2012). Regarding the platforms, it depicts the backers' perceptions regarding the availability of resources that enhance their use of the technology. The successful use of the platforms requires knowledge, skills and technical structures such as understanding the platforms' functioning and procedure, project evaluation expertise and the prevalence of an IT infrastructure. As recent literature illustrated the significance of facilitating conditions on behavioural intentions and use behaviour (Baabdullah et al., 2019; Patil et al., 2020; Rahi et al., 2019), the study proposes:
H5: Facilitating conditions positively influence investors' behavioural intentions to use IBCP.
H6: Facilitating conditions positively influence investors' IBCP use behaviour.

Habit: Habit denotes the extent to which people automatically perform behaviours because of learning and pertains to automatic conduct, built by an accumulation of knowledge and skills over time (Venkatesh et al., 2012). The study assumes that backers frequently check for investment opportunities and, unlike stock markets (i.e. offer is set within a limited time), new and promising projects appear on a weekly basis with existing funding limits. Not missing out on investment opportunities might lead backers to develop habits in using the platforms to pursue monetary returns. Scholars have illustrated its positive relation to behavioural intentions and use behaviour,

particularly in the online financial service domain (Baabdullah et al., 2019; Thusi & Maduku, 2020). Subsequently, the study proposes:

H7: Habits positively influence investors' behavioural intentions to use IBCP.

H8: Habits positively influence investors' IBCP use behaviour.

Behavioural intention and use behaviour: Behavioural intentions refer to the extent to which a person has expressed conscious plans to perform or not perform some specified future behaviour (Venkatesh et al., 2012). In the online financial service context, scholars have underlined the influence of behavioural intention on users' actual use behaviour (Patil et al., 2020; Thusi & Maduku, 2020). Accordingly, the study proposes:

H9: Behavioural intentions positively influence investors' IBCP use behaviour.

3.3.4 Extended UTAUT2

Perceived network externalities: Network externalities (network effects) exist when the perceived value of a product increases as the number of users increases (Economides, 1996). In this context, network externalities explain how the utility of IBCP is linked to the number of its investors. Generally, network externalities are a mechanical property of the technology (it becomes mechanically more useful as more people use it) rather than necessarily reflecting an underlying social process. Thus, network externalities can be direct and indirect (Qasim & Abu-Shanab, 2016) and, regarding the platforms, direct and indirect network externalities exist. On the one hand, backers only reach funding goals with other investors, which allows them to obtain subsequent monetary returns. On the other hand, backers only obtain attractive investment opportunities when sufficient project initiators are present (Thies et al., 2018). These externality effects have been found to be an influential factor in the acceptance of online financial service technology (Qasim & Abu-Shanab, 2016), especially those that share the characteristics of network goods (Kang et al., 2016). Hence, it is proposed:

H10: Perceived network externalities positively influence investors' behavioural intentions to use IBCP.

H11: Perceived network externalities positively influence investors' IBCP use behaviour.

In addition, network externalities might reduce the uncertainty of operating with the platforms through the backers' perceptions of other investors' activity and usage. In fact, they might consider a large user base a prerequisite for the usage decision. Many active investors might obligate project initiators and decrease the likelihood of fraud. In this regard, backers' perceptions of network externalities may directly enhance the trust related to the platforms (Kang et al., 2016). Hence, it is proposed:
H12: Perceived network externalities positively influence investors' perceptions of trust in IBCP.

Moreover, in the early stages of innovation diffusion, the size of a market presents a signal of the usefulness of a technology. In other words, the more backers use the platforms, the more likely those platforms are to be perceived as useful (Thies et al., 2018). Previous literature showed the positive relationship between network externalities and perceived usefulness (Song et al., 2009). In this sense, backers' perceptions of network externalities might positively influence their performance expectancy of the platforms. Thus, it is proposed:
H13: Perceived network externalities positively influence investors' performance expectancy.

The role of trust: Trust constitutes an essential factor influencing behavioural intentions, particularly in online financial services (Sharma & Sharma, 2019). Trust can be defined as the accumulation of belief regarding the platforms' integrity and benevolence, as well as their ability to fulfil their promised plans and obligations as described in their outline (Gefen et al., 2003). The concept of trust is especially salient in the IBCP context as compared to other financial services, not only due to its peer-based nature but because of the limited participation of expert investors, unfeasible due-diligence processes and potential fraud (Cumming et al., 2017; Moysidou & Hausberg, 2020). Consequently, in line with previous studies (Alalwan et al., 2017; Thusi & Maduku, 2020), trust perceptions are considered to present a key determinant of backers' behavioural intentions to use the platforms. Thus, the following is proposed:
H14: Trust positively influences investors' behavioural intentions to use IBCP.

3.3.5 The task technology fit

The TTF adoption model suggests that users will only adopt new technologies if they are good enough to perform the task efficiently (Oliveira et al., 2014). More narrowly, the theory encompasses the degree to which a technology helps individuals perform the tasks and argues that a user will only adopt and use an information technology when it fits the tasks at hand and enhances performance (Goodhue & Thompson, 1995). The theory has been applied in several studies and combined with other models such as the UTAUT to explain user adoption of new technology in the financial service context (Afshan & Sharif, 2016; Oliveira et al., 2014; Zhou et al., 2010). It is presumed that the better the fit between the technology (IBCP) and the tasks (investing money) is, the higher backers' platform usage will be. If the platforms cannot support the backers' tasks (i.e. the platforms do not provide feasible investment options), they will be less likely to use them.

The platforms provide backers with access to various high-return investment opportunities that are rarely available via traditional investment services, particularly considering the current low-interest-rate environment. Thus, the technology makes investing attractive for individuals seeking profitable investments in an easy-to-access environment. Therefore, the task characteristics and the technology characteristics of IBCP result in a higher TTF (Afshan & Sharif, 2016; Oliveira et al., 2014). Hence, it is proposed:

H15: Task characteristics positively influence the TTF.

H16: Technology characteristics positively influence the TTF.

TTF is the rational perspective of what the platforms can do to optimise the backers' job of pursuing high returns on their investments. The characteristics of the task and the practicality of the technology to perform the task influence the perspective. Accordingly, the TTF influences the adoption of the platforms (Afshan & Sharif, 2016; Zhou et al., 2010), and the following is proposed:

H17: The TTF positively influences investors' IBCP use behaviour.

The study further proposes that the technology characteristics of the platforms will have an impact on investors' effort expectancy. The advantages of the platforms, such as easy and convenient access and the availability of profitable investment

opportunities, will enable backers to make investments with lower effort expenditures (Wu & Chen, 2017; Zhou et al., 2010). In addition, compared to stock trading, which provides many functions for investors (i.e. short selling, leverage products), the platforms have fewer functions and interfaces, which are constructed straightforwardly. This might simplify the backers' operations with the platforms.

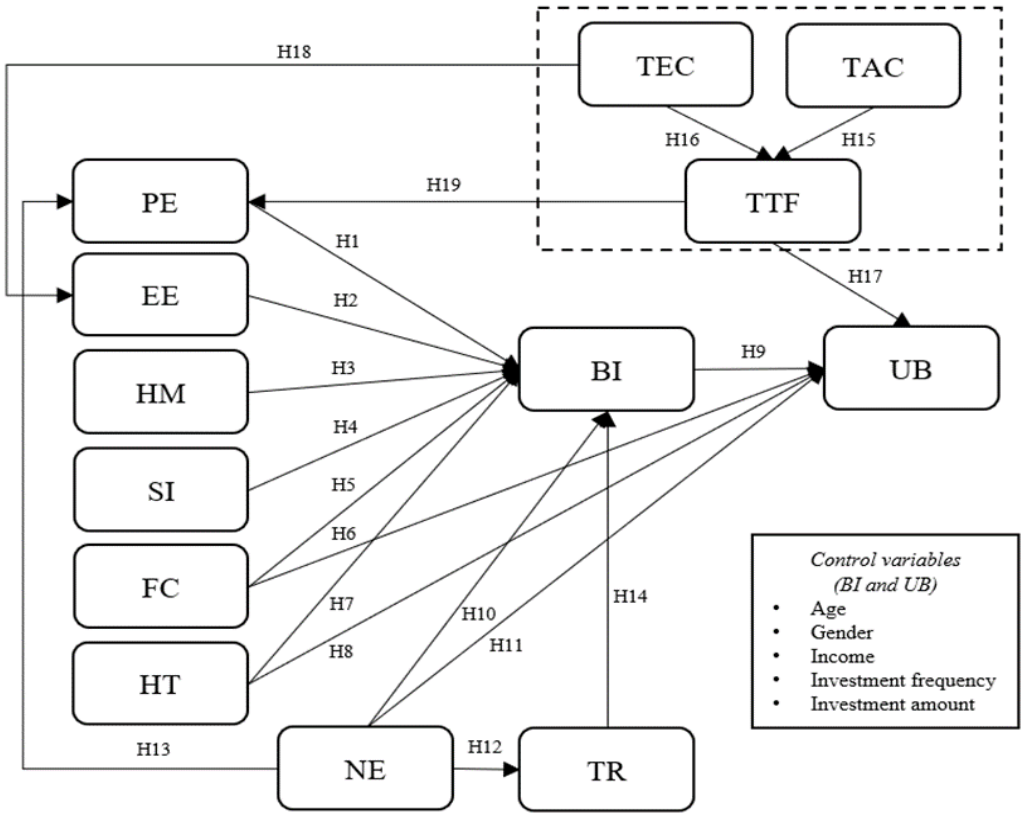
In addition, the study proposes that TTF impacts backers' performance expectancy (Wu & Chen, 2017; Zhou et al., 2010). When investors' tasks demand numerous investment options with high monetary returns, they feel that the platforms are useful and enhance their performance. Contrarily, investors might adopt alternate technologies (Oliveira et al., 2014). Hence, it is proposed:

H18: Technology characteristics influence investors' effort expectancy.

H19: The TTF positively influences investors' performance expectancy.

The proposed conceptual model is presented in Figure 3.1.

Figure 3.1. Conceptual model.



Note: Performance expectancy (PE), effort expectancy (EE), hedonic motivation (HM), social influence (SI), facilitating conditions (FC), habit (HT), network externalities (NE), trust (TR), task characteristics (TAC), technology characteristics (TEC), task-technology-fit (TTF), behavioural intentions (BI), use behaviour (UB).

3.4 Methodology

3.4.1 Measurement

Seven-point Likert scales (from 1=strongly disagree to 7=strongly agree) were developed based on instruments previously validated by scholars working on related concepts. Measurement items for the UTAUT2 variables were adapted from Venkatesh et al. (2012). The scales for use behaviour were adapted from Thusi and Maduku (2020). Items to measure perceived network externalities were derived from Kang et al. (2016). The scales proposed by Liang et al. (2019) were used to measure trust. The items to measure task characteristics, technology characteristics and TTF were adapted from Zhou et al. (2010). The study included additional control variables such as age, gender, reported incomes, investment frequency and amount. The complete list of items per variable and dimension is provided in the appendix.

3.4.2 Sampling and data collection

The data was collected using an online personal questionnaire targeting active users of IBCP of either equity, lending or real estate-based platforms in Germany and Spain. The questionnaire was designed using the online software tool SurveyMonkey. Before sending out the main questionnaire to an online panel of an independent online field supplier for market researchers (Quopinion), a pilot test was conducted using a sample of 80 IBCP users via Amazon MTurk to ensure a high degree of validity and reliability. Through the final data gathering, 303 existing IBCP users were recruited. Table 3.1 presents the sample's descriptive statistics.

Table 3.1. Sample descriptive statistics.

Variable	Categories	Frequency	Percentage
Gender	Female - 1	100	33%
	Male - 2	203	67%
Age	18 to 24	42	14%
	25 to 34	104	34%
	35 to 44	97	32%
	45 to 54	42	14%
	55+	18	6%
Income (monthly)	< €2,000	39	13%
	€2,001 - €3,000	89	29%
	€3,001 - €4,000	81	27%
	€4,001 - €5,000	64	21%
	> €5,000	30	10%
Investment frequency (last two years)	< 10	75	25%
	11 to 20	83	27%
	21 to 30	89	29%
	> 31	56	19%
Investment amount (average)	< €5,000	166	55%
	€5,001 to €10,000	112	37%
	> €10,000	25	8%

3.4.3 Common method bias assessment

Common method variance bias had to be assessed, since the data for the variables came from single respondents in a one-time survey. This study applied statistical and procedural methods to identify bias potential (Podsakoff et al., 2003). With respect to the statistical procedures, a full collinearity test based on VIF values revealed no indication of the existence of common method bias as suggested by values below 3.3 (Kock, 2015). Regarding the procedural methods, to reduce the possibility of obtaining artificial or false responses, the survey assured respondents confidentiality and anonymity of the information provided. The order of the variables in the online survey was also introduced in such a way that respondents could not infer the logic and causality of the model and its relationships.

3.5 Results

3.5.1 Measurement model evaluation

A two-stage structural equation modelling (SEM) approach was applied to validate the current study's model and test the research hypotheses. Particularly, the partial least squares structural equation modelling (PLS-SEM) technique was applied, using SmartPLS 3.0 software. PLS is a distribution-independent method that is particularly useful in contexts where the theoretical body is not sufficiently developed and in models with many latent variables. This study also aimed to predict IBCP usage among backers using a comprehensive and complex model that integrates different views and theories. Consequently, the PLS-SEM technique was considered appropriate for the data analyses (Reinartz et al., 2009).

In the first stage, the measurement model was tested to ensure construct validity and reliability. Convergent and discriminant validity were used to evaluate the validity of the measurements. Standardised loadings exceeded the critical threshold of 0.70 (see Table 3.2). The Cronbach's alpha and composite reliability estimates also exceeded the recommended threshold of 0.70. Additionally, convergent validity criteria were met, since the AVE values of the constructs were above the critical threshold of 0.50.

Table 3.2. Convergent validity of the constructs.

Construct	Measurement item	Estimate	Construct	Measurement item	Estimate
PE	PE1	.915	TR	TR1	.936
	PE2	.917		TR2	.921
	PE3	.930		TR3	.927
EE	EE1	.902	TAC	TAC1	.871
	EE2	.907		TAC2	.864
	EE3	.898		TAC3	.913
HM	HM1	.873	TEC	TEC1	.899
	HM2	.894		TEC2	.817
	HM3	.824		TEC3	.883
SI	SI1	.925	TTF	TTF1	.919
	SI2	.864		TTF2	.900
	SI3	.904		TTF3	.891
FC	FC1	.870	BI	BI1	.931
	FC2	.890		BI2	.916
	FC3	.829		BI3	.950
HT	HT1	.942	UB	UB1	.878
	HT2	.876		UB2	.845
	HT3	.935		UB3	.725
NE	NE1	.889			
	NE2	.756			
	NE3	.905			

Note: See acronyms in Figure 3.1.

Discriminant validity was tested using the HTMT ratios method (Henseler et al., 2015). Results confirmed discriminant validity among the constructs, as shown in Table 3.3. All ratios were below the threshold of 0.85 (Fornell & Larcker, 1981).

Table 3.3. Discriminant validity of the constructs.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.AU	**.831**	.853	.700	.709	.637	.370	.727	.753	.783	.745	.560	.514	.100
2.BI	.729	**.930**	.702	.734	.541	.365	.562	.704	.688	.637	.502	.550	.034
3.EE	.587	.636	**.903**	.768	.574	.433	.600	.686	.758	.694	.557	.519	.074
4.FC	.604	.670	.689	**.875**	.524	.365	.677	.732	.768	.692	.588	.517	.106
5.HT	.556	.499	.519	.480	**.921**	.322	.604	.592	.542	.610	.368	.381	.171
6.HM	.309	.332	.380	.331	.276	**.875**	.532	.439	.438	.479	.338	.194	.099
7.NE	.586	.487	.510	.578	.524	.440	**.857**	.737	.720	.687	.551	.468	.145
8.PE	.636	.641	.613	.659	.536	.387	.630	**.910**	.738	.732	.637	.494	.124
9.TEC	.636	.605	.655	.682	.478	.375	.597	.642	**.873**	.872	.686	.459	.084
10.TTF	.629	.614	.622	.626	.551	.412	.599	.660	.763	**.910**	.659	.503	.071
11.TAC	.465	.449	.489	.518	.327	.285	.461	.564	.597	.586	**.891**	.346	.143
12.TR	.436	.510	.469	.475	.349	.175	.405	.450	.405	.458	.311	**.933**	.101
13.SI	.054	.031	.063	.099	.104	.071	.113	.074	.019	.060	.126	.089	**.853**

Note: See acronyms in Figure 3.1.

3.5.2 Structural model analysis

In the second stage of SEM, the structural model was tested to verify the conceptual model and its hypotheses. To assess the model's statistical predictive power, we followed the procedure suggested by Shmueli et al. (2019). The RMSE and MAE values were higher for the naïve linear benchmark model and lower in the PLS estimated model for all the indicators of behavioural intentions. For use behaviour, only the error estimations for UB2 were higher in the PLS model. From these results, it can be concluded that the model presents a high predictive power.

For hypothesis testing, a bootstrapping procedure with 8,000 subsamples was employed (Hair et al., 2017). The analyses were performed in two steps. First, the two base models (UTAUT2 and TTF) were analysed to ascertain the predictive power in explaining the endogenous variables determining the values of R^2 and R^2 adjusted. This two-step approach was conducted to determine whether the proposed model, an extension of the integrated UTAUT2 and TTF models with trust and network externalities, would be a better predictor of investors' platform intention and use behaviour (Thusi & Maduku, 2020).

The findings indicate that the proposed integrated model explains 57.6% (R^2 adj.=56.4%) of the variance in investors' behavioural intention and 63.0% (R^2 adj.=62.4%) of the variance in use behaviour. Compared to the baseline models, the values of R^2 adjusted increased and hence the variance of the endogenous variables is better explained by employing the integrated model. Table 3.4 shows the results of the structural model.

Table 3.4. Results of the structural model.

Hypothesised path	Path coefficient	P-value	Significance
H1: PE → BI	.219	**	Yes
H2: EE → BI	.178	**	Yes
H3: HM → BI	.047	.320	No
H4: SI → BI	.023	.710	No
H5: FC → BI	.283	***	Yes
H6: FC → UB	.034	.572	No
H7: HT → BI	.106	*	Yes
H8: HT → UB	.134	**	Yes
H9: BI → UB	.465	***	Yes
H10: NE → BI	.056	.415	No
H11: NE → UB	.189	**	Yes
H12: NE → TR	.406	***	Yes
H13: NE → PE	.366	***	Yes
H14: TR → BI	.165	*	Yes
H15: TAC → TTF	.202	**	Yes
H16: TEC → TTF	.642	***	Yes
H17: TTF → UB	.135	*	Yes
H18: TEC → EE	.657	***	Yes
H19: TTF → PE	.441	***	Yes
R^2 adj. with baseline models: BI (52.9%) and UB (57.1%)			
R^2 adj. with integrated model: BI (56.4%) and UB (62.4%)			
R^2 adj. for remaining endogenous variables: TTF (60.6%), PE (51.9%), EE (43.0%) and TR (16.2%).			

Note: p > 0.001 ***, p > 0.01 **, p > 0.05 *. See acronyms in Figure 3.1.

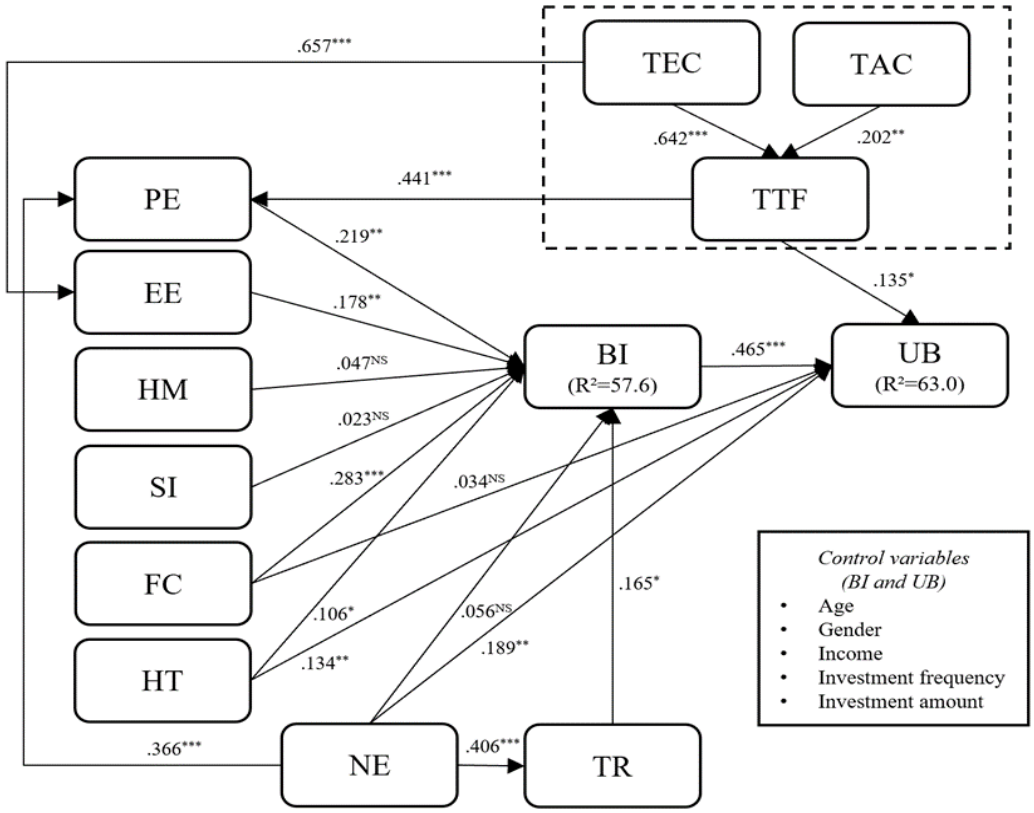
The results of the analysis revealed that performance expectancy (β=.219, p<.01), effort expectancy (β=.178, p<.01), facilitating conditions (β=.283, p<.01), habit (β=.106, p<.05) and trust (β=.165, p<.05) were significantly related to investors' intention to use the platforms, supporting H1, H2, H5, H7 and H14. In contrast, hedonic motivation (β=.047, p>.1), social influence (β=.023, p>.1) and network externalities (β=.056, p>.1) did not exert any significant effects, thus rejecting H3, H4 and H10.

Network externalities, however, were positively related to backers' trust (β=.406, p<.001) and also affect backers' perceptions of performance expectancy (β=.366, p<.001), supporting H12 and H13.

Regarding the predictors of use behaviour, the results suggested that habits (β=.134, p<.01), behavioural intentions (β=.465, p<.001), network externalities (β=.189, p<.01) and TTF (β=.135, p<.05) were significantly related to investors' platform use behaviour, thereby supporting H8, H9, H11 and H17. However, facilitating conditions (β=.034, p>.1) did not significantly influence use behaviour, rejecting H6.

Task characteristics (β=.202, p<.01) and technology characteristics (β=.642, p<.001) were positively related to the TTF, giving support for H15 and H16. In turn, the platforms technology characteristics were found to positively affect backers' effort expectancy (β=.657, p<.001) and TTF was significantly related to backers' performance expectancy (β=.441, p<.001), supporting H18 and H19. The control variables included were not significantly related to behavioural intentions and use behaviour. Figure 3.2 presents the validation of the conceptual model.

Figure 3.2. Validation of the conceptual model.



Note: p > 0.001***, p > 0.01**, p > 0.05*; NS=not significant. See acronyms in Figure 3.1.

3.6 General discussion and implications

The use of IBCP is still in the early stages. To exploit the economic benefits of this emerging technology, it is essential to understand the factors that actually shape investors' adoption of them. Given that backers' behavioural intentions and use behaviour towards these platforms are not yet fully elaborated, the study primarily realised the need to examine the main factors that form them. The main results largely supported the proposed integrated model, which predicted 57.6% and 63.0% of the variance in behavioural intentions and use behaviour, respectively, which is comparable to recent studies in the online financial service context (Patil et al., 2020; Thusi & Maduku, 2020).

As presented in the results section, performance expectancy was observed to be a substantial factor predicting backers' behavioural intentions, in line with previous findings in the context of online financial service adoption (Baabdullah et al., 2019). Investors perceive the platforms as productive and useful to conduct investments as they allow them to conveniently access various profitable investment options coupled with unbureaucratic and immediate investment processes. Mainly due to the increasing digitalisation of financial services, the platforms present a high utilitarian value for backers. Since there is a prevalence of low-interest environments and volatile stock markets, the platforms constitute a useful investment alternative.

Additionally, effort expectancy is vital for relatively new and cutting-edge technology such as IBCP to keep investors engaged via interfaces that are easy to use. Given the rise of the platforms, investors start to become competent in using these services. Thus, the relevance of the platform's interfaces and the ease with which they allow investments to be conducted are essential to shape backers' behavioural intentions to use them. The findings obtained agree with prior literature related to online financial services (Alalwan et al., 2017; Patil et al., 2020).

The findings further suggest that backers will adopt the platforms if they have the knowledge, skills and capabilities to use these services. Using these platforms requires resources (i.e. PC or mobile, secure website, an understanding of the functioning) and without the prevalence of such resources, investors cannot use them. Consequently, the variable is an essential factor driving backers' behavioural intentions, which is in line with the results obtained by previous scholars in the online

financial service domain (Baabdullah et al., 2019; Thusi & Maduku, 2020; Zhou et al., 2010).

Furthermore, habit was found to be a predictor of backers' intention to use, which implies that backers who repeatedly use the platforms will form positive intentions towards them. Habits are also associated with investors' actual use, which is consistent with previous findings in the online financial service context (Alalwan et al., 2018; Baabdullah et al., 2019; Baptista & Oliveira, 2015). Provided backers habitually use new technology, hence they have good experience and knowledge for using IBCP and this, in turn, reflects positively on how much investors actually use these platforms. Investors are more and more engaged in using digital financial services and thus backers are more likely to form this kind of habit towards these platforms.

The study also confirms a strong and positive association between backers' behavioural intentions and use behaviour, which is consistent with the findings of the UTAUT2 and recent studies in the financial service adoption context (Thusi & Maduku, 2020).

The study further revealed the significance of network externalities towards the adoption of financial technology in the broader context of collaborative consumption, as they are positively related to the actual use of the platforms. Therefore, the backers' perceptions of the size of the supply of viable projects on the platforms and the perceptions of the size of existing investors are critical when backers are involved in current investment activities. Furthermore, the backers' perceptions of the prevalence of a large pool of investors on IBCP increase their trust in these platforms, in line with Kang et al. (2016). In this regard, the perceptions of the availability of other investors and several investment opportunities have a powerful influence on the perceptions of the derived utility of these platforms (Song et al., 2009). As more investors are present, more funding goals can be reached and more investment opportunities will be available, thereby enhancing the usefulness of these platforms. Generally, the results are of particular theoretical importance for future research related to adopting new online financial service technology sharing the characteristics of network goods.

Furthermore, trust has been recognised as an essential factor influencing the adoption of these platforms, as the results show that investors will adopt them if they trust the platform's operations and the services offered (Slade et al., 2015; Thusi & Maduku, 2020).

Moreover, the findings suggest that backers are not yet fully aware of the various tasks and operations that can be conducted via the platforms. This might explain the smaller, though significant, effect of task characteristics on TTF compared to the technology characteristics (Oliveira et al., 2014). Opposing to prior results (Zhou et al., 2010), task characteristics positively influence the TTF. This suggests that individuals seeking profitable investments in an easy-to-access environment will select the platforms rather than other financial technology. Results further show a substantial effect of TTF on actual use and performance expectancy. The significant relation towards performance expectancy demonstrates the link between what these platforms can do and their usefulness in optimising the backers' investment task at hand.

Moreover, the results highlight the fact that the technology characteristics of the platforms (i.e. easy access to a variety of profitable investment opportunities) are strongly related to an enhanced degree of ease associated with the technology. Previous literature has extracted similar results (Zhou et al., 2010), though they mostly theorised about the positive influence of TTF on the individual's perceived ease of use (a concept from the Technology Acceptance Model that is similar to effort expectancy) (Wu & Chen, 2017). Hence, this study provides a mechanism for explicitly understanding the effect of technology characteristics on backers' perceptions of effort expectancy. The characteristics inherent to the platforms provide backers with the substantial belief of increased consistency and familiarity to invest their money. Accordingly, this enhanced consistency perceived in backers' cognitive systems might increase their perceptions of the ease of conducting investments using these platforms.

3.6.1 Theoretical implications

The study contributes theoretically to the nascent investment-based crowdfunding literature for several reasons. First, it primarily generated new quantitative knowledge about the factors that impact upon backers' adoption of IBCP. Using SEM to obtain descriptive and inferential statistics, this study obtained reliable findings that can be generalised to the target population of crowdfunding investors, as SEM can accurately calculate the probability distribution of observed data (Urbach & Ahlemann, 2010).

Second, the study selected a fitting theoretical foundation for the conceptual model by combining the UTAUT2 and TTF as baseline models. The study's approach by

integrating the two theories endows the theory with more value and insights than would have been the case of each individual research perspective. Moreover, the study incorporated network externalities and trust as additional constructs to better explain the backers' behaviour and usage of this new technology. The integrated model proposed in this study is unique in the literature as no such combination has been performed yet. The model has increased the predictive power of backers' usage of the platforms and demonstrates the value of integrated models to better understand consumer technology adoption. Thus, the integrated model delivers a comprehensive view of investment-based crowdfunding adoption.

Third, this study contributes to the theoretical knowledge by demonstrating the importance of perceived network externalities related to the adoption of investment-based crowdfunding. On the one hand, the results showed the essential role of the constructs in explaining the use behaviour of IBCP. On the other hand, it was found to act as a trust and utilitarian value enhancement mechanism. The construct therefore constitutes a critical role in current and emerging financial services of a collaboration-based nature. As the number of scholars interested in explaining individual behaviour towards these services grows, this study's findings initiate future research to examine such behaviour more comprehensively by including this construct.

Finally, the current research has made a novel contribution due to its being the first study to have extended the validity of both baseline models for examining a new technology. This is compatible with Venkatesh et al.'s (2012) recommendations about testing UTAUT2 in new technological services. Likewise, Goodhue and Thompson (1995) suggested expanding the scope of testing across other settings.

3.6.2 Managerial implications

The study's findings offer practical implications for platform operators to increase the level of IBCP adoption. Generally, this is achieved by manipulating the influential variables from each model (UTAUT2 and TTF) and the additional constructs that were found to have a significant influence on backers' intentions and usage.

First, operators should position the platforms as a practical investment tool using social media to carry out campaigns that emphasise the benefits of the service, thus appealing to investors' performance expectancy motivations. Operators should also allow investors to use the platforms through experimental accounts rather than their

own to create a positive experience and let backers discover the usefulness of these platforms. Second, operators need to develop their platforms in a straightforward manner to reduce effort perceptions by enhancing the platform's interfaces and creating simple calls to action. Third, operators should enhance the facilities required to use the platforms effectively. They might focus on providing their service in a compatible manner with other standard technologies such as mobile applications, as online financial tasks, in general, are being conducted more and more via mobile devices.

Fourth, operators should focus on improving the backers' habitual behaviour by frequently updating investment offers so as to establish routines of backers using the platforms. Supplementary services such as due diligence and project evaluation courses are suggested to reduce resistance to access the platforms frequently and develop habitual behaviours.

Fifth, operators need to develop strategies that increase the perceptions of network externalities. In this sense, operators could disclose new subscriptions achieved, funding goals reached, and new projects launched on the platforms to enhance investors' perceptions of network externalities. This, in turn, all increases backers' usage, trust and perceptions of the utility of the platforms. In addition, operators could actually focus on increasing the network by offering starter packages for new investors with free money in the account. This may tie backers to the platforms, which in turn enlarges the platform's network.

Sixth, operators need to further work on the perceptions of trust in the platforms. Secure socket layer certificates or trust-enhancement strategies, such as offering investment guarantees or showcasing testimonials (i.e. professional investors), could enhance levels of trust. Operators should also demonstrate a commitment to tackling investment fraud and invest in website security, data encryption and maintenance to ensure the round-the-clock provision of high-quality services in a secure online environment. Finally, operators should segregate the market and provide differentiated investment services. For example, the platforms that focus on sustainable and green projects might adjust their TTF distinctively than more commercial ones. Backers using the former may be less concerned about the variety of projects and profitability but more about sustainability aspects. Therefore, operators can provide different platform context services to meet the demands of various task groups to increase user adoption.

3.6.3 Limitations and directions for future research

This study is restricted by several limitations that provide scope for future research. First, this study explained backers' adoption of the platforms using the UTAUT2 and TTF by further including network externalities and trust. Future research may draw on additional variables and theories, such as perceived value, and explore the effects of other constructs, such as investors' need for uniqueness (i.e. distinguishing myself from mainstream investors) or attachment towards the platforms. In this line, future research could also explore the role of sustainability in shaping investors' behavioural intentions and use behaviour in the investment-based crowdfunding context. The increasing agreement about the high relevance of addressing environmental and social problems has continued growing in recent years. If and how these factors impact backers' investment behaviour on these platforms would be a viable research line.

Second, the sample used in the study was relatively small and it did not allow testing to be carried out to search for differences in investors' adoption between the three platform types: lending, equity and real estate-based crowdfunding. Although all three types can be considered IBCP, examining differences in investors' adoption behaviour between these types would provide viable insights for the embryonic literature in this domain. In addition, the sample consisted of Spanish and German users. Future research could replicate the study's conceptual model using a different sample with a non-European origin. In this line, as user behaviour is dynamic and cross-sectional data were collected, a longitudinal design could be conducted to increase generalisability.

Finally, the current study found that, for instance, hedonic motivation has no influence on investors' behavioural intentions, thereby contradicting recent studies in the online financial service context (Alalwan et al., 2017; Rahi et al., 2019). Therefore, future studies have a motivation to re-examine the essential role of the construct for more investigations, especially in the financial service adoption context.

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Chapter 4

4. CRYPTO-MANIA: How fear-of-missing-out drives consumers' (risky) investment decisions

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Chapter 4 constitutes the third article in this thesis. This study explores the mechanisms underlying consumers' increased crypto engagement and hence, tries to shed light on the timely question of why consumers increasingly conduct adverse financial decisions.

4.1 Abstract

The crypto market has experienced extraordinary growth in the last few years. Although this market is highly volatile and has frequently crashed, consumers continue to invest in such assets and often put their savings at risk. Therefore, as a first study, this research explores the mechanisms underlying consumers' increased crypto engagement. The results of five studies reveal that external evoked fear-of-missing-out appeals influence consumers' investment decision, and that this effect is mediated by affective processes and moderated by personality traits. The results further demonstrate that fear-of-missing-out appeals lead consumers to repeated investment decisions, even if prior losses have been incurred. Finally, the findings suggest that the effects of FOMO can be mitigated via communication strategies (i.e. fear messages). These findings primarily suggest various notable implications for academics, policymakers and practitioners concerned with consumers boosted crypto engagement.

Keywords: Cryptocurrencies; fear-of-missing-out; affective processes; impulsivity; adverse decision-making; communication messages.

4.2 Introduction

“Everyone’s a day trader now”, that’s how the Wall Street Journal described consumers’ post-pandemic trading engagement (Wursthorn et al., 2020). Consumer’s boredom with lockdowns and the widespread emergence of free-fee trading platforms initiated a historic trading engagement that made financial markets the new place of pilgrimage for spending money (Martin & Wigglesworth, 2021). Of the many asset classes available on the financial markets, however, many consumers had shown a particular interest in one: cryptos. In the U.S., for instance, 16% of the population has ever invested in, traded or used cryptos, with an upward trend (Perrin, 2021). The market capitalisation of cryptos has more than tripled in the last two years (de Best, 2022). At the same time, the crypto market frequently crashed throughout the last years, losing more than US$ 200 billion in value in 24 hours as in January 2022 (Morris, 2022), leaving investors with huge losses. Several examples show how private investors got hooked on high-risk trading with cryptos and lost everything they put on the line (e.g. Kale, 2021). Therefore, one might ask: Why are consumers increasingly investing in such volatile and risky assets, and more precisely, what are the mechanisms underlying such behaviour? Yet, despite governments and NGOs’ attempts to address this issue by launching initiatives to boost financial education (e.g. European Banking Federation, 2020) and scholars’ raising attention to such matters (e.g. de Ruyter et al., 2022), the literature has not started to look into this timely topic. Financial institutions still debate if cryptos are a trustworthy currency alternative or rather similar to a Ponzi-scheme. Thus, while multiple financial institutions are partially shunning cryptos, the market has become dependent on socially constructed opinions. Many participants are individual investors (young and inexperienced) who rely on social media and online platforms to get information about potential investment opportunities (Bouri et al., 2019; Shiva & Singh, 2020). The augmenting importance of these platforms for consumers’ decision-making suggests the role of the increasingly significant concept evolving in consumer behaviour: FOMO (Zhang et al., 2020). FOMO originally refers to the anxiety social network users feel when they perceive their peers are doing, experiencing or possessing something rewarding while they are not (Przybylski et al., 2013). Beyond its linkage to excessive social network usage (Balta et al., 2020; Fang et al., 2020), it is suggested to potentially drive unjustified price levels in the crypto market (Bouri et al., 2019). Accordingly, as a proxy for crypto

investments, adverse financial decisions might be attributed to externally evoked FOMO appeals that constitute a decisive factor influencing consumers' decision-making (Kim et al., 2020). Despite recent advancements in the literature concerning consumers' interaction with cryptos (e.g. Breidbach & Tana, 2021), current research on this matter still presents essential gaps that need to be addressed in order to better understand the reasons underlying this phenomenon. For instance, it has not been explored how FOMO appeals affect consumers' investment decisions, explicitly considering consumers' information access on social media and online platforms. Most literature on FOMO has conceptualised it as a trait rather than context-specific anxiety. Nevertheless, recent studies showed that FOMO can be manipulated to induce consumer behaviour (Good & Hyman, 2021). Therefore, introducing FOMO appeals in the financial context seems pivotal to examine consumers' increased crypto engagement.

Furthermore, it remains unclear if, and how, affective processes explain the FOMO appeals effect on consumers' investment intention. In fact, regret constitutes an important construct in consumers' decision-making process (Tzini & Jain, 2017) and was found to play a critical role in the financial context (Fogel & Berry, 2006). Specifically, consumers might experience negative feelings resulting from imagining future regret before making a decision (Hayran et al., 2020), such as to invest in an asset. As FOMO appeals are likely to urge consumers to conduct specific behaviours, this mechanism might reduce consumers' anticipated regret when exposed to investment opportunities. Additionally, consumers expected pleasure is considered to impact decision-making (Moore, 2013). When consumers are faced with choices, they are likely to anticipate how they will feel about the consumption experience and then choose the option with the most promising expected pleasure (Baumgartner et al., 2008; Mellers et al., 1999). Hence, FOMO appeals are likely to elevate consumers' expected pleasure as the investment opportunity might seem to be particularly profitable. Therefore, introducing anticipated regret and subjective expected pleasure seems critical in the study's context, as they might mediate the impact of FOMO appeals on consumers' investment intentions.

Moreover, while previous studies have explored how individual differences form consumers' investment decisions (Sekścińska et al., 2018), little is known about how they relate to FOMO appeals and subsequent behavioural outcomes (Holte & Ferraro, 2020). Thus, this study explores the individual difference in impulsiveness. This trait

relates to the underestimation of risk in different situations (Jia et al., 2015). As individuals' impulsivity levels are likely to affect consumers' apprehensions of missing out, this study explores impulsiveness as a contingent variable in explaining how FOMO appeals affect consumers' investment intentions.

Beyond the above discussed theoretical expansions, this study further investigates the strength and duration of the FOMO appeals effect with respect to wins and losses. Finally, the study primarily identifies potential FOMO appeal reducing interventions, such as communication tactics, to reduce the FOMO effect on consumers' investment intentions.

In sum, this study aims to contribute to the limited knowledge on the essential question of why consumers are increasingly conducting adverse financial decisions (i.e. crypto investments) and the mechanisms underlying this behaviour. To do so, it directly addresses the recent debate about contemporary grand challenges of consumer behavioural research (de Ruyter et al., 2022) and extends the nascent FOMO literature by exploring how FOMO appeals directly and indirectly via affective processes influence decision-making. It demonstrates that the FOMO appeals effect is moderated by personal traits and shows their strong and lasting effects on consumers' investment intentions, which even offsets actual financial losses. Finally, the study introduces communication messages that can counter the affective state generated by FOMO appeals.

The study is organised as follows: First, the theoretical background is presented. Second, the empirical studies are presented, including the hypotheses development, methodology and empirical analysis. Finally, the general discussion and implications for theory and practice are presented.

4.3 Theoretical background

4.3.1 Consumers adverse financial decision-making

Research exploring consumers' financial decision-making is an essential ongoing topic in the literature as it determines billions of people's well-being (Garbinsky et al., 2021). Despite an increasing self-responsibility for building up retirement and wealth, implying the promotion of savings and investments in secure and long-term options, consumers often do not uphold this personal liability (Cox et al., 2020). This questions

consumers' capabilities to conduct wise financial decisions and highlights marketing's responsibility to further explore and understand them. The Consumer Financial Protection Bureau and the European Banking Federation indicated that many consumers have not developed the basic financial education and literacy critical for building responsible and healthy financial futures (Consumer Financial Protection Bureau, 2019; European Banking Federation, 2020). Thus, it is not surprising that the United Nations recently developed sustainable development goals that embrace, amongst others, education, well-being, and responsible consumption (United Nations, 2021), and scholars recently called for more research on the debate on grand consumer challenges (e.g. de Ruyter et al., 2022). Consumers showed an intensified crypto engagement in the last years, although many do not fully understand the complex mechanism behind such investment (i.e. blockchain technology). Scholars indicate that crypto investments might be similar to high-risk addictive behaviours, such as online gambling (Mills & Nower, 2019) and that consumers often place more money than they can afford on risky coins (Delfabbro et al., 2021). In fact, recent statistics show that hundreds of thousands of private investors are signing up to crypto exchange platforms each month and that the number of global crypto users reached more than 200 million in 2021 (Crypto, 2021). This happens although the crypto market crashed several times, causing investors losses of billions of dollars (Ponciano, 2021), demonstrating the well-known hazard associated with these investments. Consequently, consumers' wealth is at risk, attesting that understanding the mechanisms underlying this phenomenon has never been timelier. As crypto trading has a strong presence in social networks and online platforms (Bouri et al., 2019), this study draws on the FOMO literature. Therefore, it considers FOMO, among other critical variables, as the underlying mechanism used to explain why consumers are increasingly conducting adverse financial decisions (Delfabbro et al., 2021). The study takes crypto investments as a proxy for unfavourable financial decisions.

4.3.2 The fear-of-missing-out

FOMO describes a pervasive feeling that others may be having rewarding experiences from which one is absent (Przybylski et al., 2013). It can be described as a general apprehension that is evoked by the perception of missing out on an experience or product other people enjoy or possess (Zhang et al., 2020). FOMO is an evolving

concept in consumer behaviour and appears to be inherent as well as delineated from previously defined constructs. An essential condition for FOMO to occur is that missing an experience is relevant to oneself (Good & Hyman, 2021). This implies that it relates to an individual's self-concept. Therefore, FOMO ingrains the notion of social comparison and reflective appraisals because their inherence in self-conceptualisation (Tedeschi, 1986). This seems not surprising since the definition of FOMO comprises a link to comparison processes (Reer et al., 2019). Yet, FOMO is conceptually different to novelty seeking, consumers' susceptibility to interpersonal influence and envy (Good & Hyman, 2020; Zhang et al., 2020). Furthermore, the construct differs from perceived scarcity. Scarcity encompasses the state of shortness that might compel people to conduct specific actions (Suri et al., 2007), whereas FOMO represents an inner sense of missing out on experiences or products others discuss, have or enjoy.
The conduct that individuals seek to regulate the psychological discomfort evoked by FOMO was found to have negative effects on their well-being. The most prominent example is consumers' frequent social media usage (Balta et al., 2020). Within the concept of FOMO, the literature differentiates between self-initiated or externally initiated FOMO. The prior one is treated as an individual trait, while the latter is evoked by external appeals that call on consumers' internal resistance to assent to a behaviour (Hodkinson, 2019). The scholars considering FOMO as a personal trait link the concept to negative psychological externalities that go beyond excessive social media usage, such as smartphone overuse and phubbing behaviour (Fang et al., 2020), substance abuse (Riordan et al., 2015) and anxiety and depression severity (Elhai et al., 2020). However, a consumer-focused FOMO might change transiently in response to different FOMO appeals, in contrast to FOMO as a trait. Specifically, recent scholars suggest that FOMO can be context-specific for consumers and, therefore, elicit purchase behaviours (Good & Hyman, 2021). While the concept of FOMO was mostly applied to domains such as the internet, social media and mobile usage (Balta et al., 2020; Fang et al., 2020; Przybylski et al., 2013), the notion of FOMO has started to appear in the financial context (Clor-Proell et al., 2020; Güler, 2021). That is, consumers focus lies on the FOMO of seemingly viable investment opportunities rather than rewarding experiences. Notably, practitioners started to use FOMO appeals in several contexts (Hodkinson, 2019). As recent scholars suggest, FOMO appeals positively impact purchase behaviours (Good & Hyman, 2021). Hence,

consumers might succumb to these appeals in the crypto context, influencing consumers' financial decision-making.

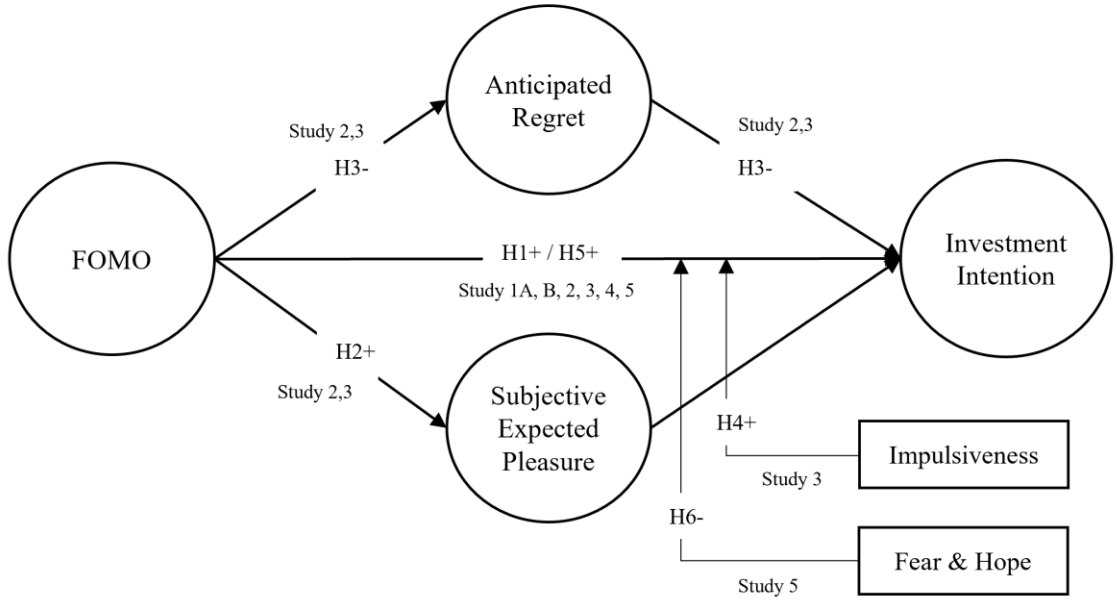
4.4 Empirical studies

Several studies were conducted to accomplish the goals of this research[5]. Study 1A (experiment) aims to establish the FOMO appeal manipulation and explores if, and how, it affects consumers' investment intention. Study 1B explores if FOMO appeals' effect on consumers' investment behaviour holds with a behavioural outcome in a laboratory setting. Study 2 (experiment) then tests whether the effect of FOMO appeals on consumers' investment intention is mediated by affective processes, and study 3 (experiment) further examines if personality traits moderate this relationship. Study 4 (experiment) examines whether FOMO appeals provoke consumers to repeatedly conduct adverse financial decisions. Finally, study 5 (experiment) tests whether communication messages reduce the effect of FOMO appeals on consumers' investment intention.

Figure 4.1 presents the conceptual model of the study.

[5] All studies were conducted when (1) search interest in Bitcoin was relatively neutral to relative highs (Google Trends) and (2) the crypto market's fear and greed index was relatively neutral to relative highs (Alternative.me).

Figure 4.1. Conceptual model.



4.4.1 Study 1A: FOMO appeals and investment intention

Study 1A aims to establish the manipulation of the FOMO appeal in the crypto context and explores whether FOMO appeals influence consumers' investment decision.
Besides the focus on FOMO as an individual trait that leads to self-initiated FOMO-driven conduct, scholars started to create context-specific FOMO appeals to induce behaviours (Milyavskaya et al., 2018). For example, recent literature suggests that externally initiated FOMO appeals can engender significant commercial, cognitive and emotional responses in recipients (Hodkinson, 2019). These appeals can be commercial or non-commercial and can be personal or impersonal. They include fear-arousing endorsements and advocate for purchases to defend against "missing out". For instance, a FOMO appeal containing peers that are or might experience or possess something from one is or might be absent, can induce a sense of missing out (Good & Hyman, 2021). Thus, an appeal including a promising investment opportunity commented on social media or online platforms is likely to create FOMO (Delfabbro et al., 2021). Nonetheless, consumers can avoid this FOMO by heeding those appeals by executing a behaviour, such as investing in this opportunity. As current scholars suggest, FOMO appeals influence consumers buying decisions (Good & Hyman, 2020; Good & Hyman, 2021). Accordingly, this study proposes:
H1: Consumers who are exhibited to a FOMO appeal (vs. non-FOMO appeal) will have a higher investment intention in cryptos.

Design and procedure: A between-subjects experiment with two conditions representing FOMO vs. non-FOMO appeals was conducted. First, a filter question ensured that participants invested at least once in the last six months in cryptos. Then, following Good and Hyman (2021), participants were exposed to a vignette that asked them to assume they would like to trade and invest their money. Further, the vignette exposed participants to the information that someone recently posted that a new crypto will be launched, and they would have to decide whether to invest or not (appendix A). To avoid decision-making based on cost, the vignette stated that the initial launching price would be typical. Participants were then randomly exposed to the FOMO - or non-FOMO appeal condition (appendix A).

Measures, coding and reliability: After the respondents had been assigned to their respective conditions, participants indicated whether the narrative was credible and readily comprehended. Then, participants submitted scores on FOMO with an 8-item measure (e.g. 'I'm afraid later I will feel sorry I did not invest.') adapted from Good (2019) as this study did not measure FOMO as a trait and was neither centred in the social media context (Przybylski et al., 2013). Investment intentions were measured with one-item ('It's very likely that I will invest in this new crypto') adapted from Good and Hyman (2021). All items were measured using a 7-point Likert scale. We recruited 150 participants from Amazon Mturk to serve nonprofessional investors in our experiment. 19 respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 131 participants. The demographics indicated that the respondents had a mean age of 37 years (SD=11.37) and that 63% of them were male. All scales achieved high reliability (Cronbach's alpha was >0.7; see appendix B).

Results and discussion: Respondents scores regarding the narrative's credibility ($M_{FOMO\text{-}APPEAL}$=4.69, SD=1.34; $M_{NON\text{-}FOMO\text{-}APPEAL}$=4.76, SD=1.19; *t*(129)=.29; p>.1, r=.03) and comprehensibility ($M_{FOMO\text{-}APPEAL}$=4.65, SD=1.32; $M_{NON\text{-}FOMO\text{-}APPEAL}$=4.82, SD=1.10; *t*(129)=.80; p>.1, r=.00) did not differ between the conditions. Also, no relationship between FOMO scores and the narratives' credibility (F(1,130)=1.22; p>.1) and comprehensibility was found (F(1,130)=.76; p>.1).

The results indicated a strong difference between the FOMO appeal conditions. We tested the manipulation using an independent samples *t*-test on the FOMO scale ($M_{FOMO\text{-}COND.}$=4.67, SD=1.12; $M_{NON\text{-}FOMO\text{-}COND.}$=3.61, SD=1.36; *t*(129)=4.85; p<.01, r=.39), providing confidence for the manipulation. To test hypothesis 1, an ANOVA was performed to test the effect of the FOMO appeals on consumers investment intention. The results revealed a significant main effect of FOMO on investment intention and showed that the FOMO appeal rather than the non-FOMO appeal increases investment intention ($M_{FOMO\text{-}APPEAL}$=4.66, SD=1.52; $M_{NON\text{-}FOMO\text{-}APPEAL}$=3.95, SD=1.38; F(1,124)=8.40; p<.01, r=.25). This effect was controlled for gender, age, education, investment frequency and income. The results of study 1A suggest a positive impact of FOMO appeals on individuals' investment intention, confirming H1. The FOMO appeal leads participants to show higher levels, whereas in the non-FOMO appeal condition, participants displayed lower levels of investment intention.

After establishing the main effect for FOMO, the question arises whether the participant's investment intention is not solely driven by dispositional espousal to social norms. We conducted an ancillary study (n=123) to address this question by including the social desirability measure from Strahan and Gerbasi (1972). An independent samples *t*-test revealed no significant difference in social desirability ($M_{FOMO\text{-}APPEAL}$=5.01, SD=.88; $M_{NON\text{-}FOMO\text{-}APPEAL}$=5.14, SD=.94; *t*(121)=-.26; p>.1, r=.01) among the FOMO conditions. Additionally, when controlling for social desirability, the effect of FOMO on investment intention remained significant ($M_{FOMO\text{-}APPEAL}$=4.88, SD=1.09; $M_{NON\text{-}FOMO\text{-}APPEAL}$=4.00, SD=1.30; F(1,120)=17.25; p<.001, r=.36), ruling out this potential issue.

4.4.2 Study 1B: FOMO appeals and investment decision: A laboratory study

Study 1B aims to extend the findings from Study 1A with a behavioural outcome measure in a laboratory setup. Thus, the same study design as in Study 1A was applied.

Design and procedure: A between-subjects experiment with two conditions representing FOMO vs. non-FOMO appeals was conducted. 100 undergraduate students from a small European university were recruited on a voluntary basis under the incentive to receive monetary compensation in a study on financial decision-making. In the laboratory, they were presented the study's instructions. Each participant received 2€ to invest. Participants were instructed that they would be compensated based on their investment decisions. That is, they were instructed that they could win or lose. And that they can also choose not to invest (or invest only a part of the money). Then, participants were randomly exposed to the FOMO - or non-FOMO appeal condition (similar as in study 1A). After, individuals indicated how much they would like to invest and were finally compensated based on their investment decision. 16 respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 84 participants. The demographics indicated that the respondents had a mean age of 23 years (SD=10.11) and that 61% of them were female.

Results and discussion: To test hypothesis 1 in this laboratory setting, an ANOVA was performed to test the effect of the FOMO appeals on investment decision. The results revealed a significant main effect of FOMO on investment decision and showed that the FOMO appeal rather than the non-FOMO appeal increases the amount of money invested ($M_{FOMO\text{-}APPEAL}$=1.60€, SD=.55; $M_{NON\text{-}FOMO\text{-}APPEAL}$=0.92€, SD=.69; F(1,78)=24.57; p<.001, r=.48). This effect was controlled for gender, age, investment frequency and income. Furthermore, 9 participants decided not to invest (seven of them in the non-FOMO appeal condition). A chi-square test showed a statistically significant relationship between the FOMO condition and the decision to invest (x^2(1)=6.88, p=<.05), in such a way that respondents in the non-FOMO condition were less likely to invest.

The study illustrated that the effect of FOMO appeals on consumers investment decision holds with an actual decision involving real money, further supporting H1. Therefore, the results from study 1A and 1B demonstrate that FOMO appeals trigger higher investment intentions, as well as higher monetary investments in unknown cryptos. The primary goal of both studies was to establish the manipulation, and to explore if FOMO appeals influence individuals' investment decision. Therefore, the results of these studies set the baseline for the subsequent studies by applying FOMO appeal conditions for the manipulations. The following studies focus on the causal effects of FOMO appeals with the additional variables included.

4.4.3 Study 2: The interplay between FOMO appeals, affective processes, and investment intention

Study 2 aims to explain how FOMO appeals affect consumers intention to invest via affective processes. Based on the notion that FOMO triggers emotional responses that subsequently impact behavioural outcomes (Good & Hyman, 2020), this study explores how consumers' subjective expected pleasure and anticipated regret mediate the effect of FOMO appeals on consumers' investment intention.

On the one hand, the subjective expectation of pleasure depicts a state of mind when individuals are certain about the positive feelings they will encounter in a future consumption event (Moore, 2014). Individuals imagine how good or bad it would feel to experience specific outcomes, given that the envisioned future event has actually happened (Baumgartner et al., 2008). Hence, these expectations of consumption

pleasure significantly impact their expected enjoyment of the consumption experience. The greater the positive feelings consumers have, such as for a gain deriving from an investment, the more pleasure they might derive once they encounter the satisfaction of consumption (Alba & Williams, 2013). In this sense, individuals who invest their money might feel positive when making a gain and feel bad when suffering a loss, and therefore, an expected pleasure deriving from an investment may influence the investment decision (Cheng, 2014). On the other hand, FOMO has a strong social component, as stated in the fear of not being part of something (Zhang et al., 2020). Therefore, the expected pleasure might also be derived from the feeling of being part of crypto investors, or even from the idea to be smarter than others and having spotted an opportunity when it arose. Accordingly, when people are exposed to FOMO appeals, they are more likely to experience positive feelings about the monetary and or social gain they might obtain from investing. Thus, the study argues that FOMO appeals enhance one's subjective expected pleasure which extends to increased intentions to invest (Moore, 2014). Hence, it is proposed:

H2: Subjective expected pleasure mediates the effect of FOMO appeals on investment intentions. Specifically, FOMO appeals enhance the expected pleasure, which will amplify the intention to invest.

On the other hand, the regret theory suggests that individuals anticipate and consider the consequences of their decisions. The importance of regret in judgment and decision-making was recognised by several scholars (e.g. Shih & Schau, 2011; Tzini & Jain, 2017). While regret refers to the negative evaluation of past decisions (Landman, 1987), anticipated regret occurs before making a choice when individuals envision the regret they will likely feel if they make a particular decision (Wong & Kwong, 2007). Therefore, this study focuses on anticipated regret as it considers an individual's experience concerning potential future decisions (i.e. decision to invest) rather than past decisions (Hayran et al., 2020). In other words, individuals might anticipate potential counterfactual alternatives and their associated emotional costs before an investment decision by mentally stimulating the potential outcomes (Shih & Schau, 2011). This is, individuals might foresee the regret of investing in a volatile asset, such as pondering that they should have saved the money or spent it on necessities. Moreover, investment decisions often entail financial trade-offs that might make individuals anticipate regret. Accordingly, FOMO appeals might lessen individuals anticipated regret of investing by giving a personally acceptable investment

justification, which extends to increased intentions to invest (Good & Hyman, 2021). Thus, it is proposed:

H3: Anticipated regret mediates the effect of FOMO appeals on investment intentions. Specifically, FOMO appeals reduce anticipated regret, which will amplify the intention to invest.

Design and procedure: A between-subjects experiment with two conditions representing FOMO vs. non-FOMO appeals was conducted. We used the same vignette as in study 1A. Participants were randomly exposed to the FOMO - or non-FOMO appeal condition. Afterwards, the study's measurements were collected. We recruited 255 participants from Amazon Mturk to serve nonprofessional investors in our experiment. 21 respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 234 participants. The demographics indicated that the respondents had a mean age of 34 years (SD=11.81) and that 53% of them were male.

Measures, coding and reliability: After the respondents had been assigned to their respective conditions, participants submitted scores on subjective expected pleasure with a four-item measure (e.g. 'When you think about investing in this crypto, how does that make you feel?; (a) excited') adapted from Mellers et al. (1999) and Van Boven and Ashworth (2007), anticipated regret with a three-item measure (e.g. 'I would be sorry because I should save money') adapted from Tsiros and Mittal (2000) and investment intention with a one-item measure adapted from Good and Hyman (2021). All items were measured using a 7-point Likert scale, and all scales achieved high reliability (Cronbach's alpha was >0.7; see appendix B).

Results and discussion: First, the effect of FOMO appeal on investment intention (H1) was tested again in this more comprehensive setting. An ANOVA was performed, revealing a significant main effect of FOMO appeal on investment intention and showed that FOMO appeal, rather than non-FOMO appeal increases the intention to invest ($M_{FOMO\text{-}APPEAL}$=5.40, SD=.97; $M_{NON\text{-}FOMO\text{-}APPEAL}$=4.15, SD=1.81; F(1,228)=56.13; p<.001, r=.44). It was controlled for gender, age, education and income. In order to test hypothesis 2 and 3, a mediation analysis (Process Model 4; 5,000 bootstrapped samples; Hayes, 2017) was carried out to further investigate the mediating role of

subjective expected pleasure (M1) and anticipated regret (M2) in the relationship between FOMO appeal (X) and investment intention (Y).

First, results indicated that the path from FOMO appeal to subjective expected pleasure was positive and significant (β=1.05, SE=.18, p<.001), whereas it was negative and significant to anticipated regret (β=-1.92, SE=.20, p<.001). The direct effect of subjective expected pleasure on investment intention was positive and significant (β=.71, SE=.06, p<.001), while anticipated regret had a significant negative effect on investment intention (β=-.12, SE=.05, p<.05). The main effect of FOMO appeal on investment intention was positive and significant (β=.55, SE=.19, p<.01), the indirect effect of FOMO appeal on investment intention via subjective expected pleasure (β=.75, SE=.15, CI95[.47,1.04]) as well as anticipated regret (β=.24, SE=.11, CI95[.04,.47]) was significant too, indicating a partial mediation. The index of the mediation was significant too (β=1.00, SE=.17, CI95[.67,1.33]).

Study 2 suggests further support for the impact of FOMO appeals on consumers investment intention (H1). Furthermore, the study illustrates the mediating role of subjective expected pleasure and anticipated regret (partially) in this relationship, confirming H2 and H3.

4.4.4 Study 3: The interplay between FOMO appeals, affective processes, personal traits and investment intention

Study 3 aims to further explore how FOMO appeals affect consumers' intention to invest via affective processes, that is, subjective expected pleasure and anticipated regret, in a more comprehensive setting by adding personal traits. Specifically, it assesses whether individuals' impulsiveness moderates how FOMO appeals affect an individual's investment intention.

Impulsivity has been found to play a critical role in individuals' decision-making choices and has been linked to individuals' risk-taking behaviour (Passanisi & Pace, 2017; Romer, 2010; Stautz & Cooper, 2013). For this reason, it represents an underlined personality trait that is linked to several behavioural addictions, such as gambling, internet and social media compulsion (Fowler et al., 2020). Impulsiveness refers to an individual's "predisposition towards rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individuals or to others" (Moeller et al., 2001, p.1784). It can be considered a personal

tendency to lack thorough consideration and planning of tasks, seek stimulation, and take a risk and rapid decision-making (Chen et al., 2015). Most consumer traits that associate with impulse buying, including buying impulsiveness (Rook & Fisher, 1995) or consumer impulsiveness (Puri, 1996), originate from a single personality trait of impulsivity (Sharma et al., 2010).

Youn and Faber (2000) suggest that individuals possessing firm impulsivity trait levels are more likely to respond to marketing overtures, including ads, visuals and promotions, as opposed to those having lower impulsivity trait levels. In this line, as individuals differ in their propensity to be impulsive, individuals with high impulsivity levels are suggested to make more impulsive purchases even when the purchase decision involves high risks (Lee & Yi, 2008). Even in popular culture, it has long been common ground that impulsive people experience less borders preventing them from action (Jeznach et al., 2006). Previous research showed that external stimuli (e.g. special purchase offers) exert some sort of time pressure on consumers that can leverage impulsive purchase behaviours (Spears, 2001). FOMO appeals can advocate consumers to execute behaviours to defend against “missing out”. Consequently, the positive relationship between FOMO appeals and investment intentions might be stronger for individuals with firm impulsivity levels.

This is, because those individuals are more eager to avoid FOMO by heeding those appeals by investing. Recent literature shows that an individual’s difference in the predisposition to be impulsive moderates consumers’ decision-making process and, ultimately, buying intentions (Van Steenburg & Naderi, 2019). Hence, FOMO appeals should have higher effects on consumers’ intention to invest when they possess higher levels of impulsivity. Thus, it is proposed:

H4: Individuals’ impulsivity levels will moderate the effect of FOMO appeals on investment intentions, such that the effects will be stronger (weaker) at higher (lower) impulsivity levels.

Design and procedure: A between-subjects experiment with two conditions representing FOMO vs. non-FOMO appeals was conducted. Before participants were exposed to the vignette and the respective FOMO conditions, the personal trait impulsivity was measured. We used the same vignette as in study 1A. Participants were randomly exposed to the FOMO - or non-FOMO appeal condition. Afterwards, the study’s measurements were collected. We recruited 250 participants from Amazon

Mturk to serve nonprofessional investors in our experiment. 23 respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 227 participants. The demographics indicated that the respondents had a mean age of 33 years (SD=9.80) and that 55% of them were male.

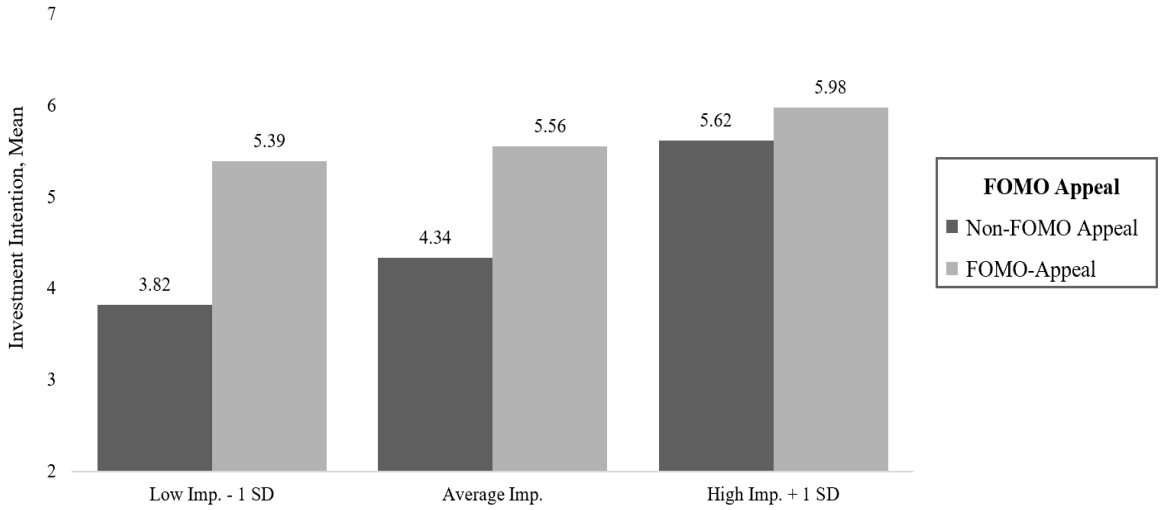
Measures, coding and reliability: After the filter variables, the personal trait impulsivity was measured with an 8-item scale (e.g. 'I plan tasks carefully') with the Barratt Impulsiveness Scale-Brief from Steinberg et al. (2013). After the respondents had been assigned to their respective condition, participants submitted scores on subjective expected pleasure, anticipated regret and investment intention. All items were measured using a 7-point Likert scale, and all scales achieved high reliability (Cronbach's alpha was >0.7; see appendix B).

Results and discussion: First, an ANOVA was performed, revealing a significant main effect of FOMO appeal on investment intention and showed that FOMO appeal, rather than non-FOMO appeal increases the intention to invest ($M_{FOMO\text{-}APPEAL}$=5.65, SD=1.13; $M_{NON\text{-}FOMO\text{-}APPEAL}$=4.38 SD=1.93; F(1,221)=38.25; p<.001, r=.41). It was controlled for gender, age, education and income. In order to test hypothesis 4, a mediation analysis with moderation on the main effect (Process Model 5; 5,000 bootstrapped samples; Hayes, 2017) was carried out to further investigate the mediating role of subjective expected pleasure (M1) and anticipated regret (M2) in the relationship between FOMO appeal (X) and investment intention (Y), as well as the moderating role of impulsivity (W). The findings showed that FOMO appeal (X) had a significant positive effect on subjective expected pleasure (M1) (β=1.18, SE=.19, p<.001) and a significant negative effect on anticipated regret (M2) (β=-1.37, SE=.22, p<.001). For investment intention (Y), subjective expected pleasure had a significant positive effect (β=.77, SE=.05, p<.001), whereas anticipated regret had a significant negative effect (β=-.16, SE=.05, p<.01). Impulsivity had a non-significant effect on investment intention (β=.12, SE=.07, p>.05), while the interaction between impulsivity and FOMO appeal was significant (β=-.21, SE=.08, p<.01).

To identify ranges of impulsivity scores where the effect on investment intention was significant and where it was not, a floodlight analysis was conducted (Spiller et al., 2013). Conducting the floodlight analysis over a range of the moderator variable from 1=very low impulsivity to 7=very high impulsivity yields a Johnson-Neyman point for

p=.05 (*t*=1.97) at a value of 5.28. This value indicates that when impulsivity scores were 5.28 or higher, the conditional effect of FOMO became non-significant. In contrast, when impulsivity scores were below the critical value, the effect of FOMO was significant. In the sample, 83% of the respondents scored below the significance point. Figure 4.2 shows the means for investment intention under different levels of impulsivity.

Figure 4.2. FOMO and non-FOMO appeal in interaction with impulsivity.



Note: SD=Standard Deviation

When turning to the mediation results, it became apparent that FOMO appeal has significant direct effects on investment intention (β=1.24, SE=.31, p<.01). The indirect effects on investment intention were significant for both subjective expected pleasure (β=.91, SE=.16, CI95[.61,1.24]) and anticipated regret (β=.17, SE=.07, CI95[.06,.36]). The index of the mediation was significant too (β=1.13, SE=.17, CI95[.79,1.48]). The results of the analysis are shown in Table 4.1.

Table 4.1. Results of the analysis.

Mediation (Model 5)								
	M1 (Subjective Expected Pleasure)				*Y (Investment Intention)*			
Antecedent	Coefficient	SE	*t*	p	Coefficient	SE	*t*	p
X (FOMO)	1.18	.19	6.01	.000	1.24	.31	3.14	.002
W (Impulsiveness)					.12	.07	1.67	.064
X*W					-.21	.08	-2.35	.009
M1 (Subj.Exp.Pl.)					.77	.05	16.79	.000
	M2 (Anticipated Regret)				*Y (Investment Intention)*			
X (FOMO)	-1.37	.22	-6.21	.000				
M2 (Ant. Regret)					-.16	.05	-2.95	.004
Constant					1.24	.42	2.92	.003
Indirect effect of X (FOMO) on Y (Investment Intention)								
					Effect	BootSE	BootLLCI	BootULCI
M1 (Subj.Exp.Pl.)					.91	.16	.61	1.24
M2 (Ant. Regret)					.17	.07	.06	.36
Model Summary	R^2 for M1 =.47; R^2 for M2 =.38.				1.13	.17	.79	1.48

Study 3 shows further support for FOMO appeal's influence on consumers' investment intention (H1). Furthermore, the study illustrates the mediating role of subjective expected pleasure and anticipated regret (partially) in this more comprehensive setting, providing further support for H2 and H3. Surprisingly, individuals' impulsivity levels did not increase the positive effect of FOMO appeal on investment intention, but rather reduced it, thus rejecting H4. Hence, highly impulsive consumers might be stronger inclined to engage in risky investments based on their inherent impulsivity levels, rather than because of externally induced appeals. Interestingly, the results suggest that FOMO appeals have stronger effects on less impulsive individuals, demonstrating its relevance in affecting consumers who usually do not act impulsively.

4.4.5 Study 4: FOMO appeals and repeated investments

Study 4 aims to explore more in-depth how FOMO appeals affect consumers' investment decision. Precisely, it explores how, and if, individuals exposed to FOMO appeals repeatedly invest in cryptos, even if a prior loss has been experienced before. Individuals' FOMO levels can account for frequent and excessive behaviours that likely have adverse effects on their well-being, such as social media and online gaming addictions (e.g. Blackwell et al., 2017; Duman & Ozkara, 2021). In fact, crypto trading shares similarities with online gambling. For instance, individuals involved in sports betting and high-risk stock trading are also often engaged in crypto trading, of which a substantial amount are day traders (Mills & Nower, 2019). As individuals with online gaming addictions are likely to gamble - repeatedly - even if losses have been experienced, the same might apply to crypto investments. Consequently, by drawing upon the above discussion, FOMO appeals may induce consumers to repeatedly conduct adverse financial decisions, that is, investing in unknown cryptos. Therefore, the following is proposed:

H5: FOMO appeals induce individuals to repeatedly conduct adverse financial decisions. Specifically, when consumers are exposed to FOMO appeals, they show higher tendencies to reinvest, even if a prior loss has been faced.

Design and procedure: A 2 (FOMO vs. non-FOMO appeal) x 2 (winning vs. losing condition) between-subjects design was used to test the hypothesis. Participants were randomly exposed to the FOMO - or non-FOMO appeal condition (same as in study

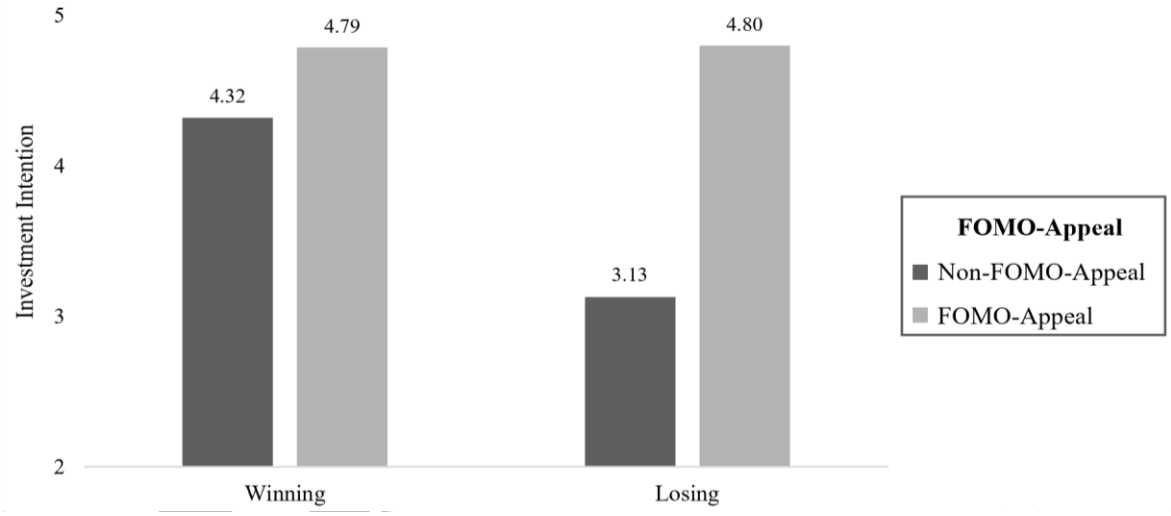
1A). After, individuals' investment intention was measured. They were then randomly exposed to the condition of winning vs. losing by receiving information that the price of the crypto they invested in increased (decreased) by 60%, and now have the chance to invest again in a new crypto. After, again, individuals' investment intention was measured (appendix A). We recruited 290 participants from Amazon Mturk to serve nonprofessional investors in our experiment. 15 respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 275 participants. The demographics indicated that the respondents had a mean age of 34 years (SD=10.41) and that 58% of them were male.

Measures, coding and reliability: After the respondents had been assigned to their FOMO appeal (non-FOMO appeal) condition, participants submitted scores on investment intention (II1). Afterwards, respondents had been assigned to their winning (losing) condition and again, submitted scores on investment intention (II2). Items were measured using a 7-point Likert scale.

Results and discussion: The 2 (FOMO vs. non-FOMO appeal) x 2 (winning vs. losing condition) between-subjects ANOVA indicates a significant main effect of FOMO appeal ($F(1,271)=26.73$, $p<.001$, $r=.30$) and a significant main effect of winning ($F(1,271)=7.96$, $p<.01$, $r=.17$) on II2. Importantly, a significant interaction effect of FOMO appeal and winning was found ($F(1,271)=8.29$, $p<.01$, $r=.17$). Using planned comparisons, we found that participants showed higher II2 in the non-FOMO appeal condition when they win, rather than lose ($M_{NoFOMO\text{-}Winning}=4.32$, $SD=1.26$; $M_{NoFOMO\text{-}Losing}=3.13$, $SD=1.85$; $F(1,271)=16.80$; $p<.001$, $r=.24$). Interestingly, in the FOMO appeal condition, the win or loss made did not alter participants II2 ($M_{FOMO\text{-}Winning}=4.79$, $SD=1.94$; $M_{FOMO\text{-}Losing}=4.80$, $SD=1.79$; $F(1,271)=.00$; $p>.1$, $r=.00$), giving support for H5. Participants in the non-FOMO appeal condition that made a loss showed lower II2 than participants in the FOMO appeal with loss condition ($M_{NoFOMO\text{-}Losing}=3.13$, $SD=1.85$; $M_{FOMO\text{-}Losing}=4.80$, $SD=1.79$; $F(1,271)=31.85$; $p<.001$, $r=.32$). Furthermore, they showed lower II2 in the non-FOMO appeal condition exposed to a loss, than in the FOMO appeal with win scenario ($M_{NoFOMO\text{-}Losing}=3.13$, $SD=1.85$; $M_{FOMO\text{-}Winning}=4.79$, $SD=1.94$; $F(1,271)=31.63$; $p<.001$, $r=.32$). Participants in the non-FOMO appeal condition exposed to a win exhibited lower II2 than participants in the FOMO appeal condition exposed to a loss ($M_{NoFOMO\text{-}Winning}=4.32$, $SD=1.26$; $M_{FOMO\text{-}Losing}=4.80$,

SD=1.79; F(1,271)=2.79; p=.09, r=.10). Finally, in the non-FOMO appeal condition exposed to a win, participants showed no significant difference in II2 than in the FOMO appeal condition exposed to a win ($M_{NoFOMO\text{-}Winning}$=4.32, SD=1.26; $M_{FOMO\text{-}Winning}$=4.79, SD=1.94; F(1,271)=2.67; p>.1, r=.10). Figure 4.3 shows the means for II2 by the FOMO and non-FOMO appeal condition.

Figure 4.3. Means for II2 by FOMO condition with winning and losing scenario.



The results of study 4 support H5. Specifically, the findings suggest that winning itself motivates participants to reinvest. In the non-FOMO condition, participants showed higher investment intentions when a win was made than in the loss condition, where participants showed significantly lower reinvestment levels. However, more importantly, the results suggest that the influence of FOMO appeals extends beyond winning or losing money, as individuals exposed to the FOMO appeal and loss condition were more likely to reinvest than individuals in the non-FOMO appeal and winning condition. Hence, when exposed to FOMO appeals, high levels of investment intentions are prevalent, independent of prior losses or wins.

4.4.6 Study 5: The interplay between FOMO appeals and counter-message tactics

Beyond exploring consumers succumbing to FOMO appeals in the crypto context, this study aims to develop counter-message tactics to reduce the effects of the appeal. Specifically, it explores whether fear and hope messages reduce FOMO appeals influence on individuals' investment intention.

On the one hand, fear appeals have been widely used in political, public health and advertising campaigns to minimise consumers' risky intentions and behaviours (e.g. Xu et al., 2015). These appeals are persuasive messages that attempt to arouse fear by emphasising the potential danger and harm that will befall individuals if they do not embrace the messages' recommendations (Dillard et al., 1996). Although numerous practitioners and scholars claim that fear messages are futile and counterproductive (e.g. Ruiter et al., 2014), more recent results suggest that fear messages are effective (e.g. Tannenbaum et al., 2015). They found that fear appeals successfully influenced individuals' attitudes, intentions, and behaviours. Furthermore, Tannenbaum et al. (2015) illustrated that the effectiveness of fear messages increases when they include efficacy statements, depict high severity and recommend one-time-only behaviours.

On the other hand, the generation of positive emotions is regarded as a promoting factor in influencing consumers' attitudes and motivation. Notably, hope appeals are a popular persuasion tactic among advertisers and scholars to help consumers attain desirable goals (e.g. Poels & Dewitte, 2008). Hope appeals are messages that create opportunities (i.e. future outcomes that may or will occur or are meant to create a better future) by evoking appraisals that constitute hope. Hence, they present a way for consumers to take advantage of that opportunity (Chadwick, 2015).

Previous findings show that induced hope strongly influences consumers' consumption behaviours (Winterich & Haws, 2011). Furthermore, hope appeals are suggested as an effective strategy for motivating consumer conduct (Chadwick, 2015). Both, fear and hope appeals, were found to impact consumer behaviour (e.g. Chadwick, 2015; Tannenbaum et al., 2015), mainly to prevent consumers from engaging in adverse conduct (e.g. Nabi & Myrick, 2018; Xu et al., 2015).

Therefore, based on the above discussion, this study develops two counter-messages (i.e. fear and hope; see appendix C), in the attempt to reduce FOMO appeals effects. Accordingly, it is proposed:

H6: Fear and hope messages will reduce the effect of FOMO appeals on investment intention. Specifically, the effects of the FOMO appeal will be weaker when exposed to fear and hope messages.

Design and procedure: The included fear message refers to the potential of losing money when investing in cryptos (i.e. "9 out of 10 investors suffer severe losses when investing into crypto"). Conversely, the hope message evokes a potential, positive future scenario that is less tangible and definable (i.e. "Be smarter than others and do your own research first"). Both messages were pilot tested prior to this study[6].

A 2 (FOMO vs. non-FOMO appeal) x 3 (fear vs. hope vs. no message) between-subjects design was used to test the hypothesis. The same vignette as in study 1A was used. Participants were first randomly exposed to the FOMO - or non-FOMO appeal condition. Second, they were randomly exposed to one of the three message condition. Afterwards, the study's measurements were collected. We recruited 281 participants from Amazon Mturk to serve nonprofessional investors in our experiment. 25 respondents were dropped from the analyses due to having failed attention check questions, leaving a final sample of 256 participants. The demographics indicated that the respondents had a mean age of 34 years (SD=11.05) and that 54% of them were male.

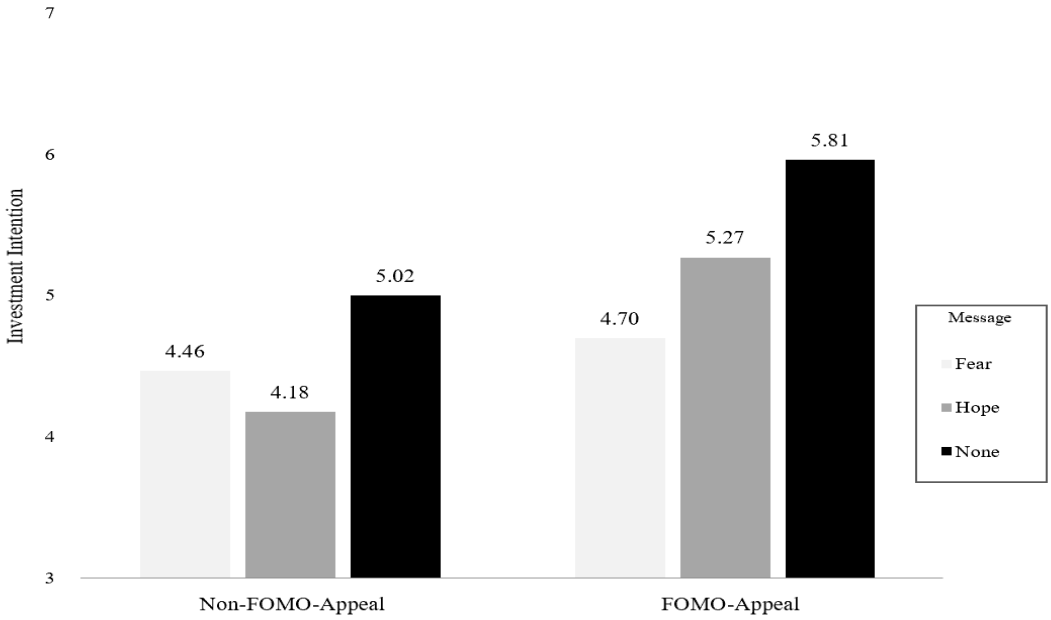
[6] Participants (n=93) scored the different messages within the frames of a multi-point rating option, ranging from a scale of 1 (fearful/resigned) to 9 (confident/hopeful). Paired sample *t*-tests (fear vs. neutral, hope vs. neutral and fear vs. hope message) revealed that participants perceived the fear message significantly more fearful than the neutral message (M_{Fear}=4.94, SD=2.92; $M_{Neutral}$=5.69, SD=2.42; $t(92)=5.23$, p<.001, r=.56). Also, participants perceived the hope message significantly more hopeful than the neutral message (M_{Hope}=6.67, SD=2.01; $M_{Neutral}$=5.69, SD=2.42; $t(92)=-4.71$, p<.001, r=.59). Furthermore, the fear message was perceived as more fearful than the hope message and vice versa (M_{Fear}=4.94, SD=2.92; M_{Hope}=6.67, SD=2.01; $t(92)=-7.05$, p<.001, r=.66).

Measures, coding and reliability: After the respondents had been assigned to their FOMO appeal (non-FOMO appeal) as well as message condition (fear vs. hope vs. no message), they submitted scores on investment intention.

Results and discussion: The 2 (FOMO vs. non-FOMO appeal) x 3 (fear vs. hope vs. no message) between-subjects ANOVA indicates a significant main effect of FOMO appeal ($F(1,250)=10.52$, $p<.01$, $r=.20$) and a significant main effect of message ($F(1,250)=4.59$, $p<.05$, $r=.19$) on investment intention. Further, a non-significant interaction effect of FOMO appeal and message was found ($F(1,250)=1.60$, $p>.1$, $r=.11$).

More narrowly, planned comparisons reveal the full scope of the results. As expected, in the no message condition, participants showed significant lower levels of investment intentions in the non-FOMO appeal condition than in the FOMO appeal condition ($M_{NoFOMO\text{-}NoMessage}=5.02$, $SD=1.86$; $M_{FOMO\text{-}NoMessage}=5.81$, $SD=.98$; $F(1,250)=7.11$; $p<.01$, $r=.17$) replicating the results from the prior studies. With regards to the fear message, participants in the non-FOMO appeal condition showed similar levels of investment intention than in the FOMO appeal condition ($M_{NoFOMO\text{-}Fear}=4.46$, $SD=2.15$; $M_{FOMO\text{-}Fear}=4.70$, $SD=1.87$; $F(1,250)=.17$; $p>.1$, $r=.01$). Interestingly, the results showed that the fear message significantly lowers investment intention in the FOMO appeal condition, when contrasting with the FOMO appeal and no message condition ($M_{FOMO\text{-}Fear}=4.70$, $SD=1.87$; $M_{FOMO\text{-}NoMessage}=5.81$, $SD=.98$; $F(1,250)=10.51$; $p<.01$, $r=.20$). Furthermore, regarding the hope message, participants in the non-FOMO appeal condition demonstrated significant lower levels of investment intentions than in the FOMO appeal condition ($M_{NoFOMO\text{-}Hope}=4.18$, $SD=2.21$; $M_{FOMO\text{-}Hope}=5.27$, $SD=1.79$; $F(1,250)=6.42$; $p<.05$, $r=.16$). Furthermore, in the FOMO appeal condition, the hope message did not significantly lower investment intentions compared to the no message condition ($M_{FOMO\text{-}Hope}=5.27$, $SD=1.79$; $M_{FOMO\text{-}NoMessage}=5.81$, $SD=.98$; $F(1,250)=3.47$; $p>.05$, $r=.12$). Figure 4.4 illustrates the means for investment intention by the FOMO and non-FOMO appeal condition.

Figure 4.4. Means for investment intention by the FOMO conditions.



The findings indicate no significant interaction between messages and FOMO appeal, rejecting H5. However, the results demonstrate that the fear message reduces consumers' investment intention in the FOMO appeal condition. Specifically, the results indicate that the fear and FOMO appeal condition show no significant differences from the three non-FOMO appeal conditions. Accordingly, the fear message fully mitigates the FOMO appeal effect, while the hope message only gradually lowers it. Interestingly, in the absence of the FOMO appeal, a hope message seems to be most efficient in reducing investment intentions.

4.5 General discussion and implications

The interest of academics and policymakers in finding answers to why consumers are increasingly investing in cryptos and what are the mechanisms underlying such behaviour is undeniably growing (Carpenter et al., 2021; Härdle et al., 2020).
Yet, empirical research that attempts to address this ongoing phenomenon remains limited. Therefore, this research presents five empirical studies to shed light on this issue. Specifically, the study finds that externally evoked FOMO appeals represent an underlying mechanism of such behaviour (Study 1A and B) and that consumers' subjective expected pleasure and anticipated regret partially mediate the effect of FOMO appeals on consumers' investment intention (Study 2). Furthermore, the study indicates how personal traits, precisely an individual's impulsivity levels, moderate the effect of FOMO appeals on investment intention (Study 3). The study further explored how FOMO appeals induce consumers to repeatedly conduct adverse decisions. It demonstrates that consumers exposed to FOMO appeals reinvest in unknown cryptos despite prior losses, exemplifying the construct's potential adverse consequences (Study 4). Finally, the study shows how counter-message tactics reduce the effects of FOMO appeals (Study 5). Mainly, the study illustrates how fear messages fully mitigate the effects of FOMO appeals on consumers' investment intention.
In sum, this study primarily examines the mechanisms underlying consumers' increased crypto engagement. It advances the nascent conceptual development of FOMO appeals and guides marketing's transformation to become more responsible, respectful and resilient. The findings of the five studies provide several theoretical and practical implications that are discussed in the following sections.

4.5.1 Theoretical contributions

This research makes several contributions to the extant literature.

First, the study informs the debate about the positive effects of externally evoked FOMO appeals on consumers' investment intention. Contrarily to previous scholars conceptualising FOMO as a general concern about other people's activities (Przybylski et al., 2013), FOMO as a context-specific phenomenon (i.e. FOMO appeals) explains consumers' behavioural outcomes. FOMO appeals enhance the willingness to invest in highly volatile assets, both in actual monetary terms and in investment intentions. While previous research showed that FOMO appeals have a positive influence on purchase intention for services (i.e. concert tickets) (Good & Hyman, 2021), this study primarily explores FOMO appeals in the financial context and provides further elaboration beyond the widely applied trait measure of FOMO to explain consumers financial decision-making (Clor-Proell et al., 2020; Przybylski et al., 2013).

Second, the study provides insights on how the FOMO effects can be explained. On the one hand, FOMO appeals reduce consumers' anticipated regret when engaging in crypto investments. The literature found anticipated regret to be a relevant determinant for consumers security and avoidance behaviour (e.g. Verkijika, 2019). As FOMO appeals lower consumers anticipated regret and, therefore, their emotional safety net, it shows its potential negative consequences in the crypto context that directly relates to consumers' financial hazard.

On the other hand, FOMO appeals augment consumers' expected pleasure of engaging in crypto investments. Accordingly, the appeals enhance consumers' positive affective states by increasing the expected pleasure of a seemingly profitable investment opportunity. Hence, both, consumers lessened emotional safety nets and increased positive affective states explain FOMO appeal's effects on crypto investments.

Third, this study reveals that individuals' impulsivity levels moderate the FOMO appeals effect. High impulsivity levels are related to higher investment intention. This connects to prior literature suggesting the predisposition of impulsivity as the preference for more immediate rewards over more delayed ones (Passanisi & Pace, 2017), such as deciding to invest in unknown cryptos for a potential monetary gain. However, more importantly, impulsivity moderates the FOMO appeals effect in such a

way that it is more substantial for less impulsive persons. The appeals, therefore, drag individuals who usually do not act impulsively into adverse financial decision-making, while highly impulsive individuals are likely to invest in absence or presence of FOMO appeals, indicating a ceiling effect.

Fourth, the influence of FOMO appeals extends beyond winning and losing money. Individuals exposed to the FOMO appeal and loss condition were more likely to reinvest than those with the non-FOMO appeal and win condition. The study, thus, primarily indicates that FOMO appeals have substantial and lasting effects on consumers' investment decisions, which might even offset actual financial losses, and which are stronger than financial gains in the absence of FOMO appeals. This finding demonstrates the potential adverse effects of FOMO appeals in the financial context.

Finally, this research sheds light on counter-message tactics' role in alleviating FOMO appeals effects. An affective message such as fear can counter the affective state generated by FOMO appeals. The results showed that the fear message could fully mitigate the FOMO appeals effect, in line with previous literature (Tannenbaum et al., 2015). In contrast, messages that do not explicitly emphasise the potential danger and hazard related to crypto investment, thus not evoking fear, such as the applied hope message, might not be helpful in reducing the effects of FOMO appeals and only develop their full strength in absence of FOMO appeals.

4.5.2 Managerial contributions

The findings also offer implications for practice. The study states practical inferences for policymakers and non-profit agencies to prevent consumers from succumbing to FOMO appeals. It also offers inferences for for-profit organisations that may help managers improve and overhaul current business models.

First, given that FOMO appeals influence consumers' investment intention, policymakers and non-profit agencies should design public service announcements and communication messages that downplay fears about missing out. These activities could concentrate on content that stresses that following others based on experienced FOMO can lead to unfavourable outcomes. In addition, based on the study's results, policymakers and non-profit agencies should focus on fear appeals, as they are likely to lessen FOMO appeals effects. These interventions might be placed best on virtual social networks and online platforms private investors frequently use to access

information, such as Reddit or Seeking Alpha (Webb, 2021). Automatised vignettes with links to objective information, as used in the case of COVID19 on many social networks might be a fruitful avenue for social media companies to reduce the FOMO effects.

Given the moderating role of personality traits, non-profit agencies and policymakers should focus on segmenting the market and target reactions to different groups of consumers. Notably, activities could be oriented to less impulsive persons, as they showed to be specifically susceptible to FOMO appeals. Impulsive persons on the other hand might need different types of interventions, as they are likely to invest in risky investments, both, in the absence and in the presence of a FOMO appeal.

Second, this study also offers implications for for-profit organisations. Concerning FOMO appeals, for-profit organisations should overhaul their investment platforms' marketing activities. Responsible marketing should not rely on pushing people into adverse decisions that might affect their long-term wealth. Hence, for-profit organisations can reduce the systematic bias of FOMO appeals in their technological applications (i.e. investment platforms) in order to maximise consumers' long-term wealth. For example, investors could be informed more explicitly about the inherent risk in crypto trading and the existing bias of FOMO appeals on related social media and online platforms. Furthermore, for-profit organisations could establish automated processes that limit investment amounts based on recent trading history, account balance and income information. Based on the study's findings, FOMO appeals can induce consumers to repeatedly invest in unknown cryptos even if losses have been faced before. Accordingly, limited investment amounts might reduce the hazardous effects of FOMO appeals in the crypto context.

4.5.3 Limitations and directions for future research

Some limitations of this study suggest topics for future investigations. First, the study respondents made hypothetical decisions based on a text vignette. This might cause research artefacts that threaten the validity of the results (Good & Hyman, 2021). In this line, future research could use video or print ads to induce FOMO appeals. Further, this research (except Study 1B) considered investment intentions equivalent to the behaviour finally executed by consumers. Referring to the intention-behaviour

gap, future research should consider using a proxy for spending real money. A field study using real investment behaviour could shed further light on this issue.

Second, other mediators should be considered in the context of FOMO and implying consumer behaviour. For illustration, FOMO appeals on social networks and online platforms might enhance consumers' situational envy of others' potential monetary gains. In specific, envy was found to induce impulsive behaviours when consumers want what others possess (Crusius & Mussweiler, 2012) and hence might play a critical role in forming consumers' decision-making. Especially more objective neuro marketing measures like emotional arousal or brain activity might help to enhance the understanding of the phenomenon.

Third, consumers' impulsivity levels were considered in this study. However, this may not be the only trait possibly influencing the FOMO appeals effects. The authors speculate that consumer differences in their ability to monitor and regulate spending-related decisions by self-imposed standards influence FOMO's effects on consumers' decision-making. Consumers' self-spending control differs between individuals (Haws et al., 2012) and hence, individuals with lower levels of self-spending control might be more likely to succumb to FOMO appeals.

Fourth, future studies should explore other counter-messages that potentially lower the effect of FOMO appeals. For example, besides affective messages (e.g. fear), cognitive messages such as rumination or doubting appeals might reduce FOMO effects in the crypto context. For this, future studies might conduct discrete choice experiments to provide more insights to practitioners under which attributes of counter-messages (i.e. fear, hope or rumination-based) consumers demonstrate higher or lower preference to invest. In addition, this can be combined by exposing consumers to newly launched cryptos and existing cryptos that are already launched. FOMO appeals might affect consumers' behaviour differently depending on whether the cryptos are new and hyped or existing in the market and already have historical price paths.

Finally, most data were collected from samples in the United States (Amazon Mturk). Thus, more research is needed to fully establish the validity of the results in other populations. Especially, conducting the experiments with older adults would be interesting because interpretations of FOMO could be susceptible to ageing (Zhang, 2020), thus, leading to different behavioural responses.

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Chapter 5

5. Conclusions

Chapter 5, the final chapter, presents the main conclusions of the thesis. Specifically, it presents an integrated discussion of the theoretical as well as managerial implications, limitations and future research lines of chapters 2, 3, and 4.

5.1 Contributions to theory

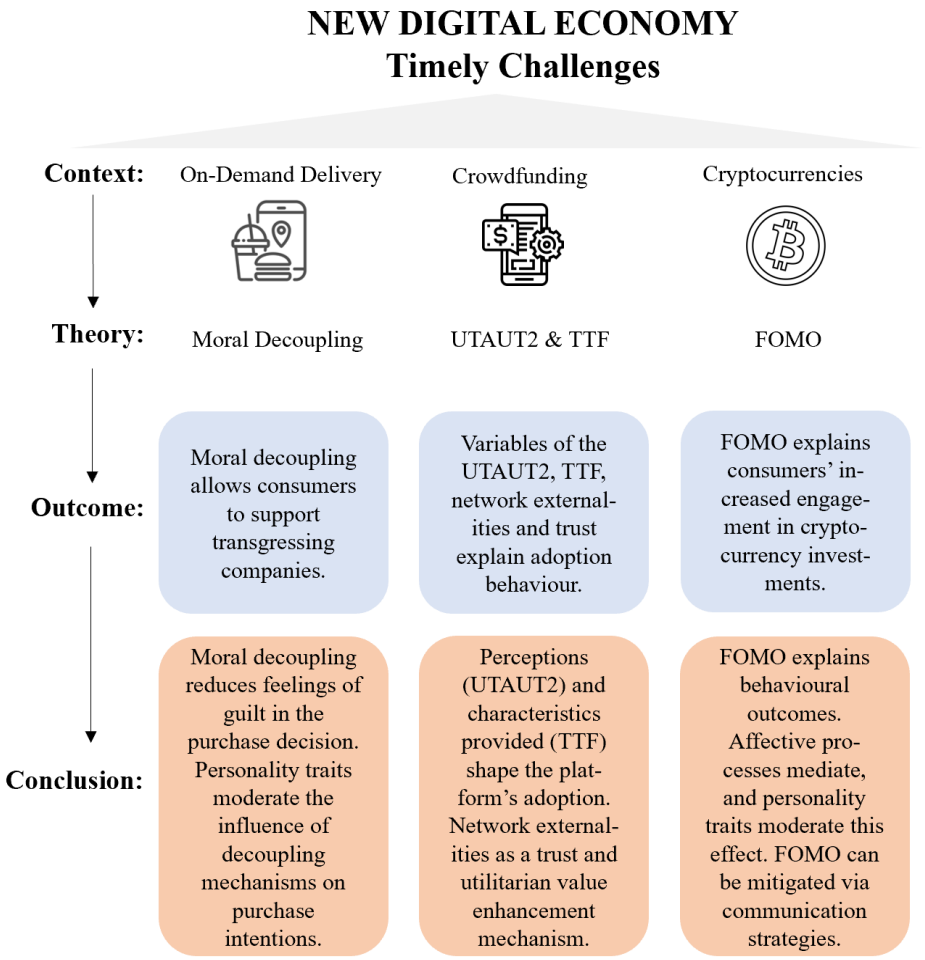
As many aspects of consumer interaction with digital products remained understudied, this thesis aimed to shed light on this issue from a marketing perspective. This thesis aimed to explore how consumers assess, select, engage and utilise digital products stemming from the new digital economy. To address this objective, this PhD thesis has focussed on essential and timely issues in consumer behaviour in the new digital economy framework. The results of the three context-specific studies yield several theoretical insights that translate into rich contributions to marketing research, managers and policymakers in the field. Figure 5.1 presents and summarises the studies context, applied theory, outcome and main conclusions.

First, by addressing the question of how consumers deliberately buy from, and 'support' companies involved in unethical conduct in the ODDS context, this thesis has contributed to the literature concerned with understanding consumers' reactions to irresponsible organisational behaviour in our current environment.

Second, by addressing what factors actually shape investors' adoption of IBCP, this thesis has provided novel insight into the investment-based crowdfunding literature by investigating private investors' IBCP adoption behaviour.

Third, by addressing the timely question of why consumers are increasingly crypto invested and what are the mechanisms underlying such conduct, this thesis has contributed to the literature concerned with understanding consumers' decision-making in the nascent crypto context.

Figure 5.1. Context, theory applied, results and main conclusion of the studies in the thesis.



5.1.1 Theoretical contributions toward consumer reactions to unethical business conduct

The global food industry and the way people consume food has radically changed. At the core of this change are ODDS, acting as an intermediary between restaurants and customers. Nevertheless, a substantial part of the success story of ODDS is based on their inherent business model, which consists of exploiting regulatory and legal loopholes by imposing controversial labour practices on their couriers (Sawers, 2019). Albeit broad media coverage of these transgressions, consumers continue to support such companies, as suggested by the growth numbers.

Previous studies that have focussed on explaining how individuals can conduct unethical decisions without encountering self-sanctions and why they can support actors involved in unethical conduct have mainly drawn on the moral disengagement theory (Bandura et al., 1996; Detert et al., 2008; Kish-Gephart et al., 2014). However, moral disengagement mechanisms bear the risk of compromising the individual's moral standards that everybody typically tries to protect (Thøgersen, 2004). Therefore, more recently, moral decoupling has been introduced to illustrate how individuals support actors involved in immoral conduct (Bhattacharjee et al., 2013). Yet, despite recent advancements in the moral decoupling literature, the current research still presented essential gaps and challenges that needed to be addressed in order to better understand the reasons underlying this phenomenon (Haberstroh et al., 2017; Orth et al., 2019). This is especially the case in the proliferating ODDS context, as, in general, little research has focused on consumers' interactions with such services (e.g. Belanche et al., 2021; Dsouza & Sharma, 2021), although they depict an integral part of millions of consumers lives nowadays. Therefore, the first research objective of this thesis was to contribute to the limited knowledge that exists on the essential question of how consumers deliberately buy from, and 'support' companies involved in unethical conduct by focusing on the ODDS context. Chapter 2 has presented empirical research to provide answers and insights to this issue to address this first research objective. Specifically:

- First, chapter 2 contributes to the current literature by illustrating that moral decoupling is the psychological mechanism that allows consumers to support companies involved in unethical conduct. Particularly, this study primarily elucidates the effect of the mechanisms in the growing ODDS context, shedding

light on the timely query of how consumers can continue to support these services besides their transgressional conduct.

- Second, chapter 2 contributes to the moral decoupling literature by primarily examining the role of negative emotions in mediating the relationship between moral decoupling and purchase intentions. While previous literature has focused on positive emotions (Orth et al., 2019) or general negative emotions (Cowan & Yazdanparast, 2019), this study has illustrated the critical role of guilt in consumers' ethical decision-making (Stöttinger & Penz, 2015). Thus, the study shows that consumers' engagement in decoupling processes allows them to reduce feelings of guilt when purchasing from companies involved in immoral conduct. This finding is particularly interesting as prior scholars suggest that unethical corporate conduct might evoke negative emotions with subsequent boycotting behaviour (e.g. Lindenmeier et al., 2012). However, the decoupling mechanisms illustrate their ability to reduce cognitive complexity and feelings of guilt, which enables consumers to support transgressing companies.

- Third, chapter 2 contributes to the literature by demonstrating that an individual's willingness to support a company involved in unethical conduct hinges on their personality. Previous scholars found that individuals differ in the moral foundation they value and how they view transgressions (e.g. Graham et al., 2009), yet this is the first study showing personality traits interplay with moral decoupling mechanisms. The study demonstrates that empathic persons are less likely to engage in moral decoupling and thus not support companies involved in unethical conduct. Regarding moral identity, the results show that high moral identity leads to lower moral decoupling engagement (though non-significantly), thus negatively affecting the positive relationship between moral decoupling and purchase intentions. However, when decoupling was manipulated in the experimental setting, moral identity increased purchase intentions. This finding primarily suggests that when high moral individuals are instructed to decouple, they might follow the instructions precisely and obey the commands to concede with their moral self-system.

- Finally, chapter 2 contributes to the literature by showing how the moral intensity of unethical conduct influences consumers' engagement in moral decoupling mechanisms. The study shows that consumers are less likely to engage in moral decoupling if they perceive the unethical conduct to be highly morally intense. Accordingly, the high severity of immoral behaviour lessens consumers' support for companies involved in unethical conduct as decoupling processes are weakened in their effectiveness in extreme unethical situations.

5.1.2 Theoretical contributions towards the investment-based crowdfunding domain

The initial idea of crowdfunding to support project initiators with funds for civic motives now evolved toward a viable investment alternative for private investors (Shneor & Munim, 2019). In investment-based crowdfunding, private investors receive a financial return on their investment via equity or debt instruments. In this domain, private investors possess mainly financial motivations. Thus, this model is fundamentally different from the other forms of crowdfunding, where the crowd makes consumption (reward-based) and donation related decisions (donation-based). This implies that the current understanding of crowdfunding based on the initial reward and donation-based models has limited applicability to the investment-based domain (Hervé et al., 2019). Although this model rapidly gains popularity as a viable investment alternative, not least due to the low-interest environment, surprisingly little research has focused on the investment-based crowdfunding domain. Instead, previous literature has focused chiefly on reward and donation-based crowdfunding (e.g. Bi et al., 2017; Ryu & Suh, 2021; Zhou et al., 2016).

Therefore, the second research objective of this thesis was to contribute to the limited knowledge that exists on the essential question of what factors shape investors' adoption of IBCP. Chapter 3 has presented empirical research to provide an initial understanding of this issue to address this second research objective. The following theoretical contributions can be extracted from this study:

- First, chapter 3 contributes theoretically to the embryonic investment-based crowdfunding literature by examining factors that influence private investors' IBCP adoption. The study primarily combined the UTAUT2 and TTF models as baseline models and further incorporated network externalities and trust,

providing a holistic framework of the underlying factor shaping investors' adoption. The applied integrated model could predict substantial variance in investors' behavioural intentions and user behaviour, which was found comparable to recent studies in the financial service domain (e.g. Patil et al., 2020; Thusi & Maduku, 2020).

- Second, chapter 3 contributes to the literature by providing an initial understanding that the platforms adoption is not solely based on investors' platform perceptions (UTAUT2) but also on the match between the features provided on the platforms and the task investors aim to conduct (TTF). This contribution widens the theoretical perspective concerned with investors' IBCP adoption. More generally, it encourages future studies concerned with financial services adoption to consider both models in conjunction as they better determine adoption behaviour than each singular view.

- Third, chapter 3 contributes to the theoretical knowledge by illustrating the importance of perceived network externalities related to the adoption of investment-based crowdfunding (Kang et al., 2016). The results showed that network externalities explain investors' adoption behaviour and act as a trust and utilitarian value enhancement mechanism. In fact, beyond investors' platform adoption, this finding might shed light on the phenomenon of why platforms frequently fail, as, without substantial network externalities, investors are not willing to adopt and subsequently use them.

5.1.3 Theoretical contributions toward the crypto and decision-making domain

Cryptos have experienced broad market acceptance and fast development despite their recent conception. Both cryptos and crypto trading have seen considerable progress and a notable upturn in interest and activity. Not only hedge funds and assets managers have begun to incorporate crypto-related assets in their portfolios, but especially consumers have demonstrated an increased engagement with these coins (Perrin, 2021). However, besides consumers' continued interest in crypto investments,

these digital assets have been characterised by sharp price volatility (Yin et al., 2021), potentially exposing investors to vast risks threatening their wealth (Kale, 2021).
Previous scholars focused on technological backgrounds, portfolios, market conditions, and cryptos inherent volatility (e.g. Fang et al., 2022; Yen & Cheng, 2021). Nevertheless, the marketing literature has not yet started to look deeply into this timely issue. Despite consumers increasing interest in crypto investments, research concerned with understanding the underlying mechanisms behind such behaviour remains limited. Consequently, the third research objective in this thesis was to primarily shed light on the essential question of why consumers are increasingly conducting adverse financial decisions by investing in highly volatile assets. And, more narrowly, what are the mechanisms underlying such conduct. To address this last research objective, chapter 4 has presented empirical research to provide insights into this issue. Specifically:

- First, chapter 4 contributes to the literature by primarily demonstrating that external evoked FOMO appeals are the underlying mechanisms influencing consumers' increased crypto engagement. Specifically, this study showed that FOMO appeals enhanced consumers' willingness to invest in cryptos, both in monetary terms and investment intentions. These findings provide an initial understanding of consumers' increased crypto engagement which directly relates to potential financial hazards. They also extend the recent FOMO literature by demonstrating the effect of the appeals in a financial context (Good & Hyman, 2021; Hodkinson, 2019; Przybylski et al., 2013).

- Second, chapter 4 delivers novel insights on how the FOMO effects can be explained and how specific persons are more susceptible to succumbing to FOMO. On the one hand, the study found that FOMO appeals reduce consumers' emotional safety net by lowering their anticipated regret. On the other hand, the appeals were found to increase consumers' positive affective states by amplifying their expected pleasure when engaging in crypto investments. In addition, the study showed that personal traits moderate the effect of FOMO appeals. Most importantly, the study demonstrates that impulsivity moderates the FOMO appeals effect in such a way that it is stronger

for less impulsive persons, dragging them into adverse decision-making, which they, by their nature, might not have conducted (Passanisi & Pace, 2017).

- Third, chapter 4 contributes to the literature by illustrating that the influence of FOMO appeals extends beyond gaining or losing money. The study showed that individuals exposed to FOMO appeals and an associated financial loss were more likely to reinvest than individuals without FOMO appeals and a financial gain condition. Accordingly, this study has demonstrated the long and lasting and potentially unfavourable consequences of FOMO on consumers' decision-making, extending previous literature (Clor-Proell et al., 2020; Good & Hyman, 2021; Güler, 2021).

- Finally, chapter 4 provides novel theoretical contributions by showing how counter-message tactics can mitigate the effects of FOMO appeals. For example, it revealed how fear messages fully mitigated the FOMO appeals impact on consumers' investment intention, while hope appeals only gradually lowered it. This knowledge represents the first starting point for future studies to combat the adverse effects of FOMO appeals in the crypto context.

5.2 Contributions to managers and policymakers

The results of the three studies of this PhD thesis provide relevant and context-specific implications for managers and policymakers. In sum, these findings provide fruitful insights for policymakers to create effective intervention strategies to reduce consumers' moral decoupling engagement and, on the other hand, help managers protect their service from public scandals involving violations of moral standards (chapter 2). Furthermore, they deliver insights for platform operators to increase IBCP adoption (chapter 3). Ultimately, they state inferences for policymakers to prevent consumers from succumbing to FOMO appeals and managers to overhaul their current business models related to crypto investments (chapter 4). Detailed managerial implications are provided in more depth in each of the following sections.

5.2.1 Practical implications concerning consumer reaction to unethical business conduct

First, chapter 2 provides policymakers with interventions to lessen consumer decoupling engagement. The following practical inferences can be extracted from this study:

- Based on the findings, policymakers should focus on the high moral repercussion of unethical conduct in order to reduce decoupling engagement by applying targeted message tactics. For instance, communication activities could concentrate on designing messages focused on the importance of moral intensity (including the probability of effect, temporal immediacy and the magnitude of consequences).

- Furthermore, policymakers can make use of messages that promote the link between morality and performance as they also make it more difficult for consumers to engage in decoupling mechanisms.

- Moreover, given the moderating role of personality traits, policymakers should focus on segmenting the market and target reactions of different groups of consumers to be most effective in hindering consumers from using decoupling mechanisms.

Second, chapter 2 provides managers with practical inferences when organisations are involved in unethical conduct. In specific:

- Managers should try to minimise consumers' perceptions of the severity of the conduct to guide consumers in activating decoupling mechanisms. In this line, brand communications for companies involved in unethical conduct, in addition to solving their unethical problems, could employ advertisements and other means to stress that moral and performance features are not inevitably intertwined. This again facilitates consumers to apply moral decoupling mechanisms and subsequently continue to support the company.

- Furthermore, managers should conduct segmentation activities. Brand communication that introduces decoupling activities might be particularly well suited for consumers with firm moral traits, as they might feel comfortable using decoupling mechanisms to justify their support for companies involved in transgressional conduct.

5.2.2 Practical implications for crowdfunding platform operators

Chapter 3 provides practical inferences for crowdfunding platform operators. In specific:

- Platform operators should manipulate the influential variables from the UTAUT2 and TTF model as well as network externalities and trust. Specifically, the findings suggest that platform operators increase the practicality of the platforms as an investment tool and to lessen the effort perception of using such platforms. In fact, based on the findings, operators should focus on providing their service in a compatible manner with other standard technologies such as mobile applications, as online financial tasks, in general, are being conducted increasingly via mobile devices.

- Moreover, based on the findings, platform operators are suggested to implement supplementary services such as due diligence and project evaluation courses as they might reduce resistance to accessing the platforms frequently and develop habitual behaviours. This, in turn, can positively influence adoption behaviours.

- Additionally, platform operators should develop strategies that amplify investors' network externalities perceptions and embrace different means that elevate them. Furthermore, as the findings suggest, operators should put efforts into increasing trust perceptions on these platforms. Moreover, to increase platform adoption, operators should make use of market segmentation activities and provide differentiated investment services to meet the various demands of investment-based crowdfunding users.

5.2.3 Practical implications concerning consumer crypto engagement

First, chapter 4 provides practical inferences for policymakers concerned with consumers' crypto engagement. The practical implications help policymakers prevent consumers from succumbing to FOMO appeals in the crypto context. Specifically:

- Based on the findings, policymakers should design public service announcements and communication messages that downplay consumers' fears about missing out on potential investment opportunities. In this line, they might draw on fear appeals as they were found to mitigate the effect of FOMO appeals. By doing so, policymakers should place these interventions on virtual social networks and online platforms, not least because FOMO appeals often stem from there.

- Furthermore, given the moderating role of personality traits in the relationship between FOMO appeals and consumers' investment intention, policymakers should specifically focus on individuals with low impulsivity levels as they showed to be particularly susceptible to FOMO appeals.

Second, chapter 4 extracts practical inferences for managers concerned with the technological applications that enable trading activities to overhaul their marketing strategies. In specific:

- Based on the findings, managers should minimise the bias of FOMO appeals in their technological applications. They can inform consumers about the inherent risk in crypto trading and the existing bias of FOMO appeals on related applications, social media and online platforms.

- From a responsible marketing perspective, managers should not rely on pushing people into financial decisions that potentially threaten their wealth. As a result, long-term and sustainable wealth creation (i.e. no FOMO-based decision-making) is most beneficial for all stakeholders involved in the long run.

5.3 Limitations and future research

With its three studies, this thesis has put forward a range of theoretical and practical implications, but obviously, the findings raise new questions that might be interesting to investigate in the future. While particular limitations of each study are highlighted separately in each chapter (i.e. chapters 2, 3 and 4), this section offers a holistic and overarching perspective on the overall limitations and presents an agenda for future research in the digital economy framework.

First, this thesis sheds light on three challenges and issues in the framework of the new digital economy. However, many more relevant topics within this framework remain that have not yet received much attention from the marketing literature. For instance, consumers' engagement with artificial intelligence enabled technologies presents a novel and impactful research stream with fruitful future research avenues (e.g. Hoffman et al., 2021; Puntoni et al., 2020). More narrowly, artificial intelligence-empowered voice-enabled technologies such as voice assistants have created a new way for consumers to interact with companies. Nonetheless, only a limited amount of attention has been focused on the factors shaping users' adoption, especially considering different task complexities (e.g. Fernandes & Oliveira, 2021; Moriuchi, 2019). In addition, future research might investigate the underlying reasons behind the latest craze among Non-Fungible Tokens. The phenomenon of consumers' unprecedented engagement with such assets shows similarities to the investigated crypto context, as they are also considered to possess speculative properties and have high volatility (Kong & Lin, 2021). Nevertheless, Non-Fungible Tokens have distinctive characteristics, as they are conceptualised as pure digital assets (i.e. digital artwork) compared to cryptos that were primarily conceptualised as a medium of exchange (Baur et al., 2018; Dowling, 2022). Therefore, the question arises whether FOMO appeals also have a decisive effect here or whether other constructs play an important role. Consequently, besides the multiple theoretical contributions of the three context-specific issues tackled in this thesis, much work remains left to clarify timely and challenging issues we encounter nowadays in consumer research in the new digital economy framework.

The second limitation of this thesis relates to its applied methodologies. In all three chapters (2, 3 and 4), quantitative methods were applied to accomplish the objectives of this thesis. They were used because they enabled us to decompose relationships

among variables, test the causal models, and, most importantly, allow for the generalisation of the outcomes (Baker & Hart, 2008). Specifically, chapters 2 and 4 had more focus on experimental approaches as they are a standard method for marketing scholars to determine the presence of causal relationships (Goldfarb et al., 2022). However, applying qualitative methods would have allowed obtaining more insights and a more thorough understanding of consumer behaviour in these under-researched areas (e.g. Spiggle, 1994), such as consumers' recent engagement with cryptos. Understanding the meanings and experiences of consumers and considering contextual settings by applying qualitative studies would have enriched the theoretical contributions. Accordingly, based upon the above discussion, future studies should conduct qualitative research on the topics discussed in this thesis to strengthen our findings and other contemporary consumer research phenomena in the framework of the new digital economy.

The third limitation of this thesis relates to the samples and data of the studies. The studies in chapter 2 used samples from Spain (students and panel) and the U.S. (Amazon Mturk). The same applies to chapter 3 with samples from Germany (panel) and the U.S. (Amazon Mturk), as well as to chapter 4 with samples from Spain (students) and the U.S. (Amazon Mturk). Specifically, all studies used data from Amazon Mturk as this online labour system provides quick, easy and inexpensive access to online research participants. However, it is to accentuate that Amazon Mturk might not steadily provide representative samples as the sample composition can vary dynamically (e.g. Paolacci & Chandler, 2014). Therefore, the generalisation of the results of these studies should be considered with caution. Future studies should thus test the thesis findings with different samples and apply research designs that account for cultural complexity and span multiple contexts to establish the generality of the results (e.g. Craig & Douglas, 2006).

Fourth, in chapter 3, the study's data was collected employing an online survey. Although possible common method bias was assessed, the data came from a single respondent one-time survey. Consequently, potential biases cannot be ruled out, limiting the study's informative value. Besides using qualitative research as mentioned above, future research could apply experimental studies to further explore the underlying causality between the construct's relationships. Furthermore, in chapter 4, experimental and laboratory studies were applied. Accordingly, to obtain a higher

external validity by simulating real-world occurrences, future research should conduct field experiments to test the applied theory and constructs.

Ultimately, most of the thesis studies considered purchase intention, behavioural intention or investment intention equivalent to the behaviour finally performed by consumers. Nevertheless, consumers do not always do the things that they intend to do (e.g. Sheeran & Webb, 2016). Referring to the intention-behaviour gap, future research should consider including a usage behaviour construct as the dependent variable. These limitations can also be overcome with field experiments.

5.4 Final conclusion

This thesis highlighted the need for tailored research in the framework of the new digital economy. The thesis aimed to address three relevant, context-specific phenomena in consumer research, contributing to the nascent stream of literature from a marketing perspective within the scope of the new digital economy. The thesis studies developed detailed insights on consumers' reactions to companies' immoral conduct, private investors' adoption of investment-based crowdfunding, and consumers' increased engagement in crypto investments. These insights can be helpful for marketers, managers and policymakers concerned with such issues and guide them to make more effective decisions. To conclude, it shall be emphasised that a large part of the significance of this work is due to the context-specific individual studies within the thesis' framework of the new digital economy. This approach gained targeted insights in specifically relevant subject areas, providing new knowledge and expertise in the marketing field.

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Appendix Chapter 2

Appendix A. Stimuli and manipulations

Stimulus and manipulation for study 1 (high vs. low moral intensity). Study 2 used the high moral intensity condition (a.) as a stimulus and manipulation.

a. High moral intensity condition.

b. Low moral intensity condition.

Stimulus and manipulation for study 2 and 3 (decoupling vs. coupling)

Study 3 only: The experiment contains four different conditions (1a, 1b, 2a, 2b). In situation 1a, the potential customer is at a gathering with friends. In this situation all the participants at this gathering intend to stay indoors and therefore use a new ODDS application to order food. Situation 1a exposes the potential customer to a better offering (30% more restaurants and food variety, a 15% shorter delivery time, a 20% cheaper price, and a better online reputation than its competitors) from a new ODDS application (fictional, created). The same setup characterises situation 1b; however, the potential customer is exposed to a worse offering (i.e. no advantages). The participant is informed that the new ODDS application has the same delivery time, prices, variety of products and online reputation as its competitors. The participants were randomly assigned to either 1a or 1b. Afterwards, the respondents were exposed to negative media information about the new application triggered by the performance of immoral working conditions and other known downsides of the Gig Economy. Specifically, the media reported that the fictional ODDS employs labour exploitation, uses false 'self-employment' and low wages, and puts pressure on its riders. Then, the participants were randomly assigned to either the decoupling scenario (2a) or the coupling scenario (2b). In condition 2a, the participant was asked to evaluate the negative information received about the new ODDS separately from its performance (decoupling). Situation 2b asks the participant to consider the company's immorality when judging its performance (coupling), see table below (Orth et al., 2019).
Study 2 and 3:

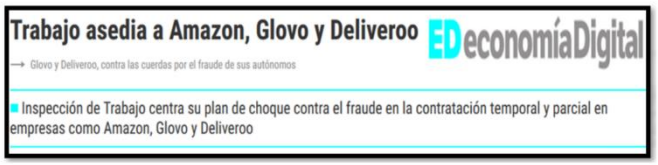
Please keep these arguments in mind when completing the next set of questions.

[Decoupling:] Make sure you keep moral and performance issues SEPARATE when evaluating the offer. Negative media reports on ODDS should NOT influence your evaluation of the performance of the offer. Do NOT let the fact that ODDS apply immoral labour practices bias your judgement of the overall service.

[Coupling:] Make sure you SIMULTANEOUSLY consider moral and performance issues when evaluating the offer. Negative media reports on ODDS should be INCORPORATED into your evaluation of the performance of the offer. The fact that ODDS apply immoral labour practices should definitely be reflected in your judgement of the overall service.

Stimulus and manipulation for study 4 (online survey)

The participants were exposed to several real media headlines before submitting scores.



Appendix B. Scale items and summary statistics for construct measures.

Latent Variable	Study 1				Study 2				Study 3				Study 4			
	St.L	M	SD	α	St.L	M	SD	α	St.L	M	SD	α	St.L	M	SD	α
Purchase Intention [*1] (Putrevu & Lord, 1994)		4.67	1.72	.91[1]		4.70	1.71	.94[1]		3.72	1.78	.92[1]		4.09	1.73	.90[1]
It's very likely that I will buy on ODDS platforms again.	.91				.97				.96				.93			
My intention to buy on ODDS platforms is high.	.92				.97				.96				.92			
Moral Decoupling (Bhattacharjee et al., 2013)		4.45	1.39	.90		4.52	1.77	.94		3.40	1.61	.86		4.87	1.62	.82
Negative media reports about ODDS should not affect our view of the company's performance.	.90				.95				.86				.87			
Judgement of performance should remain separate from judgement of morality.	.88				.95				.91				.78			
The fact that these companies employ immoral labour practices does not change my assessment of their performance.	.92				.94				.89				.87			
Guilt (Harvey et al., 2017) Buying from ODDS makes me feel…		-	-	-		-	-	-		3.17	1.57	.91		3.83	1.79	.89
…blameworthy									.91				.93			
…regretful									.92				.92			
…guilty									.92				.85			
Moral Rationalisation (Bandura et al., 1996; Bhattacharjee et al., 2013)		4.26	1.58	.90		3.71	1.86	.91		2.77	1.08	.82		2.48	1.68	.92
It's okay to use these types of labour practices (moral justification).	.92				.94				.82				.88			
It's not bad to take some advantage of loopholes in labour policies (euphemistic language).	.88				.88				.74				.80			
Using these types of labour practices is not so bad compared to other horrible things that companies do (advantageous comparison).	.93				.95				.77				.75			
Companies should not be penalised for using these labour practices, since labour regulation is very complicated (displacement of responsibility).	-				-				.78				.83			
These companies should not be penalised for using these labour practices because many other companies actually follow similar practices (diffusion of responsibility).	-				-				.71				.83			
It's okay for companies to use these types of labour practices because they don't really cause much harm (distortion of consequences).	-				-				.80				.89			
Offer Attractiveness (Colwell et al., 2008)		-	-	-		-	-	-		4.64	1.32	.85		-	-	-
Using these ODDS platforms/applications allows me to save time.									.88							
By using these platforms/applications of ODDS I get great benefits with little effort.									.90							

The information offered by these ODDS platforms/applications facilitates my purchase decision.								.84						
Moral Identity *2 (Aquino & Reed, 2002)	-	-	-		5.86	.98	.89	-	-	-		5.82	1.42	.74
It would make me feel good to be a person who has these characteristics.				.87							.81			
Being someone who has these characteristics is an important part of who I am.				.84							.74			
I strongly desire to have these characteristics.				.77							.80			
Having these characteristics is not really important to me. r				.85							.61			
I would be ashamed to be a person who has these characteristics. r				.86							.63			
Empathy (Empathic Concern) (Albiero et al., 2006)	-	-	-		5.51	.96	.88	-	-	-		5.49	1.26	.85
When I see someone being taken advantage of, I feel kind of protective towards them.				.77							.67			
When I see someone being treated unfairly, I sometimes feel very sorry for them.				.87							.76			
I often have tender, concerned feelings for people less fortunate than me.				.91							.84			
I would describe myself as a pretty soft-hearted person.				.83							.78			
Sometimes I feel sorry for other people when they are having problems.				.74							.63			
Other people's misfortunes usually disturb me a great deal.				.71							.82			
Moral Evaluation *1 (Orth et al., 2019)	5.06	1.29	.83[1]		5.44	1.30	.89[1]		5.37	1.46	.87[1]		6.43	1.12	.83[1]
I find it immoral to use ODDS.	.99			.94				.94				.92			
It is morally wrong to buy from ODDS.	.79			.95				.94				.93			

Note: St.L = Standardised loading, M = Mean, SD = Standard deviation, α = Cronbach's alpha, r = Reverse-coded.

*1 Spearman Brown coefficient was calculated for purchase intention and moral evaluation instead of Cronbach's alpha.

*2 (Moral identity): On this measure, subjects are first presented with a set of nine adjectives (caring, compassionate, fair, friendly, generous, helpful, hardworking, honest and kind) along with the statement that these represent 'some characteristics that might describe a person'. Subjects then rate five items intended to assess the degree to which these characteristics represent an essential part of their own identity (Aquino & Reed, 2002; Aquino et al., 2007).

Further measurement model information.

Construct	Study 1		Study 2		Study 3		Study 4	
	CR	AVE	CR	AVE	CR	AVE	CR	AVE
Moral Decoupling	.94	.84	.96	.90	.91	.78	.88	.71
Guilt	-	-	-	-	.94	.85	.93	.81
Moral Rationalisation	.93	.83	.95	.85	.94	.89	.93	.71
Offer Attractiveness	-	-	-	-	.90	.77	-	-
Purchase Intention	.96	.92	.97	.95	.96	.92	.92	.86
Moral Identity	-	-	.92	.70	-	-	.84	.53
Empathic Concern	-	-	.84	.58	-	-	.87	.63
Moral Evaluation	.89	.81	.95	.90	.94	.89	.92	.86

Note: CR = Composite reliability, AVE = Average variance extracted.

Study 4. Discriminant validity (HTMT ratio).

Construct	Empathic Concern	Guilt	Moral Decoupling	Moral Identity	Moral Rationalisation	Purchase Intention
Empathic Concern						
Guilt	.25					
Moral Decoupling	.33	.37				
Moral Identity	.58	.11	.34			
Moral Rationalisation	.30	.16	.59	.36		
Purchase Intention	.19	.51	.50	.11	.38	
Moral Evaluation	.21	.06	.21	.39	.37	.10

Appendix Chapter 3

Measurement items

Constructs	Items		Sources
PE	PE1	I find crowdfunding platforms useful for my investment transactions.	Venkatesh et al. (2012)
	PE2	Using crowdfunding platforms improves my investment efficiency.	
	PE3	Using crowdfunding platforms helps me complete my investment transactions more quickly.	
EE	EE1	Learning how to use crowdfunding platforms is easy for me.	
	EE2	My interaction with crowdfunding platforms is clear and understandable.	
	EE3	I find crowdfunding platforms are easy to use.	
HM	HM1	Using crowdfunding platforms to invest is fun.	
	HM2	Using crowdfunding platforms is enjoyable.	
	HM3	Using crowdfunding platforms is very entertaining.	
SI	SI1	People who are important to me think that I should use crowdfunding platforms.	
	SI2	People who influence my behaviour think that I should use crowdfunding platforms.	
	SI3	People whose opinion that I value prefer that I use crowdfunding platforms.	
FC	FC1	I have the resources necessary for me to use crowdfunding platforms.	
	FC2	I have the knowledge necessary to use crowdfunding platforms.	
	FC3	Crowdfunding platforms are compatible with other technologies I use.	
HA	HT1	The use of crowdfunding platforms has become a habit for me.	
	HT2	I am addicted to use crowdfunding platforms.	
	HT3	I must use crowdfunding platforms.	
BI	BI1	I intend to continue using crowdfunding platforms in the future.	
	BI2	I try to use crowdfunding platforms in my daily life.	
	BI3	I plan to continue to use crowdfunding platforms frequently.	
NE	NE1	A large number of investors are investing in crowdfunding platforms.	Kang et al. (2016)
	NE2	A growing number of investors increase the benefits of crowdfunding services.	
	NE3	Many people who invest use crowdfunding platforms.	
TR	TR1	The crowdfunding platforms are trustworthy.	Liang et al. (2019)
	TR2	The crowdfunding platforms intend to keep their promises and commitments to investors.	
	TR3	I believe that the crowdfunding platforms have my best interest in mind.	
TAC	TAC1	I need to obtain high monetary returns on my investments.	Zhou et al. (2010)
	TAC2	I need easy access to different investment options and alternatives.	
	TAC3	I need to obtain several viable investment opportunities.	
TEC	TEC1	Crowdfunding platforms provide projects with high monetary returns.	
	TEC2	Crowdfunding platforms provide an easy and convenient access.	
	TEC3	Crowdfunding platforms provide many profitable investment opportunities.	
TTF	TTF1	In helping complete my investment tasks, the functions of crowdfunding platforms are sufficient.	
	TTF2	In helping complete my investment tasks, the functions of crowdfunding platforms are appropriate.	
	TTF3	In general, the functions of crowdfunding platforms fully meet my investment needs.	
UB	UB1	I frequently use crowdfunding platforms.	Thusi and Maduku (2020)
	UB2	I use crowdfunding platforms to invest.	
	UB3	I currently use the services offered by the crowdfunding platforms.	

Note: See acronyms in Figure 3.1.

Appendix Chapter 4

Appendix A. Stimuli and manipulations

Manipulation for study 1A, B, 2, 3, 4 and 5 (non-FOMO appeal vs. FOMO appeal).

Assume you like to trade and invest your money and that you are into discovering and spotting the most recent investment opportunities in the market. Someone posted on social media that a new cryptocurrency (crypto) is going to be launched in the next few days. This new crypto can be purchased by using the applications that you are currently using, and the initial price is typical. You feel buying this crypto could be interesting, and you have to decide whether you will invest in the new crypto.

a. FOMO appeal

Other users, traders and investors have posted comments and videos on this social media platform about the release of this crypto. They have commended the hype about this new crypto and how profitable it might be. So, you think you are missing out if you do not invest.

b. Non-FOMO appeal

Other users, traders and investors have not mentioned anything about this crypto and have not shown any interest on this social media platform. So, you are not sure about the hype of this crypto and its profitability. You do not think you are missing something out if you finally decide not to invest.

Manipulation for study 4 (winning vs. loosing)

a. Winning condition

...after investing in this crypto, the launching price *increased* by more than 60%. Suddenly, you observe that the same traders and investors started to talk about another crypto launched in two days. This crypto is not well-known yet, and therefore little information about it is given.

b. Losing condition

...after investing in this crypto, the launching price *decreased* by more than 60%. Suddenly, you observe that the same traders and investors started to talk about another crypto launched in two days. This crypto is not well-known yet, and therefore little information about it is given.

Appendix B. Scale items and summary statistics for construct measures.

Latent Variable	Study 1A				Study 2				Study 3			
	St.L	M	SD	α	St.L	M	SD	α	St.L	M	SD	α
FOMO												
Good (2019)		4.13	1.35	.93		-	-	-		-	-	-
If I do not invest...												
I'm afraid later I will feel sorry I did not invest.	.83											
I will worry about what I'm missing.	.85											
I will worry my friends are getting more rewards than me.	.83											
I will feel concerned my friends are having more rewards than me.	.84											
I will feel left out.	.85											
I will feel sorry I did not invest.	.79											
I will feel anxious about not having invested.	.87											
I will feel bothered that I missed an opportunity to invest.	.78											
Subjective expected pleasure												
Mellers et al. (1999) and Van Boven and Ashworth (2007)		-	-	-		5.13	1.43	.89		4.91	1.59	.94
When you think about investing in this crypto, how does that make you feel?												
Excited.					.91				.91			
Elated.					.86				.92			
Satisfied.					.87				.92			
Happy.					.90				.92			
Anticipated regret												
Tsiros and Mittalm (2000)		-	-	-		4.36	1.61	.90		4.17	1.80	.90
Considering this investment…												
I would be sorry I spent the money.					.95				.93			
I would be sorry because I should have saved money.					.89				.92			
I would be sorry I did not spend the money on necessities.					.78				.88			
Impulsiveness (BIS-Brief)												
Steinberg et al. (2013)		-	-	-		-	-	-		3.52	1.69	.93
I plan tasks carefully.									.84			
I am self-controlled.									.80			
I concentrate easily.									.82			
I am a careful thinker.									.71			
I act on the spur of the moment.									.78			
I say things without thinking.									.84			
I don't pay attention.									.74			
I do things without thinking.									.88			

Note: St.L = Standardised loading, M = Mean, SD = Standard deviation, α = Cronbach's alpha.

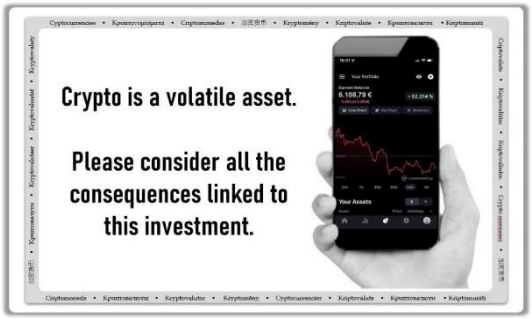
Further measurement model information.

Construct	Study 1A		Study 2		Study 3	
	CR	AVE	CR	AVE	CR	AVE
FOMO	.93	.77	-	-	-	-
Subjective expected pleasure	-	-	.91	.77	.96	.84
Anticipated regret	-	-	.90	.75	.93	.83
Impulsiveness	-	-	-	-	.94	.67

Note: CR = Composite reliability, AVE = Average variance extracted.

Appendix C. Fear and hope messages.

a. Neutral message



b. Fear Message

c. Hope Message