The Prosocial Pandemic:
A study on Prosocial Behavioural Intentions in the context of the COVID-19 pandemic

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ABSTRACT

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On December 31st, 2019, the World Health Organization was introduced to COVID-19 - a new disease that would turn out to be the global pandemic of the century. Since then, the coronavirus has left a trail of unforeseeable consequences in our society, ranging from a public health mayhem to an environment of socio-economic uncertainty. Despite physical changes being evident in everyone's lives, some changes are not as clear to the naked eye. In fact, the way individuals think and act may have also changed. The present research focuses on some of those changes, in particular in what concerns one's prosociality – How has individuals' prosocial behavioural intentions been affected by the pandemic context?

This dissertation sought to answer this question by exploring possible responses and reactions to the pandemic that would have an impact on prosocial intentions, in addition to how individuals respond to prosocial decisions when presented with a pandemic reminder.

A series of studies revealed that the COVID-19 situational context fosters indeed individuals' prosocial behavioural intentions. Several findings led to this conclusion, in particular that both a higher concern and an increased understanding of COVID-19 as a matter of socio-economic relevance, increases individuals' willingness to help. Moreover, when reminded of the pandemic, individuals revealed willingness to make higher donations as well as showed a preference to buy from small businesses proportional to their assessment on their financial risk. COVID-19 is undoubtedly changing the world, and, in what concerns prosociality, for the better.

Keywords: Prosocial Behavioural Intentions, Prosociality, Prosocial Behaviour, COVID-19, Pandemic, Crisis, Situational Factors, Reminders, Donation, Prosocial Consumption, Small Businesses

SUMÁRIO

A Pandemia Pró-social: Um estudo sobre Intenções Comportamentais
Pró-sociais no contexto da pandemia COVID-19

Mariana Calado Bernardo Cardoso Leitão

A 31 de dezembro de 2019, a Organização Mundial da Saúde teve conhecimento da existência da COVID-19 - uma doença que se viria a tornar a pandemia global do século. Desde então, o coronavírus deixou um rasto de consequências imprevisíveis na nossa sociedade, instalando o caos na saúde pública e criando um ambiente de incerteza socioeconómica. Apesar de algumas mudanças serem evidentes na vida de todos, outras não são tão claras a olho nu. Na verdade, a maneira como as pessoas pensam e agem também pode ter mudado. A presente pesquisa incide sobre algumas dessas mudanças, em particular no que diz respeito à pró-socialidade do individuo – Como é que as intenções pró-sociais dos indivíduos foram afetadas pelo contexto pandémico?

Esta dissertação procurou responder a esta questão explorando possíveis reações e respostas à pandemia que pudessem ter um impacto nas intenções pró-sociais, além de como os indivíduos respondem às decisões pró-sociais quando expostos a um *reminder* pandémico.

Os estudos revelaram que o contexto da COVID-19 aumenta, efetivamente, as intenções comportamentais pró-sociais dos indivíduos. Constatou-se, em particular, que uma maior preocupação com a pandemia e um maior entendimento desta como um problema socioeconómico aumentam a predisposição dos indivíduos para agir pro-socialmente. Quando expostos a um *reminder* da pandemia, demonstraram ainda predisposição para fazer doações mais altas, bem como evidenciaram uma preferência em comprar em pequenas empresas proporcional à sua avaliação sobre o risco financeiro que atravessam.

A COVID-19 está a mudar o mundo e, no que diz respeito à pró-socialidade, para melhor.

Palavras-chave: Intenções Comportamentais Pró-sociais, Pro-socialidade, Comportamento Pró-social, COVID-19, Pandemia, Crise, Fatores Situacionais, Reminders, Doação, Consumo Pró-social, Pequenos Negócios

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TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF APPENDICES

GLOSSARY

DGS – Direção-Geral de Saúde

INE – Instituto Nacional de Estatística

UN – United Nations

WHO – World Health Organization

CHAPTER 1: INTRODUCTION

1.1 Background and Scope

"This is the moment to step up for the vulnerable"
António Guterres, UN Secretary-General

In December 2019, the world was rocked by the start of the COVID-19 pandemic, with more than 20 million cases being confirmed throughout the globe in the following months (WHO, 2020). Hundreds of thousands of people have lost their lives (WHO, 2020) and countless others have lost their jobs and livelihood (Nicola et al., 2020). The aftermath of the COVID-19 pandemic has been devastating as it has impacted everyone's lives in one way or another, with the disease evolving from just a public health crisis to a multidimensional phenomenon that also comprises economic and social dimensions (UN, 2020).

It is a time for cooperation, for unity and, as mentioned by António Guterres, a moment to step up for the vulnerable. Billions of people have indeed engaged in cooperative behaviours by practicing collective social distancing, in what could be seen as one of the biggest acts of cooperation in history (Zaki, 2020).

It is evident that COVID-19 has triggered numerous changes – society's own construct has changed, the way people live their lives has changed, and it even seems plausible to question whether certain aspects inherent to the individual have changed (Abel & Brown, 2020). In this sense, the study of human behaviour and prosocial attitudes has gained an even more important role.

However, despite the relevance that COVID-19 brought upon the topic of prosocial behaviour, this subject is not new and has been around for many decades, with debates between scholars that cover everything from the very own definition of the concept to the factors that influence it (Eisenberg, 1982). One factor that stands out with particular relevance for the present study is the situational context – while slight situational variations have been seen to cause substantial effects on prosocial behaviour (Doris, 2002; Harman, 2009), a situation such as the COVID-19 pandemic becomes a new and unexplored context full of research possibilities.

Thereby, the present study proposes to explore a potential relationship between the COVID-19 pandemic context and prosocial behavioural intentions.

With this in mind, the following research questions were framed in an attempt to define guidelines for the research process:

> **RQ1**: What is the nature of the relationship between the COVID-19 pandemic context and individuals' prosocial behavioural intentions?

RQ2: What are the motivational sources behind prosocial behavioural intentions in the pandemic situation?

RQ3: If the above stand as true, do these behaviours translate into changes in consumption decisions?

To do so, on a first stage, a conceptual and theoretical study was developed, attempting to establish this very connection through the link between individuals' level of concern with the present pandemic and their manifested prosocial behavioural intentions. From there, on a second stage, a more experimental approach was followed, where a between-subjects design was employed on a donation exercise, to determine whether individuals act more prosocially when exposed to a reminder of COVID-19. Finally, on a third stage, this idea was further developed onto the study of individuals' behaviour when an individual acts as a consumer, complementing the scope of the research with a study that possesses direct managerial implications.

1.2 Relevance and Implications

Given the recent nature of COVID-19, a pandemic that had it start less than a year ago, it still stands as a relatively new and unexplored subject. Several of its economic, social and psychological impacts remain very much unknown to the world and to its respective fields of research, making the effects of such a situation a relevant and current issue.

In this sense, the present study aims to contribute, in its own modest way, to the existing knowledge on the effects of the pandemic, attempting to further study the topics of human behaviour, prosociality and consumption patterns in light of the COVID-19 pandemic.

Additionally, this academic research will not only contribute to study the impact a crisis has on prosocial behaviour but will also contribute to answer the psychological debate of whether situational factors determine if an actor behaves in a prosocial way.

Moreover, as mentioned in the section above, the third stage of this research aims to study the effects of a specific context on individuals' behaviour while also analysing how their behaviour and feelings (self-interested or prosocial) may change the way they consume. As such, and even though it focuses mostly on a psychological issue, part of this research culminates in a contribution from a managerial point-of-view to B2C businesses, by adding value to the process of understanding how the pandemic affects the consumers' decision-making process.

1.3 Dissertation Outline

The present dissertation comprises five chapters: (i) Introduction; (ii) Literature Review; (iii) Methodology; (iv) Analyses and Results; and (v) Conclusions and Discussion.

Following this introduction, a theoretical background to the subjects under study will be provided resorting to past literature on similar and related topics, as well as preliminary studies from working papers concerning the present pandemic.

Afterwards, the research methods will be presented, followed by the analysis of the proceeding results.

Finally, the main findings and conclusions will be discussed, from which managerial and academic implications will be drawn, as well as underlying limitations to the study and suggestions for further research.

CHAPTER 2: LITERATURE REVIEW

In this chapter, a theoretical analysis concerning the research topics will be presented, summarizing previous findings and creating foundations to further explore the subjects under investigation.

Firstly, notions and conceptual context will be provided regarding COVID-19 and the dimensions of the pandemic, namely humanitarian, economic and public health crises.

Secondly, literature regarding prosociality will be analysed under the scope of a situational context as is the current pandemic, exploring a possible link between the two subjects.

Lastly, this review will dive into how and whether prosociality in consumer behaviour has changed during the pandemic, specifically analysing the case of small businesses.

Critically reviewing the content found will provide a basis to formulate hypotheses.

2.1 COVID-19

"The coronavirus outbreak is first and foremost a human tragedy, affecting hundreds of thousands of people. It is also having a growing impact on the global economy."

Craven et al., 2020

2.1.1 A global health emergency

On December 31st, 2019, the World Health Organization (WHO) first heard of a mysterious pneumonia that surged in Wuhan, China, with an unknown cause (Ravelo & Jerving, 2020). Later, in February, the disease reached Europe (Spiteri et al., 2020) and in early March the first case was confirmed in Portugal (DGS, 2020). This mysterious disease turned out to be today's widely known COVID-19, the global pandemic of the century.

Caused by SARS-CoV-2, a new strain of the Coronaviruses family, the new disease is a respiratory infection that affects people from all ages (WHO, 2020; UNICEF, 2020).

What sets it apart is both its newness and its high levels of contagiousness. The virus has travelled around the globe at a speed never seen before, infecting millions of people across all habitable continents. However, it is yet to be found both an effective treatment and a vaccine that will provide protection to our immune system (WHO, 2020).

On January 30th, 2020, following an Emergency Committee, WHO declared that the COVID-19 outbreak constituted a Public Health Emergency of International Concern, posing as an imminent threat to global health (WHO, 2020).

Later, on March 11th, due to the rapid level of spread and severity of the situation, WHO further assessed the new disease as a pandemic (WHO, 2020).

As stated by Dr Tedros Adhanom Ghebreyesus, WHO's Director-General, "Describing the situation as a pandemic requires countries to accelerate their efforts, striking the right balance between protecting health, preventing economic and social disruption, and respecting human rights. I appreciate that this means facing difficult decisions." (WHO, 2020).

Thereby, a global Public Health Crisis was installed, and governments started to implement protective measures to ensure the safety of the population and protect the national health systems.

The pandemic can, in this way, be described as a crisis, or, in other words, a threatening situation that weakens the system (Turner, 1976), characterized by the lack of resources to adequately cope with the circumstances (Starbuck & Hedberg, 1977; Webb, 1994) and little to no time to respond to its effects (Hermann, 1963; Mishra, 1996).

Furthermore, COVID-19 went through the boundaries of public health extending its impacts to the social and economic fields. This crisis can now be looked at as a multidimensional phenomenon comprising three dimensions: economic, humanitarian and public health crises (UN, 2020).

2.1.2 An economic recession

According to Grewal and Tansuhaj (2001), an economic crisis can be characterized by the observable change in several critical macroeconomic indicators, such as a decrease in the GDP or a rise in unemployment levels. This happens as a result of organizations' tendency to resort to downsize and layoff strategies during difficult times (Akdogan & Cingöz, 2009). Economic crises are, therefore, referred to by some authors as anomalous events with high degrees of uncertainty with which organizations must deal with (Grewal & Tansuhaj, 2001).

In fact, an economic crisis creates uncertainty and panic among consumers and volatility in the market (Amalia & Ionut, 2009), impacting groups of people (enterprises and families) and single individuals who during such crises feel like their employment might be at risk (Köksal & Özgül, 2007). These individuals who act as consumers in the economic setting, will move downwards in the demand curve, postponing big purchases and changing their consumption patterns (Amalia & Ionut, 2009). In general, consumers will change their shopping behaviour and habits according to the environment they are in (Köksal & Özgül, 2007), decreasing their average consumption in the market (Amalia & Ionut, 2009), greatly impacting the gross domestic product given that private consumption is the largest portion of the GDP (Kaytaz & Gul, 2014).

In the current COVID-19 pandemic, all the macroeconomic patterns typical of a context of economic crisis can be observed. The public safety measures implemented by most governments across the world, such as social distancing (Morita et al., 2020) and travel restrictions (Linka et al., 2020), have had several macroeconomic impacts: job losses have led to a significant increase in unemployment (Nicola et al., 2020) and according to the World Bank, in a baseline global pandemic scenario, the GDP of the world will be falling by 2 percent below the baseline (Maliszewska et al., 2020). Additionally, the need for most products and services has decreased (Nicola et al., 2020), creating a change in consumer patterns characteristic of an economic recession.

From the data available to date, it can already be recognized that the ongoing pandemic will create much more than a global public health crisis, with the world already plummeting into a severe economic downfall (Van Lancker & Parolin, 2020).

2.1.3 A social crisis

As previously seen, an economic recession is deeply linked with social issues, further contributing to the conception of a social crisis. Barton defines crisis as a situation where "members of a social system fail to receive expected conditions of life from the system" (Barton, 1969, p.38; Quarantelli & Dynes, 1977), a definition that points towards the fact that a crisis can be translated into social impacts.

In the coronavirus pandemic, social issues are easily deduced from the public health situation and subsequent economic downturn, with international organizations, as the United Nations, classifying the pandemic as a social crisis that may have short to long term consequences. If not properly addressed, it may evoke or further deepen existing societal problems, as are the cases of inequality, exclusion and unemployment (UN, 2020).

The social impacts of COVID-19 are hurting societies at their core, affecting all segments of the population (Ali & Alharbi, 2020). Some of the measures imposed by many countries during the COVID-19 pandemic, such as social distancing, are having a substantial impact on all sectors of society, affecting everyone from elderly to children, to working individuals who found themselves in an unemployment situation decreasing their quality of life (Alon et al., 2020).

The loss of family income linked with other events such as schools having closed down can impact general poverty indexes and children's poverty status and learning outcomes. Some children now find themselves in a precarious housing situation, which further exacerbates the inequality when compared to higher income households (Van Lancker & Parolin, 2020).

Isolation was another issue that originated from the social distancing measure, which particularly affected the elderly (Armitage & Nellums, 2020), a segment of the population which was more vulnerable to the disease and its complications (UN, 2020).

Additionally, research that studied differences before and after the COVID-19 pandemic in a group of individuals found that negative emotions and sensitivity to social risks has significantly increased, leaving the population feeling more anxious and depressed, which in itself constitutes a mental health issue (Li et al., 2020).

In sum, COVID-19 is a phenomenon of many layers, that was here explored as an international crisis that entails economic, social and public health impacts. All these dimensions are of paramount importance in the process of understanding how people's lives were changed and will continue to be changed during these unparallel times.

In the next chapters, some of the possible changes will be discussed, in light of the concept of prosocial behaviour.

2.2 Prosociality and the COVID-19 pandemic

"By nature, we are not only self-interested; we are also naturally interested in others."

R. P. Hanley (2019) on Adam Smith's thoughts

2.2.1 Prosocial behaviour and situational factors

Prosocial behaviour has been the subject of study of many fields of research, such as moral philosophy and economics. Although there has not been much agreement upon a definition, many authors have attempted to define the concept of "prosocial behaviour" throughout history: "behaviour such as helping or sharing that promotes the welfare of others without conscious concern for one's own self-interest" (Hoffman, 1982, p.281); with the most notable definitions describing the term as a "behaviour that benefits others" (Hinde & Groebel, 1991, p.5) or the action of acting in behalf of someone else (Keltner et al., 2014).

The behaviour of acting prosocially towards another person can be a complex subject, influenced by several different factors. Literature suggests a simplification by stating that behaviour can be a function of the person, the situation, and the interaction between them (Staub, 1978). Although it has been demonstrated how personality traits may contribute to an individual's proneness to help (Reykowski, 1982; Underwood & Moore, 1982), numerous studies have proven that even slight situational variations may have substantial effects on prosocial behaviour (Doris, 2002; Harman, 2009), with situational manipulations serving as a documented way of increasing/decreasing the likelihood of the behaviour (Lefevor et al., 2017).

In fact, during a situational press, when an affective input is present, the decisions one makes become less personal and more situational (Eisenberg, 1982). This is the case with the COVID-19 pandemic, where the situation involved the community in a significant and unexpected manner - the circumstances conditioned people's freedom through confinement restrictions, social distancing, among other globally implemented measures. In this sense, the particular importance that the situational variable assumes may generate significant behavioural changes.

2.2.2 Prosocial behaviour in the context of the COVID-19 pandemic

Some authors have stated that, in a crisis situation, the outcomes that follow can be either positive or negative (Marcus & Goodman, 1991; Pauchant & Mitroff, 1992) and are dependent on the nature of the adopted behaviours during the crisis itself (Mishra, 1996). In turn, the way individuals act - with self-interest or prosocially - will depend on the circumstances around them (Lefevor et al., 2017), the previously mentioned situational factors. As the extent of prosocial behaviour depends on the situation, some crises receive more attention than others (Jonas, 2012): as a global threat that differentiates between no one (WHO, 2020; UNICEF, 2020), COVID-19 is clearly a crisis that receives a lot of attention from everyone all around the world. Therefore, and since the concepts of crisis and prosocial behaviour are already naturally linked (Jonas, 2012), it becomes relevant to explore the relationship between this specific pandemic crisis and the topic of prosocial behaviour.

Throughout time, research has documented two narratives concerning human behaviour in a time of crisis, reporting contradictory findings of both selfish and generous attitudes (Zaki, 2020; Brañas-Garza et al., 2020). In the same way that back in the 18th century, Adam Smith stated that individuals are both self-interested and interested in others, an uncertainty on how to balance this self-interest and prosociality is always present in the mind of a community member (Abel & Brown, 2020).

One of the narratives addresses the approach of how human nature is instinctively selfish during a moment of distress: it is every man for himself (Zaki, 2020). Social preference literature widely suggests that the guiding assumption is that each person must advance one's self-interest (Hill Jr., 2002; Miller, 1999) or, in other words, value their own welfare more than the welfare of others; consequently responding more effectively to appeals that highlight self-interest (Jordan et al., 2020).

In the context of the COVID-19 pandemic, some of the behaviours adopted showcase a self-centred attitude, for instance when individuals started hoarding essential goods or breaking the confinement measures. This type of actions were in line with the nature of the situation, where

feelings of scarcity surged, which consequently lead to an increase in competition and an overall less predisposition to adopt prosocial behaviours (Brañas-Garza et al., 2020; Hardin, 1968; Dietz et al., 2003; Diamond, 2005; Gleditsch, 1998).

The second narrative covers the topic of interest to the present study: prosociality increasing during times of need. History has shown how a disaster may release the best in people, producing "groundswells of prosocial behaviour and feelings of community" (Zaki, 2020, p.1). During the last decades, the world witnessed numerous situations where in moments of crisis communities joined efforts to help whoever was in need. 9/11 and hurricane Katrina are two great examples of crisis situations where a rise in prosocial behaviour was evidently observed; millions were raised, with help and empathy flooding from all over the globe (Pyszczynski et al., 2003; Silva et al., 2009).

More recent studies (see Kappes et al., 2018) confirm that in an "impact uncertainty" situation where others may be affected, prosocial behaviours increase, with the authors providing a contextual example of an infectious disease threat, which poses as a case that depends on behaviours with social consequences, such as hygiene and isolation.

Since the beginning of 2020, numerous studies addressing the current COVID-19 pandemic have been initiated, on the most diverse areas of interest, from health, to psychology, to economics, to the subject under study, prosocial behaviour.

According to a recent study by Abel & Brown (2020), crises like the COVID-19 pandemic become moments in which individuals revise their own role in society, contributing to the development of the notion that humans will change their behaviour during this time. In this way, a crisis provides individuals with an opportunity for learn and change (Mishra, 1996; Pauchant & Mitroff, 1992).

All through the pandemic, a change in behaviour was evident, with individuals showing signs of solidarity since the beginning, from helping the most vulnerable to hand-making masks for others (Brañas-Garza et al., 2020); the cooperation of millions with the confinement measures, engaging in physical distancing from everyone including their loved ones, is one of the biggest acts of cooperation and care for others in history (Zaki, 2020).

Global leaders have vehemently urged for global cooperation as an essential strategy to tackle the pandemic, with important voices such as the President of the European Commission, Ursula Von Der Leyen, claiming that only strong international cooperation is able to stop the spreading of the coronavirus (European Commission, 2020).

National leaders across the entire world have also advocated for a unified and cooperative effort in controlling the contagion and mitigating its impacts, from the Minister of Foreign Affairs in Spain (Gobierno de España, 2020) to the Minister of Health in South Korea (KBS, 2020). Looking at the case of Portugal, Prime Minister António Costa has been adamant in how the present moment is all about community and protecting one another, further assessing that "a collective effort is required in order to face this pandemic, at both the international and the national level" (República Portuguesa, 2020).

In this sense, the uniqueness of the situation, in which no one is immune, accompanied by the realization that a conjoint effort is required to overcome it, generated a "common enemy" effect, that ended up increasing cooperation, a behaviour of prosocial nature (Brañas-Garza et al., 2020; Diamond, 2005; Ostrom et al., 1999; Henrich & Henrich, 2007; Mesterton-Gibbons & Dugatkin, 1992). A different research that follows the same approach found that when a natural disaster or an epidemic disease hits the world, the results show an increase in prosocial behaviours and social solidarity, contributing to a higher group cohesiveness (Li et al., 2020). Another relevant study to the topic of prosociality (see Jordan et al., 2020) found evidence that in this specific context, appeals highlighting the benefits for society as a whole were more effective than the ones that highlighted benefits to the self. These findings go in line with the previously described ideas, suggesting that the pandemic situational factor that serves as context for this research can be a trigger that changes human behaviour: the personal threat of the pandemic has less perceived importance than the public threat (Jordan et al., 2020), a perception that evokes the need for a prosocial behaviour instead of a self-centred one.

To sum up, scientific literature regarding how social behaviour adapts to negative and adverse situations goes in both directions (Brañas-Garza et al., 2020; Zaki, 2020), with some authors pointing towards the idea that, following disasters, individuals might act more selfishly, with others stating that prosocial behaviour will prevail during a situation of crisis. Additionally, literature on situational factors suggests that depending on the nature of the crisis, individuals will exert either more generous or selfish behaviours, or, perhaps, a mix of the two in a sort of contradictory duality. Although this is the case of the present COVID-19 pandemic, where these conflicting behaviours can be witnessed, throughout this review strong evidence pointed towards the prevalence of prosocial intentions in the actions of individuals rather than self-centred attitudes.

2.2.3 Situational induced responses that foster prosociality

In a pandemic context, individuals may experience the feeling of being under threat, a sense of uncertainty, as well as higher levels of stress, with these concepts being extensively explored throughout literature and intimately connected to a situation of crisis.

The concept of stress can be defined as an emotional state that comes as a response to unpredictability and uncontrollability (Buchanan & Preston, 2014). In this particular crisis context, it can result from a lack of control induced by the situation in hand (Buchanan & Preston, 2014). In fact, in a crisis situation such as the pandemic, stress comes as a natural reaction to the factors external to the individual - in this type of environment, individuals may perceive the situation to be out of their control (Cutright, 2012; Durante & Laran, 2016) and may experience difficulties coping with the demands of the event (Durante & Laran, 2016).

Extensive literature showcases the effects of stress on human behaviour and decision-making (Buchanan & Preston, 2014), with a growing body of research documenting evidence on how stress promotes prosocial behaviours such as cooperation, empathy and altruism (Taylor et al., 2000; de Waal & Suchak, 2010; Vinkers et al., 2013; Von Dawans et al., 2012; Buchanan & Preston, 2014). For instance, a study by Von Dawans and colleagues (2012) found that when exposed to acute stress, participants engaged substantially more in prosocial behaviours, namely exhibiting higher levels of trust and sharing intentions.

Crisis situations may also induce a high cognitive load disposition as well as the feeling of being under pressure. Literature has found that when these inputs are present in the environment, individuals' decisions are affected; this has been studied in experimental research throughout time with the mentioned inputs often being used as a way to induce stress in participants (see Maule & Hockey, 1993). It has subsequently been proven that when individuals are under pressure and forced to make decisions more quickly, they rely on their intuition and are usually more cooperative (Yu, 2016; Rand et al., 2012), demonstrating how in a crisis situation they may resort to cooperative heuristics throughout their decision making process. The Social Heuristics Theory is at the base of this idea stating that intuition leads to more cooperative behaviour opposed to deliberation (Rand et al., 2014) - in a context of uncertainty, where stress is present, heuristics are likely to dominate over slow deliberation (Yu, 2016).

Additionally, as mentioned, individuals may feel inserted in an environment that leaves them feeling under threat - health threat, financial stability threat, or social threat, respectively with the three types of crises described in the pandemic situational analysis at the start of this chapter.

A study by Alonso-Ferres and colleagues (2020) found evidence that when under high perceived financial threat individuals engage in a larger number of prosocial attitudes, with empathic concern explaining this relationship. Moreover, authors suggest that individuals may use prosocial behaviour as a mechanism of protection against the sensation of being under threat.

Another study has found that prosocial behaviour increases when making a decision under impact uncertainty towards other individuals (Kappes et al., 2018), which further suggests a connection between feeling under threat and prosocial intent.

In short, from the previous gathering of insights concerning the concepts of stress, high cognitive load and pressure, while present in an environment of threat and uncertainty, one can propound that in the context of the COVID-19 pandemic individuals may exhibit high levels of concern which in turn may affect their prosocial behavioural intentions.

2.3 Small Businesses

Since the beginning of the pandemic outbreak, there has been an observable change in consumption patterns (Pantano et al., 2020). Demand for most products and services has decreased (Nicola et al., 2020) and, in the face of uncertainty, people avoided unnecessary spending and focused consumption on commodities that appeared to be crucial when dealing with a health-related crisis (Barua, 2020). This pattern was a reality around the world wherever the coronavirus pandemic had reached (see the examples Andersen et al., 2020; Bartik et al., 2020; McKinsey, 2020) and such drastic changes in consumption patterns can have unpredictable consequences and can be a major contributor to the start of the economic turmoil that the world is currently facing.

In line with these globally challenging times, Portugal is no stranger to the economic difficulties that the pandemic has caused and the same is the case for the Portuguese small businesses, as was reported by Statistics Portugal. In fact, micro and small businesses appear to be the ones suffering the most through the course of the pandemic – by April 17th, in a month that could be considered as the country's pandemic peak with the state of emergency in motion, 24% of micro businesses had shut down temporarily, accompanied by 16% of small businesses and opposed to 13% medium/large enterprises (INE, 2020), an information that displays a tendency for smaller businesses to be facing more difficulties.

Additional data from Statistics Portugal in this same moment in time highlights that 48% of all businesses report that it will not be possible to maintain the company operational for more than 2 months, with micro and small businesses being the most affected ones by the present

circumstances; allied to the fact that these were the businesses that most reported losses over 75% of gross sales (INE, 2020).

While the data presented highlights that smaller businesses appeared to face more difficulties when compared to larger ones, the question that arises is whether the Portuguese population is indeed perceiving the threat small businesses are under, in a way that could consciously or not affect their behaviour towards these same businesses.

Literature has found that it is in fact possible for a community to engage in collective support of businesses and that it even represents a critical success factor (Kilkenny et al., 2010), although in a context of reciprocated mutual support between businesses and a small-town community.

However, despite the fact that there is no secondary data available that could point towards a definitive conclusion, it is still relatively easy to identify attitudes and behaviours that might suggest an interesting research direction – among the Portuguese community, several initiatives have risen in an attempt to assist small local businesses in surviving these difficult times (Gonçalves, 2020): "Na minha comunidade" is an initiative created in April that joins in a platform all kinds of small home delivery businesses, such as F&B, cleaning services, pets, or furniture, with an option to search by area to fulfil the purpose of helping local businesses; "Compre aos pequenos" is another initiative that gathers more than 250 small businesses with the intention of raising awareness, spreading information regarding their services which can be home delivery, take-away, online classes or vouchers; or even the "Go Small or Stay Home" initiative which shares information on various grocery stores, bakeries, restaurants, among other businesses of minor dimension (Gonçalves, 2020).

Analysing these ideas in the context of the COVID-19 pandemic, one can hypothesise that the situation of recession and financial distress left small businesses in a fragile situation, creating an opportunity for prosocial behavioural intentions. This in turn may motivate acts of prosocial nature in consumption acts, affecting the decision of choosing to visit small or large businesses.

2.4 Hypotheses

Throughout the present chapter, a comprehensive review of literature pertaining to the topics under study accompanied by considerations on related and similar subjects was presented, contributing to the construct of a plausible scenario from which hypotheses can be derived.

After establishing that a situational press can significantly influence prosociality, the specific case of the COVID-19 pandemic crisis was looked at, with literature pointing towards the idea that a crisis situational context could have a substantial impact on individuals' prosocial

intentions. In addition, when exploring attitudes and psychological variables linked to the COVID-19 environment, findings went in the same direction, suggesting that an increase in proneness to help in the pandemic context may be observed.

From a combination of the findings above, one can hypothesize that:

> **H1:** A higher level of concern with the COVID-19 pandemic increases an individual's prosocial behavioural intentions.

> **H2:** Individuals who are exposed to reminders of the COVID-19 pandemic display higher prosocial behavioural intentions than individuals who are not.

Moreover, attending that in order for an individual to feel the urge to take prosocial action one may need to first consider the situation in hand as a matter of social concern, it is plausible to further infer that:

> **H3:** Considering COVID-19 as a matter of social concern is a moderator in the predictive relationship between concern with the COVID-19 pandemic and prosocial behavioural intentions.

In addition, global leaders advocating for the importance of cooperation and a conjoint effort to overcome this difficult time may play a role in the predictive relationship under study. In this sense, one can further propose that:

> **H4:** Considering that cooperation is essential to overcome the pandemic situation is a moderator in the predictive relationship between concern with the COVID-19 pandemic and prosocial behavioural intentions.

Finally, the research on prosocial behavioural intentions further expanded onto the topic of consumption, in an attempt to assess the influence of the pandemic on individuals prosocial consumption decisions, using preference for small businesses as the case of study. As previously seen, purchasing tendencies in the Portuguese market showcase a different reaction between small and larger businesses during the pandemic, which allied to an increasing tendency from the community to support smaller businesses opens space to hypothesize that:

> **H5:** Individuals who are exposed to reminders of the COVID-19 pandemic display increased preference for smaller businesses than individuals who are not.

2.5 Conceptual Framework


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┌─────────────────────────────────────────────────────────────────────────┐
│  ┌──────────────────────┐         H1; H5          ┌─────────────────────┐ │
│  │  CONCERN WITH THE     │ ──────────────────────▶ │ PROSOCIAL BEHAVIOURAL│ │
│  │  COVID-19 PANDEMIC    │                          │     INTENTIONS      │ │
│  └──────────────────────┘                          └─────────────────────┘ │
│            H3                          H4                                   │
│          ▲                           ▲                                      │
│  ┌──────────────────┐      ┌──────────────────┐                            │
│  │   CONSIDERING     │      │   CONSIDERING     │                           │
│  │    COVID-19       │      │  COOPERATION      │                           │
│  │  A MATTER OF      │      │  ESSENTIAL TO     │                           │
│  │ SOCIAL CONCERN    │      │  OVERCOME THE     │                           │
│  └──────────────────┘      │    PANDEMIC       │                           │
│                            └──────────────────┘                            │
└─────────────────────────────────────────────────────────────────────────┘
```
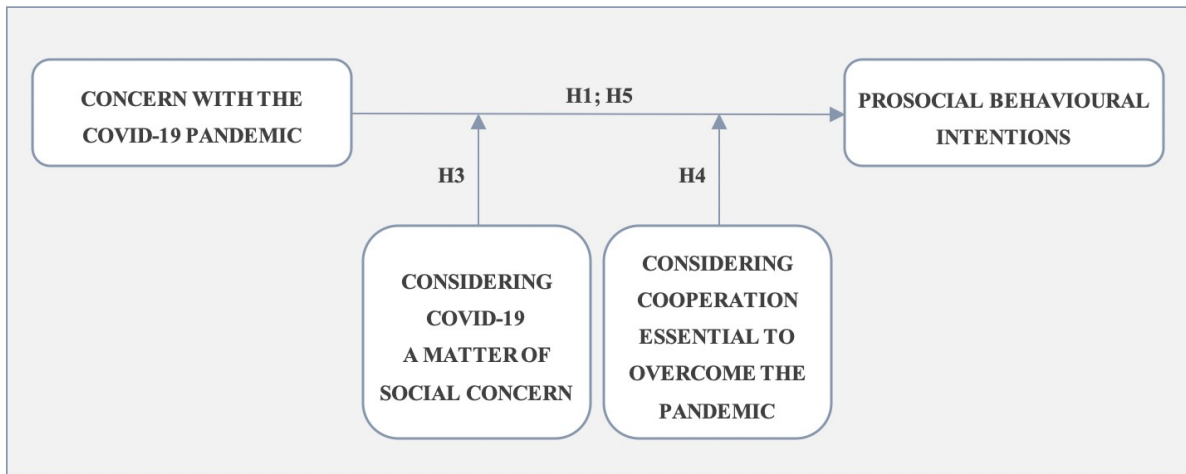
Figure 1 - Conceptual Framework

CHAPTER 3: METHODOLOGY

In this chapter, the methodology used in order to study the proposed hypotheses and research questions will be presented. Firstly, secondary data will be discussed, followed by the unveiling of the primary data, which stands as the main form of data collection in this research.

3.1 Secondary data

As the research in hand has its cornerstone in the current pandemic situation, a completely new environment that has not yet been subject to thorough study, the use of secondary data has been limited in the sense that no direct findings could be retrieved from previous literature to serve as a solid starting point. Nonetheless, resorting to secondary data has proven essential in constructing a possible scenario with literature on similar topics and related subjects, that even though do not paint the full picture of the present circumstances give a plausible and steady base to start the research.

Accordingly, literature pertaining to the topic of prosociality in times of crisis as well as on the observed behaviours of individuals during the first semester of the pandemic, allied with preliminary findings of several working papers, have been analysed and reviewed in the previous chapter as theoretical background.

3.2 Primary data

As mentioned, primary data was the prevalent source of data collection, with its insights providing the main contribution to answer the proposed research questions.

The research process encompassed three stages, each corresponding to one of three studies conducted. These were launched on a sequential manner and designed taking into consideration the precedent study's results, conceding the three stages an interdependent nature. All studies involved quantitative data collection, resorting to online questionnaires, which appeared as the most appropriate and efficient way of collecting insights.

Before assessing the impact of the COVID-19 pandemic on individuals' prosocial intentions, a connection between the situational context and the behavioural change should first be tested. Therefore, the first study was designed to find evidence on the existence of such connection, testing if individuals' level of concern with the COVID-19 pandemic predicts one's prosocial behavioural intentions.

On a second stage, an experimental study tested whether reminders of COVID-19 have the potential to increase prosocial behaviours. To do so, a donation exercise was employed, as it has been widely used in literature as way to measure individuals' prosocial intent (Pavey et al., 2011; Brañas-Garza et al., 2020; Olivola & Shafir, 2013; Guan et al., 2019).

Finally, a second experimental study employing reminders of COVID-19 versus no-reminders was conducted, this time aiming to extend the preceding findings into the consumer level, testing if consumption intention decisions would be influenced by the presence of a reminder of the pandemic. The consumption exercise was built using preference for smaller businesses as the prosocial choice – in a time where businesses are facing financial trouble, the smaller ones are perceived as the most vulnerable and, therefore, the ones in the most need for help.

All three surveys were designed through the Qualtrics' platform. Each questionnaire remained open for 5 days, after which results were analysed resorting to the SPSS software.

As the present research was subject to resource and time constraints, responses were collected through a non-random method, resorting to a network of contacts. All respondents participated in the study voluntarily and without receiving any kind of payment.

The questionnaires were shared online, through social media, in order to maximize the number of participants in a shorter period of time.

In the following sections, the online surveys and respective methods will be disclosed chronologically, covering the participants, procedure, measures and design of each questionnaire.

3.2.1 Study I

Participants. A total of 234 responses were collected. All Portuguese and residents in the country, most participants were women (73.5%), married or in a domestic partnership (57.3%), and with ages mainly ranging from 35 to 64 years old (66.7%). Mostly employed (78.2%) and with a gross income up to 1499€ (54.3%), this sample presents high levels of education with nearly all participants holding an academic degree (82.9%). (Appendix 2)

Procedure. The study was composed by four blocks: (1) Introduction; (2) Level of concern with the COVID-19 pandemic; (3) Prosocial behavioural intentions; and lastly (4) Demographics. After a brief introduction to the study, participants were then presented with a set of questions regarding their level of concern with the present pandemic situation, first in regard to their apprehension for themselves and the subsequent page on their concern for others. Next, respondents were asked to specify their agreement with a set of statements intended to understand how much individuals consider the pandemic to go beyond the scope of public health into social and economic matters. Subsequently, respondents were presented with two prosocial behavioural intention scales retrieved from literature (Baumsteiger & Siegel, 2019; Pavey et al., 2011), and, at the end, demographic data was collected. (Appendix 1)

Measures. In order to measure individuals' concern level with the COVID-19 pandemic, 8 questions were made – encompassing health, stress, economic and social impacts – with 4 questions concerning the respondents' themselves, and the other identical 4 on the respondents' apprehension for other people. Additionally, 6 questions regarding whether individuals' have been following the recommendations from health authorities were made, with 3 questions directed towards the participant himself, and another identical 3 in regard to other people's behaviours. The sets of mirrored questions were separated by a page break in an effort to avoid any response contamination. All responses were given on a scale from 1 to 7, with 1 demonstrating no concern/ no compliance with the recommendations and 7 extreme concern/ complete compliance.

To assess individuals' prosocial intentions, a combination of two scales previously validated in literature was used: (i) the Prosocial Behavioural Intentions Scale (PBIS), a 4-item scale developed by Baumsteiger and Siegel (2019); and (ii) a 5-item scale developed by Pavey and colleagues (2011), and also used by Baumsteiger in a previous article (2017). The first measure assessed how willing participants would be to perform four prosocial behaviours, as "Assist a stranger with a small task", on a scale from 1(Definitely would not do this) to 7(Definitely would do this), whilst the latter considered the extent to which participants intended to perform each of the five behaviours described, including "Donate goods or clothes to a charity", in the course of the forthcoming 6 weeks.

Additionally, a matrix was presented requesting participants to specify their agreement, on a scale from 1(Strongly Disagree) to 7(Strongly Agree), with a set of 8 statements that display the extent to which individuals' see the COVID-19 pandemic as a matter with both social and economic dimensions.

3.2.2 Study II

Participants. In whole, 208 questionnaires were completed, counting with 94 responses to the control condition and 114 to the treatment condition. The majority of the sample is composed by women (68.8%), married or in a domestic partnership (50.5%) and with ages ranging from 18 all the way to 81 years old. Most participants hold an academic degree (89.4%), are employed (69.2%) and have a gross income up to 1999€ (55.8%). Additionally, the sample presents respondents from two nationalities: Portuguese (54.8%) and Brazilian (45.2%). Comparing the two groups, the sample revealed fairly homogeneous in regard to demographic characteristics. (Appendix 8)

Design. An experimental between-subjects design was employed in which participants were randomly assigned to one of two groups: a treatment group, where a reminder of COVID-19 was presented, or a control group, where no-reminder of COVID-19 was shown. The core dependent variable of the study was the outcome of a donation exercise, used as a way to measure prosocial intention.

Procedure. Using Qualtrics' randomizing function, participants were, from the start, randomly and evenly distributed across the two groups. Respondents were first given a brief introduction to the study and then directed to the following page where they were exposed to a stimulus. Inspired on a study by Goldsmith and colleagues (2019), in order to direct participants thoughts to the pandemic (treatment group) or, on the contrary, to distract them from the present circumstances (control group), a set of three magazine covers were presented to each group, asking participants to select the one they would like to purchase. Subsequently, in order to assess prosocial behavioural intentions between groups, individuals were subject to a donation exercise, after which they were asked to respond to a set of questions on their concern level regarding the pandemic as well as to fill in the PBIS scale. Finally, demographic data was collected. (Appendix 7)

Measures. In order to assess individuals' proneness to act prosocially after exposed to one of the stimuli, a donation exercise was conducted. Consumers were given a scenario where they receive a lottery prize in the value of 100€. When withdrawing their prize on an automatic machine, they are asked if they would like to donate part of their winnings to a charity, and, if so, with how much they would like to contribute. A similar activity to this one can be found on a working paper by Brañas-Garza et al. (2020) and on an article by Guan et al. (2019).

Lastly, to assess the concern level three questions were made, all of which retrieved from the preceding study.

3.2.3 Study III

Participants. 241 participants took part in the final study, being distributed across two groups: Control Group and Treatment Group, with 121 and 120 participants, respectively. Regarding demographic characteristics, the sample presents a predominance of women (62.7%) over men (36.1%), mostly single (48.1%) or married or in a domestic partnership (44.0%), and with ages evenly ranging from 18 to 64 years old (96.7%). Most with a gross income up to 1499€ (52.7%), the vast majority holds an academic degree (90.5%) and is currently employed full-time (70.5%). The sample revealed fairly homogeneous across both groups of study. (Appendix 12)

Design. As in the previous study, an experimental between-subjects design was employed, randomly assigning participants to either a treatment group, where they were exposed to a reminder of COVID-19, or a control group, where no reminder was present. The main dependent variables of the study were a set of four consumption decisions, intending to assess if a reminder of the pandemic influences individuals' consumption choices in a prosocial manner.

Procedure. Applying the same procedure of Study II, after being randomly assigned to one of the two conditions, participants were presented with a stimulus – respondents in the treatment group were exposed to reminders of the COVID-19 pandemic, whereas the ones in the control group were shown unrelated information. In the subsequent block, participants were requested to make four consumption decisions. In each, they were given a scenario where they had to choose between purchasing the item in question to a large business or a small local one. This exercise intended to measure individuals' proneness to act prosocially through their consumption choices when exposed to different stimuli. Afterwards, they were asked to what extent they consider that each of the businesses mentioned before will face economic difficulties over the next 12 months. Additionally, on block 5, a matrix on the importance of cooperation for full recovery of the pandemic's impacts was presented, aiming to assess if the belief that cooperation is essential is a moderator in the relationship between concern with pandemic and prosocial intent. Finally, the concern measures from Study I, followed by Pavey and colleagues' prosocial intentions scale (2011) were presented, concluding with demographic questions. (Appendix 11)

Measures. In the stimuli activity, participants were asked to read a set of three news and rate how interesting they found each one. Participants assigned to the treatment condition were presented with news recalling COVID-19 as a social, economic and public health crisis, whilst respondents in the control condition were showed news unrelated to the pandemic situation (articles on Taylor Swift, Cristina Ferreira and the Princesses of Spain).

To measure prosocial intent in a consumption setting, four scenarios were presented: (i) buying apples from a small grocery store or a supermarket from a large chain; (ii) ordering fresh produce online from an agricultural producer or a supermarket from a large chain; (iii) purchasing a coke from a local coffee shop or a restaurant from a fast-food chain; and (iv) buying a desired pair of shoes from a local shoe store or from the shopping centre – the entirety of the exercises can be accessed on Appendix 11. In order to avoid response contamination, the four exercises were separated by page breaks. A dichotomous decision was presented in each one using a scale from 1 to 9, with 1 corresponding to the small local business option and

9 the large business alternative. Additionally, in every scenario, participants were informed that "Both establishments are at the same distance, practice similar prices and sell [item] of equal quality." in a way that limits the decision deliberation to the business' dimension and the respondents' prosocial intent.

To understand if the consumption choices made before were related with the respondents' belief that the said businesses were facing financial distress during the pandemic period, on the following block, participants were asked to rate the likelihood that each of the businesses will face economic difficulties over the next 12 months on a scale from 1(Not likely at all) to 7(Extremely likely).

Furthermore, to explore if the belief that a joint effort is crucial in the pandemic context works as moderator in the predictive relationship between concern with pandemic and prosocial behavioural intentions, participants were asked to show their agreement, on a scale from 1(Strongly Disagree) to 7(Strongly Agree), with 6 statements regarding cooperation and the COVID-19 pandemic context.

To measure concern level and prosocial intent, the 14 questions from the first study were retrieved, as well as Pavey and colleagues' prosocial intentions scale (2011).

CHAPTER 4: RESULTS AND ANALYSES

In this chapter, the results from the carried-out studies will be presented and statistically analysed, providing a basis for further discussion and conclusions.

4.1 Study I

This first study intends to start exploring a connection between prosocial intentions and the COVID-19 pandemic through an assessment of the potential predictive relationship of an individuals' concern level and their respective prosocial behaviour intentions. Additionally, the fact of whether individuals consider COVID-19 as a matter of social relevance will be assessed and tested as a moderator in the relationship above.

4.1.1 Concern with the COVID-19 pandemic

In the first part of the questionnaire, participants answered a set of 14 questions that covered their level of concern with the COVID-19 pandemic for themselves and for others, as well as their assessment on how closely they and others have been following the recommendations from health authorities.

As questions were mirrored – with the first 7 concerning the respondent himself and subsequent identical 7 on the respondent's feelings and opinions on others – it is appropriate to use a Paired Samples T-test in order to compare the means on each pair of mirrored questions (Appendix 3). Results have shown a statistically significant difference across all pairs ($p<.001$), with respondents displaying higher levels of concern for other people ($M=5.689;SD=.890$) than for themselves ($M=5.052;SD=.997$), in addition to the belief that they follow the recommendations from health authorities more closely ($M=5.85;SD=0.928$) than others ($M=4.28;SD=1.014$) as well as give more importance to the use of masks ($M_{myself}=6.56;SD_{myself}=.802;M_{others}=4.99;SD_{others}=1.270$) and maintenance of social distance ($M_{myself}=6.40;SD_{myself}=.889;M_{others}=4.61;SD_{others}=1.333$).

From these results alone, one can already identify an underlying prosocial nature, rather than selfish, to the present pandemic context, with individuals putting their concern for others above the one for themselves.

Additionally, it is also relevant to assess the feasibility of the measures. Using Cronbach's alpha coefficient, the measures on "Self-concern" and "Concern for others" revealed good reliability indexes with alphas of .782 and .841, respectively (Appendix 3).

Nonetheless, as concern with the self and with others may reflect together a more general and comprehensive measure of concern with COVID-19, the two measures were merged. The internal consistency of the overall concern measure revealed good, with an alpha of .861. In

addition, from this measure's results, one can see participants demonstrate overall a medium high concern level with the present pandemic (M=5.371;SD=.844), with the average respondent showing a 5.371 concern level on a scale from 1(Not concerned at all) to 7(Extremely concerned). (Appendix 3)

As it is, in this way, adequate to analyse the two measures as one, upcoming analyses will solely refer to the overall "Concern" measure in place of the individual ones.

4.1.2 Prosocial behavioural intentions

On a second stage, respondents were tested on their prosocial behavioural intentions resorting to two scales developed in past literature (Baumsteiger & Siegel, 2019; Pavey et al., 2011). Each individual scale revealed an adequate level of internal consistency, with alphas of .736 and .755, in the Baumsteiger & Siegel scale and in the Pavey et al. one, respectively. Nonetheless, as the present study aims to look at prosocial behavioural intentions as a whole, rather than a comparison across measures, analyses will be considering the two scales as part of one overall "Prosocial behavioural intentions" measure. Thereby, the Cronbach's alpha for the combination of the two scales was computed, revealing good reliability and internal consistency (α=.806), presenting, however, a slightly higher alpha if the item "Give money to charity" were to be deleted (α=.812). As the difference between values is very reduced, and as deleting the item would be altering the original measure, the element was not removed, and the overall "Prosocial behavioural intentions" variable was computed as a result of the mean of all responses (M=5.804;SD=.836). (Appendix 4)

4.1.3 Concern as a predictor of Prosocial behavioural intentions

In order to assess if individuals' overall concern level with the present pandemic is a predictor of their prosocial behavioural intentions (H1), a Linear Regression analysis was carried out (Appendix 5). Using the "Prosocial behavioural intentions" variable computed earlier as the dependent variable and the set of "Concern" measures as the independent one, revealed a statistically significant regression model (p=.006;R^2=.091;β=.249). Analysing the results, one can see that when individuals' concern level with the COVID-19 pandemic rises so does their prosocial behavioural intentions, being responsible for 9.1% of the variation in the latter. In this way, H1 – *A higher level of concern with the COVID-19 pandemic increases an individual's prosocial behavioural intentions.* – is validated.

4.1.4 COVID-19 as a social matter

Lastly, participants manifested their agreement with a set of 8 statements that showed how much they consider the COVID-19 pandemic as an issue of social relevance. This measure

encompassed both social and economic components as well as the belief on the importance of cooperation.

In a scale of agreement from 1(Strongly Disagree) to 7(Strongly Agree), participants showed great agreement with the statements, with responses averaging between 5.91 and 6.74 (Appendix 6). Individuals revealed they believe COVID-19's effects go beyond the scope of public health, comprising social and economic impacts, and that a joint effort is needed to overcome this period.

Before further analysis, it is, once again, appropriate to analyse the reliability of the measures. "COVID-19 as a social matter" revealed an adequate level of internal consistency, displaying a Cronbach's alpha of .770 (Appendix 6).

In order to test if considering "COVID-19 a social matter" moderates the predictive relationship between individuals' level of concern with the pandemic and their respective prosocial behavioural intentions (H3), Hayes' PROCESS model 1 was employed (Appendix 6).
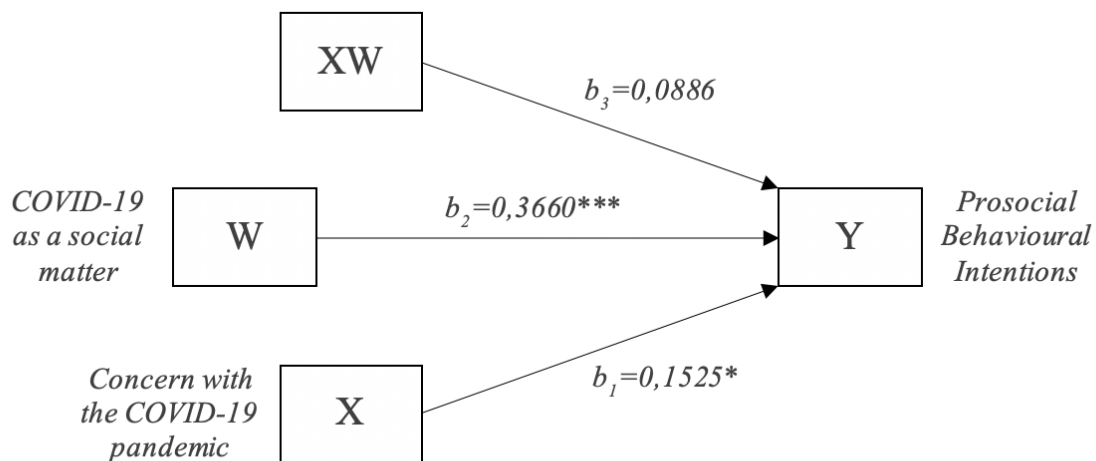
Note: $p<0,05*$, $p<0,01**$, $p<0,001***$

Figure 2- Statistical Model I

Results have shown that "COVID-19 as a social matter" is not a statistically significant moderator of the predictive relationship ($p=.405$), according to which H3 - *Considering COVID-19 as a matter of social concern is a moderator in the predictive relationship between concern with the COVID-19 pandemic and prosocial behavioural intentions.* - must be rejected.

Even though the interaction term did not prove significant, when looking at the other Linear Regressions' results, one can see that, once again, the individuals' level of concern is a

significant predictor of their prosocial intentions ($p=.023$), and, in addition, that considering the pandemic a matter of social relevance is a predictor as well ($p=.001$).

When running a separate Linear Regression between the variables, results show indeed a significant model ($p=.001;R^2=.112;\beta=.489$), from which one can conclude that the more an individual considers the pandemic as a multidimensional phenomenon, with social and economic dimensions allied to the public health one, the higher his prosocial intentions. (Appendix 6).

Furthermore, in order to assess the overall variation produced by the two predictors on one's prosocial intentions, another Linear Regression was run (Appendix 6). Combining all measures, revealed, as expected, a statistically significant model ($p=.001$), which explains 16.0% of an individual's prosocial intent in the present pandemic context ($R^2=.160$).

4.1.5 Key takeaways

In this first study, evidence was found on how a high level of concern with the COVID-19 pandemic increases prosocial behavioural intentions, in addition to the unforeseen finding that individuals' assessment of COVID-19 as a matter of social relevance is also a predictor, against what was originally thought to be a moderator of the first relationship.

Regarding assessments on the pandemic, participants have shown they do indeed understand the present context as a situation that encompasses economic, social and public health dimensions, in line with the contextualization given in chapter 2.

Furthermore, individuals expressed high levels of concern with the situation, with that apprehension being more salient towards other people's well-being than their own, further supporting the idea that this particular situational context prompts a prosocial rather than selfish response in individuals.

4.2 Study II

The second study proposes to further explore the effects of the pandemic context on prosocial behavioural intentions by testing those said intentions in an experimental study where they are put into action – the pandemic situational influence was manipulated using a Reminder of COVID-19 vs. No-Reminder of COVID-19 between-subjects design, followed by a donation exercise where individuals demonstrate their willingness to help.

4.2.1 Donation exercise

From the start, participants were randomly and evenly assigned to one of the two conditions – a treatment condition, with a COVID-19 reminder, or a control condition, with no reminder of

the pandemic – after which they were subject to a donation exercise, intending to assess prosocial behavioural intentions across groups.

In order to test for mean differences in donation values between conditions, an Independent Samples T-test was run (Appendix 9). Results have shown a statistically significant difference between the two groups ($t(206)=-3.006;p=.003$), revealing that participants in the COVID-19 reminder group donated higher amounts ($M=47.30;SD=35.68$) than the ones in the control group ($M=33.28;SD=30.64$). These results suggest that when exposed to a reminder of the COVID-19 pandemic, individuals show an increased proneness to act prosocially, supporting H2 - *Individuals who are exposed to reminders of the COVID-19 pandemic display higher prosocial behavioural intentions than individuals who are not.* – which is, therefore, accepted.

4.2.2 Further analysis

Furthermore, it is appropriate to note that this particular sample presents a reasonable sized population of two different nationalities: Portuguese and Brazilian, with 114 and 94 participants, respectively (Appendix 8).

In this way, as the sample includes participants from two different political, social and economic settings, where governmental positions in regard to the pandemic are rather distinct, it becomes relevant to understand whether the previous results remain true when looking at each individual group. Running two Independent Samples T-tests, results have shown a statistically significant mean difference both in the Portuguese ($t(111)=-1.909;p=.051$) and in the Brazilian samples ($t(92)=-2.395;p=.019$) (Appendix 10).

These results further support H2 as in in both cases participants who were exposed to the COVID-19 reminder donated higher values ($M_{PT}=41.86,;SD_{PT}=35.74;M_{BR}=53.81;SD_{BR}=34.86$) than the ones who were not ($M_{PT}=30.31;SD_{PT}=28.45;M_{BR}=39.95;SD_{BR}=32.71$), in this way displaying an increased predisposition to behave prosocially when reminded of the current pandemic.

These findings are of particular interest since even though each group resides in a different country, with a different governmental approach to the pandemic, the two show the same pattern of results, supporting the idea that the present situational context influences individuals' prosocial behavioural intentions.

4.2.3 Manipulation check

Regarding COVID-19's concern measures, even though mean results suggested a higher concern level in the COVID-19 reminder group, the difference was not statistically significant ($t(206)=.279;p=.780$) (Appendix 10). Same results were found for the Portuguese

(t(112)=.785;p=.434) and Brazilian (t(92)=-.393;p=.695) samples individually, so one cannot reject the null hypothesis of equal levels of concern across the two groups.

The same revealed true for the prosocial behavioural intentions measure, showing no statistically significant difference between the groups in the overall sample (t(206)=-.681;p=.496) as well as across nationalities (t_{PT}(122)=.000;p_{PT}=1.000;t_{BR}(92)=-1.045;p_{BR}=.299) (Appendix 10).

Finally, a Linear Regression analysis was run in order to test if the respondents' concern level with the COVID-19 pandemic was a predictor of their donation intentions (Appendix 10). The Linear Regression model revealed a non-significant effect both in the global population (t(1)=0.665, p=.507) and according to the respondents' country of residence (t_{PT}(1)=0.399;p_{PT}=.690;t_{BR}(1)=-0.384;p_{BR}=0,702).

4.2.4 Key takeaways

In the same manner that was hypothesized, the stimuli produced an effect on donations: participants assigned to the COVID-19 reminder group donated higher amounts than those assigned to the control group.

Moreover, as the sample was composed by residents from two different countries – Portugal and Brazil – with each representing nearly half of the sample, it was found relevant to explore that same relation across nationalities. The results from the first analysis remained true, demonstrating that even in distinct political, economic and social contexts, a reminder of the pandemic generates the same effects.

Yet, it is also relevant to note that no statistically significant differences were found in levels of concern across the two manipulation groups, as well as no significant predictive relationship between "Concern" and donated amounts.

4.3 Study III

The final study aims to extend the findings from the previous one into the consumer level – employing, once again, a Reminder of COVID-19 vs. No-Reminder of COVID-19 between-subjects design, in which individuals were tested on their prosocial consumption decisions, using preference for small businesses as the prosocial choice.

Additionally, individuals' assessment on the importance of cooperation to overcome the pandemic will be tested as a moderator in the predictive relationship between "Concern" and "Prosocial behavioural intentions".

4.3.1 Consumption decisions

After being randomly assigned to one of the two conditions – a COVID-19 reminder condition or a Control one – participants were asked to make four consumption decisions.

In the first given scenario, participants were told they needed to buy some apples on their way home. To do so, they could either go to a small grocery store or a supermarket from a large chain. As in all four decisions, responses were given on a scale from 1(Definitely the [small business]) to 9(Definitely the [large business]). Overall, respondents have shown a greater preference for the small grocery store (M=2,91;SD=2,44). In addition, running an Independent Samples T-test revealed no significant difference between the groups (t(239)=1.510;p=.132), hence, despite the mean results, one cannot say participants in the COVID-19 reminder group have shown a greater preference for the grocery store (M=2.68;SD=2.32) than the ones in the control group (M=3.15;SD=2.55) (Appendix 13).

Next, participants needed to do an online order of some fresh produce, to either an agricultural producer or an online supermarket from a large chain. As a whole, respondents have shown an increased preference for the producer (M=2,58;SD=2,37), yet with a marginally significant difference between the groups (t(232)=1.733;p=.084) – participants in the COVID-19 reminder group stressed their preference for the producer more clearly (M=2.32;SD=2.15) than the ones in the control group (M=2.84;SD=2.55).

Subsequently, respondents were asked whether they would go to a local coffee shop or a fast-food chain restaurant to buy a coke. Respondents showed, overall, preference for the local coffee shop (M=2.04;SD=1.94), yet with a statistically significant difference between the groups (t(215)=2.039;p=.043). Once again, individuals assigned to the COVID-19 stimulus revealed to favour the local business more (M=2.32;SD=2.15) than the ones assigned to the control condition (M=2.84;SD=2.55).

Lastly, respondents were given a scenario where they were going to buy the pair of shoes they have been dreaming about. To do so, they could either go to a local shoe store or, alternatively, a shopping centre. Individuals' choice turned towards the local shoe store (M=3.10;SD=2.69), with, once again, a statistically significant difference between the two groups decisions (t(235)=2.613;p=.010) – participants exposed to the COVID-19 reminder revealed a more accentuated preference for the local shoe store (M=2.65;SD=2.48) than the ones who were not (M=3.55;SD=2.83).

Additionally, it poses as relevant to measure the reliability of the overall "Prosocial Consumption" measure. Using Cronbach's coefficient, results revealed an alpha above α=.700,

and therefore considered adequate, when analysing both the whole sample (α=.726) and each group individually (α COVID-19 Reminder Group=.720;α Control Group=.708) (Appendix 13).

Performing once again an Independent Samples T-test, this time using the aggregated variable, "Prosocial Consumption", a statistically significant difference was found (t(233)=2.838;p=.005) (Appendix 13). These results show that when exposed to a reminder of the COVID-19 pandemic, participants exhibit a greater preference for the small and local businesses (M=2.356;SD=1.491) rather the large ones (M=2.957;SD=1.780). Therefore, H5 - *Individuals who are exposed to reminders of the COVID-19 pandemic display increased preference for smaller businesses than individuals who are not.* - is validated.

4.3.2 Businesses' financial risk assessment

In the following section, participants were asked to what extent they consider that each of the businesses, mentioned in the previous block, will face economic difficulties over the next 12 months.

In order to compare respondents' financial risk assessments to the small business' options alongside the large business' alternatives, a Paired Samples T-test was run (Appendix 14). Results have shown a statistically significant difference across all pairs (p<.001). Participants were adamant in how they believe there is an increased economic risk for the smaller businesses (p=.000), namely grocery stores (M=5.67;SD=1.41), agricultural producers (M=5.37;SD=1.52), local coffee shops (M=5.54;SD=1.37) and local stores (M=5.79;SD=1.25), compared to the larger businesses, such as supermarkets part of large chains (M=2.45;SD=1.34), shopping centres (M=3.52;SD=1.59) and restaurants of fast-food chains (M=2.91;SD=1.51).

In addition, an Independent Samples T-test was run, aiming to explore possible response differences between the two conditions (Appendix 14). Even though mean results were leaning towards increased business risk perceptions in the COVID-19 reminder group, results were not statistically significant across all measures (.920>p>.189).

Testing now for a possible predictive relationship between respondents' belief that smaller businesses face greater economic risk and their consumption decisions in the beginning of the questionnaire, resorting to a Linear Regression model, revealed a statistically significant result (p=.026;R^2=.046), with individuals' risk assessment explaining 4.6% of their consumption choices (Appendix 14). Furthermore, testing this same idea across the two groups has shown a statistically significant model in the COVID-19 reminder condition (p=.023;R^2=.093;β=.098)

whilst a not statistically significant one in the Control condition ($p=.458$; $R^2=.031$) (Appendix 14).

4.3.3 Concern with the COVID-19 pandemic

Regarding participants concern with the pandemic, results were in line with the ones from Study I: (i) overall, individuals' express high levels of concern with the present pandemic ($M=5.29$; $SD=.85$; $\alpha=.841$); (ii) with a statistically significant difference between participants' self-concern and concern for others ($p<.001$), with the latter being the preeminent one ($M_{Self-concern}=5.28$; $SD_{Self-concern}=1.09$; $M_{Concern\ for\ others}=6.12$; $SD_{Concern\ for\ others}=.99$); (ii) in addition, to the belief that they give more importance to the maintenance of social distance ($M=6.36$; $SD=.92$) and the use of mask ($M=6.46$; $SD=.97$) than others ($M_{Social-distance}=4.46$; $SD_{Social-distance}=1.36$; $M_{Mask}=4.92$; $SD_{Mask}=1,25$) (Appendix 15).

Additionally, using an Independent Samples T-test, no statistically significant difference was found in participants' concern levels across the two groups ($t(239)=-.786$, $p=.433$) (Appendix 15).

4.3.4 Prosocial behavioural intentions

As in the first study, Pavey and colleagues' prosocial intentions scale has shown an adequate level of internal consistency ($\alpha=.785$), presenting, once again, a slightly higher alpha if item 1, "Give money to charity", were to be deleted ($\alpha=.806$).

Even though from these results respondents seem to present a reduced predisposition to give money ($M=3.76$; $SD=1.82$), running a Linear Regression between this intention and individuals' concern with the economic impacts of the pandemic ($M=5.62$; $SD=1.06$), has shown that despite their sensitivity to economic matters at the present moment, higher levels of concern with the economic impacts of the pandemic increase willingness to give to money to charity ($p=.002$; $R^2=.051$; $\beta=.399$). In addition, running the same model across conditions, revealed a significant predictive relationship in the COVID reminder group ($p=.006$; $R^2=.083$) but a not significant one in the Control group ($p=.179$; $R^2=.029$). Accordingly, one can infer these results come as an effect of the COVID-19 pandemic, of which participants in the treatment group were reminded about. In this way, the present findings further support the ones from Study II, where participants donated higher amounts when reminded of the pandemic.

Regarding the overall "Prosocial behavioural intentions" measure, no statistically significant difference was found across the two groups ($t(239)=-.287$; $p=.774$). (Appendix 16)

4.3.5 Cooperation

Finally, respondents were asked to specify their level of agreement with a set of 6 statements, aiming to assess to what extent people believe cooperation is important in the current pandemic context.

Using Cronbach's coefficient, these measures have shown good internal consistency ($\alpha=.835$), as well as a mean response of 6.47, which on a scale from 1(Strongly Disagree) to 7(Strong Agree), reveals great agreement with how a joint effort is needed to resolve the pandemic (Appendix 17). In addition, running an Independent Samples T-test, no statistically significant difference was found between groups' responses to the matrix ($t(239)=-.352;p=.725$) (Appendix 17).

In order to test if "Cooperation" works as a moderator in the predictive relationship between "Concern" and "Prosocial behavioural intentions", Hayes' PROCESS model 1 was employed (Appendix 17).
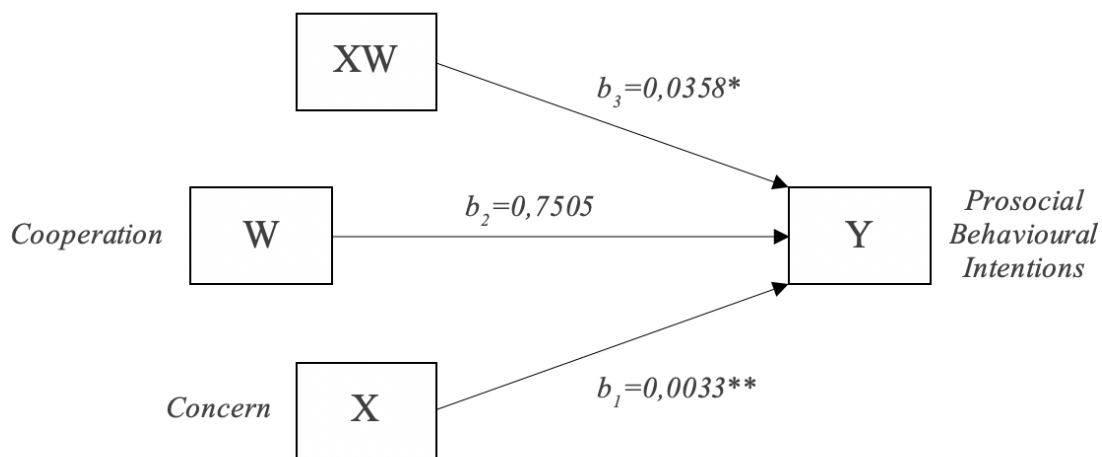
Note: $p<0,05*, p<0,01**, p<0,001***$

Figure 3- Statistical Model II

Results have shown that the interaction term is statistically significant ($p=.0358;R^2=.0477$), which suggest that the predictive relationship between "Concern with the COVID-19 pandemic" and individuals' "Prosocial behavioural intentions" is indeed moderated by their belief that "Cooperation" is essential in resolving the present pandemic. In this way, H4 – *Considering that cooperation is essential to overcome the pandemic situation is a moderator in the predictive relationship between concern with the COVID-19 pandemic and prosocial behavioural intentions.* – is validated.

Additionally, Hayes' model results have also shown that "Concern" is a predictor of "Prosocial behavioural intentions" ($p=.003$) – supporting Study I's results – whilst "Cooperation" is not ($p=.7505$).

As a final analysis, a second Hayes' PROCESS model 1 was run, this time aiming to assess if "Cooperation" moderates a potential predictive relationship between "Concern" and participants' prior "Prosocial consumption" decisions (Appendix 17).
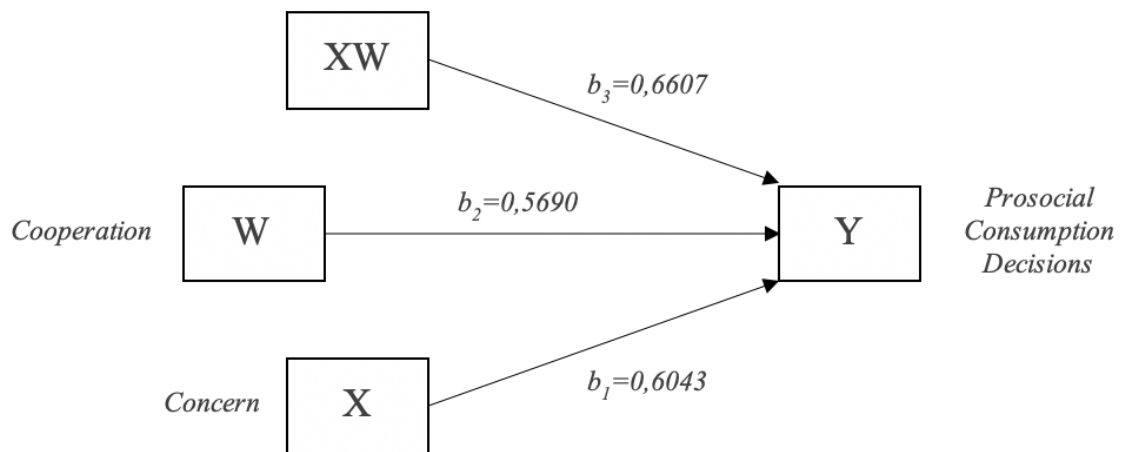
Note: $p<0,05$*, $p<0,01$**, $p<0,001$***

Figure 4 - Statistical Model III

The output matrix revealed no statistically significant results: "Cooperation" is not a significant moderator of the relationship ($p=.6607;R^2=.0035$), with, furthermore, "Concern" not being a significant predictor of "Prosocial Consumption Decisions" ($p=.6043$).

4.3.6 Key takeaways

As in Study II, the exposure to a COVID-19 reminder altered participants behaviours: individuals assigned to the COVID-19 condition revealed an increased preference for smaller businesses.

Furthermore, respondents' assessment on financial risk for small businesses in the present pandemic is a statistically significant predictor of their consumption decisions. Yet, these results are only true for the COVID-19 reminder group, showing once again the impact of the pandemic situational factor in prosocial intentions, extending now the findings into the individual as a consumer.

In addition, it was also found that individuals' belief in "Cooperation" as essential to resolve the pandemic is a statistically significant moderator of the relationship between "Concern" and "Prosocial behavioural intentions", with "Cooperation" not being a predictor itself.

CHAPTER 5: CONCLUSIONS AND DISCUSSION

In this final chapter, the main findings and conclusions will be discussed, from which managerial and academic implications will be drawn, as well as underlying limitations and further research proposals.

5.1 Main Findings and Conclusions

The present research has at its core the purpose of studying prosocial behavioural intentions in the unique setting of the COVID-19 pandemic. In an attempt to explore this idea, potential predictors of prosocial intentions in the pandemic environment were tested as well as moderators of such relationships, with the main hypotheses proposing that an increased concern with COVID-19 would lead to increased prosocial behavioural intentions. Additionally, the effects of reminders of COVID-19 on prosocial behaviours were explored in two scenarios: (i) a donation exercise, an inherently prosocial action; and (ii) prosocial consumption decisions.

In order to deepen the knowledge on the subjects under investigation, a study plan encompassing three sequential stages of quantitative nature was developed. All three studies provided valuable insights with which the research now paints a clearer picture of how individuals' prosocial intentions are affected by the pandemic context.

In the following sections, main findings and conclusions from this project will be summarized.

5.1.1 Prosocial Behavioural Intentions – Predictors and Moderators

Several predictors and ensuing moderators were tested in an attempt to analyse a change in prosocial behavioural intentions as a result of the COVID-19 pandemic.

The first relevant connection that surged during the research process was related with the individuals' concern with the impacts of the pandemic. As hypothesized, this reaction to the present situational context has an influence on willingness to act prosocially, with higher levels of concern leading to increased prosocial intentions - an idea that was supported by results in both Studies I and III.

A second connection that arose, showcased that the way in which individuals perceive the pandemic influences their prosocial intentions. That perception is linked with the three-dimensional crisis concept that was portrayed in the literature review, which defined the present pandemic as a unique situation that poses as an economic, a social and a public health crisis all together. Accordingly, individuals who attribute social and economic dimensions to the pandemic alongside the intrinsic public health one, display an increased predisposition to incur in prosocial actions.

The combined influence of the two predictors presented above is responsible for 16% of the variation in one's prosocial behavioural intentions in the present reality. The remaining variation may originate from various sources such as one's personality traits and other responses to the situational factor, that are yet to be explored, leaving endless routes for further research.

A final relevant influence worth noting derives from an individual's belief in the importance of a collective effort to overcome the present circumstances. This perception moderates the first predictive relationship found between one's concern with the pandemic and respective prosocial intentions.

From these findings, one can comprehend that an individual's prosocial behavioural intention in the context of the COVID-19 pandemic will rise in a direct proportion to the rise in concern allied to his perception of the importance of cooperation. Simultaneously, those prosocial intentions will rise as a result of individuals increasingly considering the pandemic as a phenomenon comprising economic, social and public health impacts.

5.1.2 Effect of COVID-19 reminders on Prosocial behavioural intentions

Following the initial correlational study, two experimental ones were conducted, employing a Reminder of COVID-19 vs. No-Reminder of COVID-19 between-subjects design.

These reminders will allow to isolate the effects coming from the pandemic from the ones with unrelated sources. Even though one cannot extract individuals from the context they are currently living in, it is still possible to, through increasing awareness in one group and partially distracting the other, isolate the pandemic influence under study.

In this way, two studies were conducted: (i) a first one intending to test in action, through a donation exercise, changes in prosocial behavioural intentions; and (ii) a second study aiming to test whether the increased prosocial intentions due to the pandemic extend as well to consumption decisions.

5.1.2.1 Donations

In the first experimental study, findings displayed concrete evidence that points towards the same idea that individuals show increased prosocial intentions in the pandemic context, as when they were reminded about the pandemic, their generosity in donations raised. A finding that provides an increased weight to this result is the fact that the same pattern was found in two separate samples, originating from two different socio-political contexts – a Portuguese sample and a Brazilian one.

These results are further endorsed by findings in Study III where individuals' shown an increased willingness to engage in prosocial behaviours of monetary nature when their concern with the economic impacts of the pandemic was higher.

In sum, the results from Study II's donation exercise have sprung into action what individuals said were their intentions in the previous study, reinforcing once again a connection between the pandemic situational factor and prosocial intentions.

5.1.2.2 Consumption decisions

In addition, the prosocial behavioural intentions did not find its limits in behaviours that are exclusively prosocial as is the case of donation. When presented with various consumption decisions that included a choice between purchasing in a small business versus a large one, participants were adamant on their preference for the ones of smaller dimension. Even though that alone does not reveal a connection to the present pandemic context, one can infer this decision was partially influenced by the situational factor since a statistically significant difference between the manipulation groups was found, revealing greater preference in the COVID-19 reminder group.

This idea was further endorsed by a predictive relationship found between individuals' financial risk assessment for small businesses and their consumption choices. This particular analysis has shown that, when reminded of COVID-19, individuals who more greatly consider small businesses to be under financial distress show greater preference for them through their consumption choices.

5.2 Discussion and Managerial / Academic Implications

Consolidating all the collected evidence, it is possible to convey that the COVID-19 pandemic context is producing a magnifying effect on individuals' prosocial behavioural intentions. As previously seen, reactions individuals experience during the pandemic, as is the case of concern, have the power to increase their willingness to help. Moreover, when simply reminded of the present circumstances, individuals' prosocial intentions also rise.

In this way, these studies' results can be translated into our daily lives - reminders of COVID-19 are present all around us, from constant public reminders to wear a mask and to sanitize our hands, to mass media reports on the situation the world is facing - we are immersed in a COVID-19 bubble where it is impossible to forget the situational context, making every one of us a member of the COVID-19 reminder group in our daily lives. Accordingly, it is possible to infer that individuals' attitudes and responses in day-to-day life should be in line with the ones observed in the studies, with focus on the predisposition to act prosocially.

In fact, what impacts individuals' lives as a whole, will in turn influence managerial decisions, as consumers are one of the most important stakeholders in a company's micro-environment. Particularly, when following a consumer-focused strategy, it is of paramount importance to take into consideration a moment in which society has a completely unique and different mindset, that, as evidenced in this research results, changes human behaviour.

As seen, COVID-19's impacts led to an increase in prosocial behavioural intentions which translated into consumption decisions with individuals demonstrating a shift in preferences towards smaller businesses - posing as a relevant fact to have into consideration when performing economic and strategic decisions from a managerial point of view. Additionally, from this particular example can be inferred an overall predisposition from individuals to consume prosocially as well as to take into account businesses' prosocial practices when making a consumption choice - however, these last findings should be looked at as a basis for further research on the topic of how COVID-19 influences consumptions decisions, and not as a conclusive evidence that all prosocial behaviours increase during this particular crisis.

Furthermore, from an academic point of view, the present research contributes, in its on modest way, to the study of various subjects from literature on (i) prosocial behavioural intentions, supporting the study of the impacts of situational factors on prosocial behaviour; (ii) COVID-19, analysing the pandemic's impacts on human behaviour; to (iii) the studies on consumer behaviour, with a focus on prosocially motivated decisions.

5.3 Limitations and Future Research

As the present study was under resource constraints, one can understand there are ensuing limitations.

In what concerns the sample, although demographically the subjects under study appear as diversified, the data collection process was done resorting to a non-random method and may therefore be under a certain group bias, such as being composed of individuals who belong to the same network of contacts. Accordingly, and since the used population may not pose as representative, it would be interesting to replicate the studies with a more diversified and random group of individuals, as well as perhaps with a considerably larger sample.

On another note, as previously seen on Study III's results and ensuing conclusions, evidence has been found on how the pandemic context is affecting prosocial behavioural intentions in an extent that encompasses consumption decisions. However, and despite the success of the conducted experiment, it serves only as a single example of decision-making in the consumers' journey – preference for small businesses. In this sense, a logical path to follow for further

research would be to explore other examples of prosocial consumption choices as suggested in previous literature, such as preference for pro-environmental, pro-fair-trade (Connolly & Shaw, 2006), products with prosocial attributes or sustainable products (Ross & Kapitan, 2018).

Additionally, as the examples under analysis include all low involvement products, it also poses as relevant to explore this same idea into high involvement products.

Furthermore, Devinney and colleagues (2010) suggest that consumers are heterogeneous in their motivations and preferences towards social issues, making it more difficult for attitudes to reliably predict prosocial consumption, which could pose as a limitation for the present study, as well as a possibility for future research that encompasses motivations that complement prosocial behaviour in the decision-making process.

Finally, one of Study I's main findings – namely, how concern with the pandemic is a predictor of prosocial behavioural intentions – led to the belief that when exposed to a reminder of the pandemic not only would individuals act in an increasingly prosocial manner, but also that the reason underlying this behavioural change would be an increase in concern levels prompted by the stimulus. However, results from Studies II and III revealed no statistically significant difference on concern levels across the two groups, which suggests that the motor behind the adjustment in prosocial intentions might be something else, leaving here another possible route for further research. A possible explanation for these results may be that the main driver is not concern but rather accessibility of the topic – that is, whether one's thought are focused on COVID-19 or not. Individuals who are concerned will most likely be thinking about the pandemic, in the same way that individuals exposed to the reminder are, perhaps explaining why participants revealed equal levels of concern in both groups.

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APPENDICES

Appendix 1: Study I | Survey

<u>**Block 1: Introduction**</u>

Dear participant, ¶ Thank you in advance for being part of this study. The present survey is part of an academic research project that will be included in my master thesis in Management at Católica Lisbon SBE. It will take no more than 8 minutes to complete the survey. Be assured that all the provided answers will be kept anonymous in the strictest confidentiality, and that all data collected will be used solely for the purpose of my dissertation. ¶ Thank you once again for your time. ¶ Let's start!

<u>**Block 2: COVID-19 – Level of concern and social problem**</u>

Q2.1 - How much do you consider COVID-19 to be a threat to your health?

Not a threat at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extreme threat 7 (7)
o	o	o	o	o	o	O

Q2.2 - How much stress are you facing due to the COVID-19 pandemic?

No stress at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extreme stress 7 (7)
o	o	o	o	o	o	O

Q2.3 - How concerned are you with the economic and social impacts of the COVID-19 pandemic in your own life?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q2.4 - How scared are you with the COVID-19 pandemic as a whole?

Not scared at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely scared 7 (7)
o	o	o	o	o	o	O

Q2.5 - How closely have you been following the recommendations from public health authorities?

Not closely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely closely 7 (7)
o	o	o	o	o	o	O

Q2.6 - How important do you believe it is to use a mask?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

Q2.7 - How important do you believe it is to maintain social distance?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

____ *Page Break*_____

Q2.8 - How concerned are you with the COVID-19 disease being a threat to other people's health?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q2.9 - How concerned are you with the level of stress other people are facing due to the COVID-19 pandemic?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q2.10 - How concerned are you with the economic and social impacts of COVID-19 in other people's lives?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q2.11 - How concerned are you with the impacts of the COVID-19 pandemic in other people's lives?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q2.12 - How closely have other people been following the recommendations from public health authorities?

Not closely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely closely 7 (7)
o	o	o	o	o	o	O

Q2.13 - How important do other people believe it is to use a mask?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

Q2.14 - How important do other people believe it is to maintain social distance?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

___ *Page Break*_____

Q2.15 - Please specify your level of agreement with each of the following statements on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

	Strongly Disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly Agree 7 (7)
I believe that public health is a social cause. (1)	O	O	O	O	O	O	O
I believe a joint effort is needed to end COVID-19 pandemic. (2)	O	O	O	O	O	O	O
I believe COVID-19 pandemic effects go beyond the scope of people's health. (3)	O	O	O	O	O	O	O

I believe COVID-19 to be a threat to the world economy. (4)	O	O	O	O	O	O	O
I believe unemployment is a direct effect from COVID-19. (5)	O	O	O	O	O	O	O
I believe a joint effort is needed for economic recovery. (6)	O	O	O	O	O	O	O
I believe COVID-19 is responsible for a rise in poverty levels. (7)	O	O	O	O	O	O	O
I believe COVID-19 is a social problem. (8)	O	O	O	O	O	O	O

Block 3: Prosocial Intentions Scales

Q3.1 - Imagine that you encounter the following opportunities to help others. Please indicate

how willing you would be to perform each behaviour from 1 (Definitely would not do this) to

7 (Definitely would do this).

	Definitely would not do this 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Definitely would do this 7 (7)
Comfort someone I know after they experience a hardship. (1)	O	O	O	O	O	O	O
Help a stranger find something they lost, like their key or a pet. (2)	O	O	O	O	O	O	O
Help care for a sick friend or relative. (3)	O	O	O	O	O	O	O
Assist a stranger with a small task (e.g., help carry groceries, watch their things while they use the restroom). (4)	O	O	O	O	O	O	O

_____ *Page Break*_____

Q3.2 - On a scale from 1 (Definitely would not do this) to 7 (Definitely would do this), to

what extent do you intend to carry out the following behaviours over the next 6 weeks?

	Definitely would not do this 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Definitely would do this 7 (7)
Give money to charity. (1)	O	O	O	O	O	O	O
Donate goods or clothes to a charity. (2)	O	O	O	O	O	O	O
Go out of your way to help a friend in need. (3)	O	O	O	O	O	O	O
Give up your time to do something that will benefit the community. (4)	O	O	O	O	O	O	O
Go out of your way to help a stranger in need. (5)	O	O	O	O	O	O	O

Block 4: Demographics

Q4.1 - You are now in the final stage of the questionnaire!

Q4.2 - What is your gender?

Male (1)   Female (2)   Other (3)   Prefer not to say (4)

o   o   o   o

Q4.3 - What is your age? _____

Q4.4 - What is your nationality?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q4.5 - In which country do you currently reside?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q4.6 - What is the highest degree or level of school you have completed?

Less than high school (1)	High school or equivalent (2)	Bachelor's degree (3)	Master's degree or MBA (4)	PhD degree (5)
o	o	o	o	o

Q4.7 - What is your current employment status?

Full-time worker (1)	Part-time worker (2)	Worker currently in lay-off (3)	Unemployed (4)	Student (5)	Retired (6)
o	o	o	o	o	o

Q4.8 - What is your marital status?

Single (1)	Married or in a Domestic partnership (2)	Divorced (3)	Widowed (4)	PhD degree (5)
o	o	o	o	o

Q4.9 - In what range is your gross personal income per month?

Less than 500€ (1)	500€ – 999 (2)	1000€ – 1499€ (3)	1500€ – 1999€ (4)	2000€ – 2499€ (5)	2500€ – 2999€ (6)	3000€ – 3499€ (7)	3500€ – 4000€ (8)	More than 4000€ (9)
o	o	o	o	o	o	o	o	o

Appendix 2: Study I | Sample characterization (n=234)

Frequency Statistics				
Variable	Value	Frequency	Percentage	Cumulative
Gender	Male	62	26,5%	26,5%
	Female	172	73,5%	100,0%
Age	Under 18	3	1,3%	1,3%
	18-24	39	16,7%	18,0%
	25-34	26	11,1%	29,1%
	35-44	40	17,1%	46,2%
	45-54	68	29,1%	75,3%
	55-64	48	20,5%	95,8%
	65 and older	10	4,3%	100,0%
Nationality	Portuguese	234	100,0%	-
Country of residence	Portugal	234	100,0%	-
Education	Less than high school	11	4,7%	4,7%
	High school or equivalent	29	12,4%	17,1%
	Bachelor's degree	113	48,3%	65,4%
	Master's degree or MBA	71	30,3%	95,7%
	PhD degree	10	4,3%	100,0%
Employment status	Full-time worker	174	74,4%	-
	Part-time worker	9	3,8%	-
	Worker currently in lay-off	2	0,9%	-
	Unemployed	12	5,1%	-

		Student	28	12,0%	-
		Retired	9	3,8%	-
Marital status		Single	78	33,3%	-
		Married or Domestic partnership	134	57,3%	-
		Divorced	21	9,0%	-
		Widowed	1	0,4%	-
Gross income		Less than 500€	30	12,8%	12,8%
		500€ – 999€	36	15,4%	28,2%
		1000€ - 1499€	61	26,1%	54,3%
		1500€ – 1999€	35	15,0%	69,3%
		2000€ - 2499€	20	8,5%	77,8%
		2500€ – 2999€	16	6,8%	84,6%
		3000€ – 3499€	12	5,2%	89,8%
		3500€ – 4000€	9	3,8%	93,6%
		More than 4000€	15	6,4%	100,0%

Appendix 3: Study I | Concern with the COVID-19 pandemic - Descriptive statistics, Paired samples T-test, Cronbach's alpha coefficient and New variable

| | | Descriptives | | P. S. Correlations | | Paired Samples Test | | | | | | | |
Pair	Q	Mean	Std. Dev.	Correlation	Sig.	Mean	Std. Dev.	S.E. Mean	95% C.I. Diff. Lower	Upper	t	df	Sig. (2-tailed)
1	Q2.1	4,93	1,403	0,466	0,000	-0,970	1,298	0,085	-1,137	-0,803	-11,429	233	0,000
	Q2.8	5,90	1,033										
2	Q2.2	4,19	1,314	0,420	0,000	-0,919	1,361	0,089	-1,094	-0,744	-10,329	233	0,000
	Q2.9	5,11	1,206										
3	Q2.3	5,52	1,278	0,486	0,000	-0,423	1,199	0,078	-0,578	-0,269	-5,396	233	0,000
	Q2.10	5,94	1,059										
4	Q2.4	5,57	1,118	0,521	0,000	-0,235	1,048	0,069	-0,370	-0,100	-3,430	233	0,001
	Q2.11	5,80	1,017										
5	Q2.5	5,85	0,928	0,138	0,035	1,564	1,276	0,083	1,400	1,728	18,747	233	0,000
	Q2.12	4,28	1,014										
6	Q2.6	6,56	0,802	0,274	0,000	1,564	1,303	0,085	1,396	1,732	18,364	233	0,000
	Q2.13	4,99	1,270										
7	Q2.7	6,40	0,889	0,248	0,000	1,791	1,406	0,092	1,609	1,972	19,479	233	0,000
	Q2.14	4,61	1,333										

Cronbach's Alpha Coefficient			
Variable	Q	Cronbach's α	Cronbach's α if item deleted
Self-concern	Q2.1	0,782	0,720
	Q2.2		0,716
	Q2.3		0,753
	Q2.4		0,691
Concern for others	Q2.8	0,841	0,820
	Q2.9		0,811
	Q2.10		0,775
	Q2.11		0,754
Concern with the COVID-19 pandemic	Q2.1	0,861	0,852
	Q2.2		0,848
	Q2.3		0,854
	Q2.4		0,833
	Q2.8		0,848
	Q2.9		0,841

Q2.10		0,840	
Q2.11		0,837	

New variable		Descriptive Statistics	
Variable	Construct	Mean	SD
Concern with the COVID-19 pandemic	MEAN(Q2.1,Q2.2,Q2.3,Q2.4, Q2.8,Q2.9,Q2.10,Q2.11)	5,371	0,844

Appendix 4: Study I | Prosocial behavioural intentions - Paired samples T-test, Descriptive statistics, Cronbach's alpha coefficient and New variable

Construct	Cronbach's α	Items
PBI scale by Baumsteiger & Siegel (2019)	0,736	Q3.1_1, Q3.1_2, Q3.1_3, Q3.1_4
PBI scale by Pavey et al. (2011)	0,755	Q3.1_1, Q3.1_2, Q3.1_3, Q3.1_4, Q3.1_5

		Descriptives		Cronbach's Alpha Coefficient	
Variable	Q	Mean	SD	Cronbach's α	Cronbach's α if item deleted
Prosocial Behavioural Intentions	Q3.1_1	6,36	0,92	0,806	0,798
	Q3.1_2	5,76	1,28		0,789
	Q3.1_3	6,20	1,03		0,786
	Q3.1_4	5,88	1,34		0,786
	Q3.2_1	4,29	1,90		0,812
	Q3.2_2	5,87	1,37		0,795
	Q3.2_3	6,07	1,17		0,773
	Q3.2_4	5,46	1,38		0,782
	Q3.2_5	5,80	1,46		0,754

New variable		Descriptive Statistics	
Variable	Construct	Mean	SD
Prosocial Behavioural Intentions	MEAN(Q3.1_1,Q3.1_2, Q3.1_3, Q3.1_4, Q3.2_1, Q3.2_2, Q3.2_3, Q3.2_4, Q3.2_5)	5,804	0,836

Appendix 5: Study I | Concern with the COVID-19 pandemic and Prosocial behavioural intentions - Linear Regression analysis

Linear Regression - Model Summary					
Model	R	R Square	Adj. R Square	SE of the Est.	Durbin-Watson
1	0,301	0,091	0,058	0,812	2,179

X: Concern - Q2.1, Q2.2, Q2.3, Q2.4, Q2.8, Q2.9, Q2.10 and Q2.11
Y: Prosocial behavioural intentions - MEAN(Q3.1_1,Q3.1_2, Q3.1_3, Q3.1_4, Q3.2_1,Q3.2_2, Q3.2_3, Q3.2_4, Q3.2_5)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14,796	8	1,849	2,808	0,006
	Residual	148,218	225	0,659		
	Total	163,013	233			

Coefficients						
	Unstand. Coefficients		Stand. Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	4,295	0,380		11,298	0,000	
Q2.1	0,059	0,052	0,099	1,138	0,256	
Q2.2	-0,081	0,053	-0,127	-1,510	0,133	
Q2.3	-0,018	0,052	-0,028	-0,349	0,727	
Q2.4	0,037	0,071	0,049	0,521	0,603	
Q2.8	0,046	0,069	0,056	0,657	0,512	

Q2.9	0,048	0,061	0,069	0,791	0,430
Q2.10	0,122	0,106	0,155	1,156	0,249
Q2.11	0,036	0,110	0,044	0,332	0,740

Appendix 6: Study I | Considering COVID-19 pandemic as a social matter – Descriptive statistics, Cronbach's alpha coefficient, PROCESS Macro by Andrew F. Hayes and Linear Regression analyses

		Descriptives		Cronbach's Alpha Coefficient	
Variable	Q	M	SD	Cronbach's α	Cronbach's α if Item Deleted
COVID-19 as a social matter	Q2.15_1	6,45	0,97	0,770	0,751
	Q2.15_2	6,74	0,61		0,761
	Q2.15_3	6,71	0,64		0,764
	Q2.15_4	6,69	0,72		0,728
	Q2.15_5	5,91	1,08		0,734
	Q2.15_6	6,57	0,80		0,732
	Q2.15_7	5,99	1,10		0,718
	Q2.15_8	5,97	1,34		0,757

Run MATRIX procedure:

****************** PROCESS Procedure for SPSS Version 3.5 ******************

Written by Andrew F. Hayes, Ph.D.   www.afhayes.com

Documentation available in Hayes (2018). www.guilford.com/p/hayes3

****

Model : 1

  Y : Prosocial behavioural intentions (PBI)
      MEAN(Q3.1_1,Q3.1_2, Q3.1_3, Q3.1_4, Q3.2_1,Q3.2_2, Q3.2_3, Q3.2_4, Q3.2_5)
  X : Concern with the COVID-19 pandemic (CONCERN)
      MEAN(Q2.1,Q2.2,Q2.3,Q2.4,Q2.8,Q2.9,Q2.10,Q2.11)
  W : Considering COVID-19 as a social matter (COV_SM)
      MEAN(Q2.15_1, Q2.15_2, Q2.15_3, Q2.15_4, Q2.15_5, Q2.15_6, Q2.15_7, Q2.15_8)

Sample Size: 234

****

OUTCOME VARIABLE: PBI

Model Summary

```
     R      R-sq      MSE       F       df1       df2        p
  .3190    .1018    .6366    8.6862   3.0000  230.0000    .0000
```

Model

```
               coeff      se       t        p      LLCI     ULCI
constant      5.7886    .0554  104.5633   .0000    5.6795   5.8977
CONCERN        .1525    .0664    2.2963   .0226     .0216    .2833
COV_SM         .3660    .1109    3.2989   .0011     .1474    .5845
Int_1          .0886    .1062     .8343   .4050    -.1207    .2979
```

Product terms key:

Int_1: CONCERN x COV_SM

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

```
     R2-chng      F      df1      df2       p
X*W    .0027    .6961   1.0000  230.0000    .4050
```

Focal predict: CONCERN   (X)
    Mod var: COV_SM   (W)
Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.
DATA LIST FREE/
  CON_2   COV_SM   PBI_3   .
BEGIN DATA.
   -.8445   -.5799   5.4910
    .0000   -.5799   5.5764
    .8445   -.5799   5.6618
   -.8445   .0000   5.6598
    .0000   .0000   5.7886
    .8445   .0000   5.9174
   -.8445   .5799   5.8286
    .0000   .5799   6.0008
    .8445   .5799   6.1730
END DATA.
GRAPH/SCATTERPLOT=CONCERN   WITH   PBI   BY   COV_SM .
********************* ANALYSIS NOTES AND ERRORS *********************
Level of confidence for all confidence intervals in output: 95.0000
NOTE: The following variables were mean centered prior to analysis: COV_SM   CONCERN
------ END MATRIX -----

Linear Regression - Model Summary					
Model	R	R Square	Adj. R Square	SE of the Est.	Durbin-Watson
1	0,335	0,112	0,081	0,802	2,072

X: COVID-19 as a social matter - Q2.15_1, Q2. 15_2, Q2. 15_3, Q2. 15_4, Q2. 15_5, Q2. 15_6, Q2. 15_7 and Q2.15_8
Y: Prosocial behavioural intentions - MEAN(Q3.1_1,Q3.1_2, Q3.1_3, Q3.1_4,Q3.2_2, Q3.2_3, Q3.2_4, Q3.2_5)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18,289	8	2,286	3,554	0,001
	Residual	144,724	225	0,643		
	Total	163,013	233			

Coefficients					
	Unstand. Coefficients		Stand. Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,621	0,777		3,375	0,001
Q2.15_1	0,172	0,063	0,200	2,744	0,007
Q2. 15_2	0,017	0,092	0,013	0,188	0,851
Q2. 15_3	0,195	0,091	0,148	2,150	0,033
Q2. 15_4	-0,012	0,097	-0,010	-0,123	0,902
Q2. 15_5	0,007	0,063	0,009	0,110	0,912
Q2. 15_6	0,062	0,084	0,059	0,730	0,466
Q2.15_7	0,046	0,064	0,060	0,715	0,475
Q2. 15_8	0,002	0,045	0,003	0,042	0,967

Linear Regression - Model Summary					
Model	R	R Square	Adj. R Square	SE of the Est.	Durbin-Watson
1	0,400	0,160	0,098	0,794	2,135

X: Concern + COVID-19 as a social matter - Q2.1, Q2.2, Q2.3, Q2.4, Q2.8, Q2.9, Q2.10, Q2.11, Q2.15_1, Q2.15_2, Q2. 15_3, Q2. 15_4, Q2. 15_5, Q2. 15_6, Q2. 15_7 and Q2.15_8
Y: Prosocial behavioural intentions - MEAN(Q3.1_1,Q3.1_2, Q3.1_3, Q3.1_4,Q3.2_2, Q3.2_3, Q3.2_4, Q3.2_5)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	26,075	8	1,630	2,583	0,001
1	Residual	136,938	225	0,631		
	Total	163,013	233			

Coefficients					
	Unstand. Coefficients		Stand. Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,336	0,790	s	2,959	0,003
Q2.1	0,074	0,052	0,124	1,411	0,160
Q2.2	-0,083	0,055	-0,131	-1,514	0,132
Q2.3	0,006	0,052	0,010	0,123	0,903
Q2.4	-0,002	0,073	-0,003	-0,034	0,973
Q2.8	0,037	0,069	0,046	0,545	0,586
Q2.9	0,046	0,060	0,066	0,763	0,446
Q2.10	0,106	0,106	0,134	0,999	0,319
Q2.11	-0,005	0,110	-0,006	-0,042	0,967
Q2.15_1	0,152	0,064	0,176	2,371	0,019
Q2. 15_2	-0,020	0,097	-0,015	-0,210	0,834
Q2. 15_3	0,198	0,091	0,150	2,177	0,031
Q2. 15_4	-0,077	0,099	-0,067	-0,777	0,438
Q2. 15_5	0,015	0,063	0,019	0,229	0,819
Q2. 15_6	0,063	0,086	0,060	0,736	0,463
Q2.15_7	0,022	0,064	0,029	0,341	0,734
Q2. 15_8	0,015	0,047	0,025	0,328	0,743

Appendix 7: Study II | Survey

Block 1: Introduction

Dear participant, ¶ Thank you in advance for being part of this study. The present survey is part of an academic research project that will be included in my master thesis in Management at Católica Lisbon SBE. It will take no more than 5 minutes to complete the survey. Be assured that all the provided answers will be kept anonymous in the strictest confidentiality, and that all data collected will be used solely for the purpose of my dissertation. ¶ Thank you once again for your time. ¶ Let's start!

Block 2: Stimuli

Q2.1 - Imagine you are out running some errands. On your way, you pass through a newsstand and decide to buy a magazine. You are choosing between the three magazines presented below. Which one will you pick? ¶ **Please take a moment to think about the options and decide which one you would like to purchase.**

Respondents are randomly and evenly assigned to one of two groups.

Group 0: Control group – No-reminder of COVID-19

Group 1: Treatment group – Reminder of COVID-19

Block 3: Donation exercise

Q3.1 - While reading your magazine, you receive the following text message:

"Congratulations! You just won a lottery prize in the value of 100€! You can now proceed to claim your lucky prize in one of our lottery stands."

_____ *Page Break* _____

Q3.2 - You've found an automatic machine to pick up your prize. Right before withdrawing your money, you are asked if you would like to donate part of your winnings to a charity that works with people in need. The remaining amount will be withdrawn for you to keep. Would you like to contribute? ¶ Please write the amount that you want to donate from 0 to 100.

[   ]

Block 4: Manipulation check

Q4.1 - How much do you consider COVID-19 to be a threat to your health?

Not a threat at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extreme threat 7 (7)

o   o   o   o   o   o   O

Q4.2 - How concerned are you with the economic and social impacts of COVID-19?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q4.3 - How much stress are you facing due to the COVID-19 pandemic?

No stress at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extreme stress 7 (7)
o	o	o	o	o	o	O

___ *Page Break*_____

Q4.4 - Imagine that you encounter the following opportunities to help others. Please indicate

how willing you would be to perform each behaviour from 1 (Definitely would not do this) to

7 (Definitely would do this).

	Definitely would not do this 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Definitely would do this 7 (7)
Comfort someone I know after they experience a hardship. (1)	O	O	O	O	O	O	O
Help a stranger find something they lost, like their key or a pet. (2)	O	O	O	O	O	O	O
Help care for a sick friend or relative. (3)	O	O	O	O	O	O	O
Assist a stranger with a small task (e.g., help carry groceries, watch their things while they use the restroom). (4)	O	O	O	O	O	O	O

Block 5: Demographics

Q5.1 - You are now in the final stage of the questionnaire!

Q5.2 - What is your gender?

Male (1)	Female (2)	Other (3)	Prefer not to say (4)
o	o	o	o

Q5.3 - What is your age? _____

Q5.4 - What is your nationality?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q5.5 - In which country do you currently reside?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q5.6 - What is the highest degree or level of school you have completed?

Less than high school (1)	High school or equivalent (2)	Bachelor's degree (3)	Master's degree or MBA (4)	PhD degree (5)
o	o	o	o	o

Q5.7 - What is your current employment status?

Full-time worker (1)	Part-time worker (2)	Worker currently in lay-off (3)	Unemployed (4)	Student (5)	Retired (6)

o   o   o   o   o   o

Q5.8 - What is your marital status?

Single (1)	Married or in a Domestic partnership (2)	Divorced (3)	Widowed (4)	PhD degree (5)
o	o	o	o	o

Q5.9 - In what range is your gross personal income per month?

Less than 500€ (1)	500€ – 999 (2)	1000€ – 1499€ (3)	1500€ – 1999€ (4)	2000€ – 2499€ (5)	2500€ – 2999€ (6)	3000€ – 3499€ (7)	3500€ – 4000€ (8)	More than 4000€ (9)
o	o	o	o	o	o	o	o	o

Appendix 8: Study II | Sample characterization (n=208)

Frequency Statistics					
Variable	**Value**	**Frequency (n=208)**	**%**	**G0 (n=94)**	**G1 (n=114)**
Gender	Male	65	31,3%	28,7%	33,3%
	Female	143	68,8%	71,3%	66,7%
Age	Under 18	1	0,5%	0,0%	0,9%
	18-24	27	13,0%	14,9%	11,4%
	25-34	38	18,3%	18,1%	18,4%
	35-44	37	17,8%	17,0%	18,4%
	45-54	56	26,9%	26,6%	27,2%
	55-64	34	16,3%	13,8%	18,4%
	65 and older	15	7,2%	9,6%	5,3%
Nationality	Portuguese	114	54,8%	55,3%	54,4%
	Brazilian	94	45,2%	44,7%	44,6%
Country of residence	Portugal	114	54,8%	55,3%	54,4%
	Brazilian	94	45,2%	44,7%	44,6%
Education	Less than high school	3	1,4%	0,0%	2,6%
	High school or equivalent	19	9,1%	7,4%	10,5%
	Bachelor's degree	87	41,8%	44,7%	39,5%
	Master's degree or MBA	83	39,9%	39,4%	40,4%
	PhD degree	16	7,7%	8,5%	7,0%
Employment status	Full-time worker	129	62,0%	62,8%	61,4%
	Part-time worker	15	7,2%	5,3%	8,8%
	Worker currently in lay-off	5	2,4%	2,1%	2,6%
	Unemployed	14	6,7%	6,4%	7,0%
	Student	22	10,6%	12,8%	8,8%
	Retired	23	11,1%	10,6%	11,4%
Marital status	Single	80	38,5%	39,4%	37,7%
	Married or Domestic partnership	105	50,5%	50,0%	50,9%
	Divorced	21	10,1%	9,6%	10,5%
	Widowed	2	1,0%	1,1%	0,9%
Gross income	Less than 500€	30	14,4%	16,0%	13,2%
	500€ – 999€	27	13,0%	11,7%	14,0%
	1000€ - 1499€	31	14,9%	12,8%	16,7%
	1500€ – 1999€	28	13,5%	17,0%	10,5%
	2000€ - 2499€	23	11,1%	11,7%	10,5%
	2500€ – 2999€	8	3,8%	3,2%	4,4%
	3000€ – 3499€	13	6,3%	4,3%	7,9%
	3500€ – 4000€	19	9,1%	9,6%	8,8%
	More than 4000€	29	13,9%	13,8%	14,0%

Appendix 9: Study II | Donation exercise – Descriptive Statistics and Independent Samples T-test

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Q3.2	0	94	33,276	30,644	3,160
	1	114	47,3070	35,688	3,342

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	3,854	0,051	-3,006	206	0,003	-14,030	4,667	-23,233	-4,827
Not assumed			-3,050	205	0,003	-14,030	4,600	-23,100	-4,960

Appendix 10: Study II | Further analysis – Descriptive Statistics, Independent Samples T-tests and Linear Regression analysis

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Q3.2 - **PT**	0	52	30,307	28,848	4,001
	1	62	41,859	35,738	4,538

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	4,760	0,031	-1,873	112	0,058	-11,547	6,164	-23,760	0,666
Not assumed			-1,909	111	0,051	-11,547	6,050	-23,535	0,440

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Q3.2 - **BR**	0	42	39,952	32,708	5,047
	1	52	53,808	34,858	4,833

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	0,411	0,523	-2,395	92	0,019	-16,85	7,036	-30,830	-2,880
Not assumed			-2,412	89	0,018	-16,85	6,988	-30,739	-2,971

Descriptive Statistics			
Question	Group	Mean	Std. Dev.
Q4.1	0	4,98	1,63
	1	5,03	1,42
Q4.2	0	6,06	1,20
	1	6,09	1,10
Q4.3	0	4,66	1,60
	1	4,46	1,61
Q4.4_1	0	6,43	1,06
	1	6,44	0,88
Q4.4_2	0	5,64	1,28
	1	5,69	1,29

Q4.4_3	0	6,20	1,01
	1	6,20	1,12
Q4.4_4	0	5,70	1,48
	1	5,93	1,36

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Concerm	0	94	5,234	1,196	0,123
	1	114	5,190	1,073	0,100

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	0,684	0,409	0,279	206	0,780	-0,023	0,157	-0,266	0,354
Not assumed			0,276	189	0,783	-0,023	0,159	-0,269	0,357

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Concern PT	0	52	5,076	1,232	0,170
	1	62	4,914	0,984	0,125

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	3,603	0,060	0,785	112	0,434	0,162	0,207	-0,248	0,574
Not assumed			0,770	97	0,443	0,162	0,211	-0,257	0,583

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Concern BR	0	42	5,428	1,134	0,174
	1	52	5,519	1,091	0,151

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	0,000	0,999	-0,393	92	0,695	-0,906	0,230	-0,548	0,366
Not assumed			-0,392	86	0,696	-0,906	0,231	-0,550	0,369

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
PBI scale	0	94	5,992	0,822	0,084
	1	114	6,066	0,737	0,069

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	1,102	0,295	-0,681	206	0,496	-0,073	0,108	-0,287	0,139
Not assumed			-0,674	189	0,501	-0,073	0,109	-0,289	0,142

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean

PBI scale	0	52	5,875	0,826	0,114
PT	1	62	5,875	0,759	0,096

Independent Samples Test

Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	0,625	0,431	0,000	122	1,000	0,000	0,148	-0,294	0,294
Not assumed			0,000	105	1,000	0,000	0,149	-0,297	0,297

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
PBI scale	0	42	6,136	0,804	0,124
BR	1	52	6,293	0,646	0,089

Independent Samples Test

Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.	
								Lower	Upper
Assumed	2,584	0,111	-1,045	92	0,299	-0,156	0,149	-0,453	0,140
Not assumed			-1,021	78	0,310	-0,156	0,153	-0,461	0,148

Linear Regression - Model Summary

Model	R	R Square	Adj. R Square	SE of the Est.	Durbin-Watson
1	0,046	0,002	-0.003	34,195	1,879

X: Concern – MEAN(Q4.1,Q4.2,Q4.3)
Y: Donation – Q3.2

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	516,407	1	516,407	0,442	0,507
1	Residual	240880,358	206	1169,322		
	Total	241396,764	207			

Coefficients

	Unstand. Coefficients		Stand. Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	33,671	11,231		2,998	0,003
Concern	1,400	2,107	0,046	0,665	0,507

Linear Regression - Model Summary

Model	R	R Square	Adj. R Square	SE of the Est.	Durbin-Watson
1	0,036	0,001	-0,007	33,216	1,953

X: Concern – MEAN(Q4.1,Q4.2,Q4.3) - PT
Y: Donation – Q3.2 - PT

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	175,838	1	175,838	0,159	0,690
1	Residual	134604,250	122	1103,314		
	Total	134780,089	123			

Coefficients

	Unstand. Coefficients		Stand. Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	31,849	14,090		2,260	0,026
Concern	1,098	2,751	0,036	0,399	0,690

Linear Regression - Model Summary					
Model	R	R Square	Adj. R Square	SE of the Est.	Durbin-Watson
1	0,40	0,002	-0,009	34,930	1,938

X: Concern – MEAN(Q4.1,Q4.2,Q4.3) - BR
Y: Donation – Q3.2 - BR

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	180,168	1	180,168	0,148	0,702
1	Residual	112254,640	92	1220,159		
	Total	112434,809	93			

Coefficients					
	Unstand. Coefficients		Stand. Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	53,174	18,307		2,905	0,005
Concern	-1,259	3,276	-0,040	-0,384	0,702

Appendix 11: Study III | Survey

Block 1: Introduction

Dear participant, ¶ Thank you in advance for being part of this study. The present survey is part of an academic research project that will be included in my master thesis in Management at Católica Lisbon SBE. It will take no more than 10 minutes to complete the survey. Be assured that all the provided answers will be kept anonymous in the strictest confidentiality, and that all data collected will be used solely for the purpose of my dissertation. ¶ Thank you once again for your time. ¶ Let's start!

Block 2: Stimuli

Q2.1 - Please read the following news and rate how interesting you found each one.

Respondents are randomly and evenly assigned to one of two groups.

Group 0: Control group – No-reminder of COVID-19

News 1

News 2

News 3

Group 1: Treatment group – Reminder of COVID-19

News 1 – COVID-19 as a public health crisis

News 2 – COVID-19 as a social crisis

News 3 – COVID-19 as an economic crisis

Q2.2 - How interesting did you find each of the news presented?

	Not interesting at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely interesting 7 (7)
News 1 (1)	O	O	O	O	O	O	O
News 2 (2)	O	O	O	O	O	O	O
News 3 (3)	O	O	O	O	O	O	O

Block 3: Consumption decisions

Q3.1 - You're on your way home when you remember you need to buy some apples. On the way, you know you'll find a small grocery store and a supermarket from a large chain. Both establishments are at the same distance, practice similar prices and sell apples of equal quality.

Q3.2 - Please indicate where you would choose to buy the apples.

Definitely in the small grocery store 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	Definitely in the supermarket from a large chain 9 (9)
o	o	o	o	o	o	o	o	o

___ *Page Break*_____

Q3.3 - You need to buy some fresh produce. So, you decide to place an order online and find two alternatives: to order directly from a producer or from an online supermarket from a large chain. Both practice equivalent prices, have the same delivery times and sell fresh produce of equal quality.

Q3.4 - Please indicate from where you would choose to buy the fresh produce.

Definitely from the producer 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	Definitely from the online supermarket from a large chain (9)
o	o	o	o	o	o	o	o	o

Q3.5 - You are on a street where you'll find a local coffee shop and a store from a fast-food chain. You just want to drink a coke. Both establishments are at the same distance and practice equivalent prices.

Q3.6 - Please indicate where you would choose to buy your coke.

Definitely in the local coffee shop 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	Definitely in the store from the fast-food chain 9 (9)
o	o	o	o	o	o	o	o	o

Q3.7 - You finally decide to buy those shoes you've been dreaming about for weeks. You know they are available at the shopping centre and at a local shoe store. Both establishments are at the same distance, have equivalent prices and sell the same shoes.

Q3.8 - Please indicate where you would choose to buy your shoes.

Definitely from the local shoe store 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	Definitely from the shopping centre 9 (9)
o	o	o	o	o	o	o	o	o

Block 4: Financial struggle

Q4.1 - How likely do you believe it is that a **supermarket from a large chain** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Q4.2 - How likely do you believe it is that a **small grocery store** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Q4.3 - How likely do you believe it is that a **agricultural producer** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Q4.4 - How likely do you believe it is that a **restaurant from a fast-food chain** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Q4.5 - How likely do you believe it is that a **local coffee shop** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Q4.6 - How likely do you believe it is that a **shopping centre** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Q4.7 - How likely do you believe it is that a **local store** will face economic difficulties over the next 12 months?

Not likely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely likely 7 (7)
o	o	o	o	o	o	O

Block 5: Cooperation

Q5.1 - Please specify your level of agreement with each of the following statements on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

	Strongly Disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly Agree 7 (7)
Cooperation is a crucial factor in the current pandemic context. (1)	O	O	O	O	O	O	O
I believe that a joint effort is needed to end the COVID-19 pandemic. (2)	O	O	O	O	O	O	O
If we all work together, we will overcome this pandemic period more quickly. (3)	O	O	O	O	O	O	O
I consider international cooperation to be important in combating COVID-19. (4)	O	O	O	O	O	O	O
I believe that it is necessary to protect each other by following the recommendations of health authorities. (5)	O	O	O	O	O	O	O
If there is no cooperation, it will be difficult to resolve the pandemic. (6)	O	O	O	O	O	O	O

Block 6: Concern with the COVID-19 pandemic

Q6.1 - How much do you consider COVID-19 to be a threat to your health?

Not a threat at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extreme threat 7 (7)
o	o	o	o	o	o	O

Q6.2 - How much stress are you facing due to the COVID-19 pandemic?

No stress at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extreme stress 7 (7)
o	o	o	o	o	o	O

Q6.3 - How concerned are you with the economic and social impacts of the COVID-19 pandemic in your own life?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)

o   o   o   o   o   o   O

Q6.4 - How scared are you with the COVID-19 pandemic as a whole?

Not scared at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely scared 7 (7)
o	o	o	o	o	o	O

Q6.5 - How closely have you been following the recommendations from public health authorities?

Not closely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely closely 7 (7)
o	o	o	o	o	o	O

Q6.6 - How important do you believe it is to use a mask?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

Q6.7 - How important do you believe it is to maintain social distance?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

_____ _Page Break_ _____

Q6.8 - How concerned are you with the COVID-19 disease being a threat to other people's health?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q6.9 - How concerned are you with the level of stress other people are facing due to the COVID-19 pandemic?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q6.10 - How concerned are you with the economic and social impacts of COVID-19 in other people's lives?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q6.11 - How concerned are you with the impacts of the COVID-19 pandemic in other people's lives?

Not concerned at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely concerned 7 (7)
o	o	o	o	o	o	O

Q6.12 - How closely have other people been following the recommendations from public health authorities?

Not closely at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely closely 7 (7)
o	o	o	o	o	o	O

Q6.13 - How important do other people believe it is to use a mask?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

Q6.14 - How important do other people believe it is to maintain social distance?

Not important at all 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely important 7 (7)
o	o	o	o	o	o	O

Block 7: Prosocial intentions

Q7.1 - On a scale from 1 (Definitely would not do this) to 7 (Definitely would do this), to what extent do you intend to carry out the following behaviours over the next 6 weeks?

	Definitely would not do this 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Definitely would do this 7 (7)
Give money to charity. (1)	O	O	O	O	O	O	O
Donate goods or clothes to a charity. (2)	O	O	O	O	O	O	O
Go out of your way to help a friend in need. (3)	O	O	O	O	O	O	O
Give up your time to do something that will benefit the community. (4)	O	O	O	O	O	O	O
Go out of your way to help a stranger in need. (5)	O	O	O	O	O	O	O

Block 8: Demographics

Q8.1 - You are now in the final stage of the questionnaire!

Q8.2 - What is your gender?

Male (1)	Female (2)	Other (3)	Prefer not to say (4)
o	o	o	o

Q8.3 - What is your age? _____

Q8.4 - What is your nationality?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q8.5 - In which country do you currently reside?

▼ Afghanistan (1) ... Zimbabwe (1357)

Q8.6 - What is the highest degree or level of school you have completed?

Less than high school (1)	High school or equivalent (2)	Bachelor's degree (3)	Master's degree or MBA (4)	PhD degree (5)
o	o	o	o	o

Q8.7 - What is your current employment status?

Full-time worker (1)	Part-time worker (2)	Worker currently in lay-off (3)	Unemployed (4)	Student (5)	Retired (6)
o	o	o	o	o	o

Q8.8 - What is your marital status?

Single (1) Married or in a Divorced (3) Widowed (4) PhD degree (5)
Domestic partnership (2)

  o   o   o   o   o

Q8.9 - In what range is your gross personal income per month?

Less than 500€ (1)	500€ – 999 (2)	1000€ – 1499€ (3)	1500€ – 1999€ (4)	2000€ – 2499€ (5)	2500€ – 2999€ (6)	3000€ – 3499€ (7)	3500€ – 4000€ (8)	More than 4000€ (9)
o	o	o	o	o	o	o	o	o

Appendix 12: Study III | Sample characterization (n=241)

Frequency Statistics					
Variable	**Value**	**Frequency (n=241)**	**%**	**G0 (n=121)**	**G1 (n=120)**
Gender	Male	87	36,1%	43,8%	28,3%
	Female	151	62,7%	54,5%	70,8%
	Prefer not to say	3	1,2%	1,7%	0,8%
Age	Under 18	1	0,4%	0,8%	0,0%
	18-24	56	23,2%	22,3%	24,2%
	25-34	43	17,8%	21,5%	14,2%
	35-44	28	11,6%	12,4%	10,8%
	45-54	61	25,3%	23,1%	27,5%
	55-64	44	18,3%	16,5%	20,0%
	65 and older	8	3,3%	3,3%	3,3%
Nationality	Portuguese	241	100%	100%	100%
Country of residence	Portugal	241	100%	100%	100%
Education	Less than high school	2	0,8%	1,7%	0,0%
	High school or equivalent	21	8,7%	9,1%	8,3%
	Bachelor's degree	114	47,3%	40,5%	54,2%
	Master's degree or MBA	95	39,4%	44,6%	34,2%
	PhD degree	9	3,7%	4,1%	3,3%
Employment status	Full-time worker	170	70,5%	71,9%	69,2%
	Part-time worker	11	4,6%	4,1%	5,0%
	Worker currently in lay-off	3	1,2%	1,7%	0,8%
	Unemployed	12	5,0%	4,1%	5,8%
	Student	37	15,4%	14,9%	15,8%
	Retired	8	3,3%	3,3%	3,3%
Marital status	Single	116	48,1%	52,1%	44,2%
	Married or Domestic partnership	106	44,0%	41,3%	46,7%
	Divorced	18	7,5%	6,6%	8,3%
	Widowed	1	0,4%	0,0%	0,8%
Gross income	Less than 500€	30	12,4%	14,0%	10,8%
	500€ – 999€	31	12,9%	12,4%	13,3%
	1000€ - 1499€	66	27,4%	27,3%	27,5%
	1500€ – 1999€	21	8,7%	6,6%	10,8%
	2000€ - 2499€	19	7,9%	7,4%	8,3%
	2500€ – 2999€	11	4,6%	5,8%	3,3%
	3000€ – 3499€	12	5,0%	2,5%	7,5%
	3500€ – 4000€	9	3,7%	3,3%	4,2%
	More than 4000€	31	12,9%	17,4%	8,3%
	Missing	11	4,6%	3,3%	5,8%

Appendix 13: Study III | Consumption decision – Descriptive Statistics, Cronbach's Alpha Coefficient and Independent Sample T-tests

Descriptive Statistics					
Question	Mean	Std. Deviation	Group	Mean	Std. Deviation
Q3.2	2,91	2,44	0	3,15	2,548
			1	2,68	2,316
Q3.4	2,58	2,37	0	2,84	2,553
			1	2,32	2,146
Q3.6	2,04	1,94	0	2,29	2,23
			1	1,78	1,567
Q3.8	3,10	2,69	0	3,55	2,831
			1	2,65	2,479

	Independent Samples Test									
	Levene's Test			t-test for Equality of Means						
Q	Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff. Lower	Upper
Q3.2	Assumed	3,106	0,079	1,510	239	0,132	0,474	0,314	-0,144	1,092
	Not assumed			1,511	237	0,132	0,474	0,314	-0,144	1,092
Q3.4	Assumed	6,246	0,013	1,732	239	0,085	0,526	0,304	-0,072	1,125
	Not assumed			1,733	232	0,084	0,526	0,304	-0,072	1,125
Q3.6	Assumed	10,875	0,001	2,036	239	0,043	0,506	0,249	0,016	0,995
	Not assumed			2,039	215	0,043	0,506	0,248	0,017	0,995
Q3.8	Assumed	7,979	0,005	2,611	239	0,010	0,895	0,343	0,220	1,571
	Not assumed			2,613	235	0,010	0,895	0,343	0,220	1,571

Construct	Cronbach's α	N of Items	Mean	S.D.
Prosocial Consumption Intentions on the whole sample (n=241)	0,726	4 items (Q3.2, Q3.4, Q3.6, Q3.8)	2,658	1,667
Prosocial Consumption Intentions in G0 (n=121)	0,720	4 items (Q3.2, Q3.4, Q3.6, Q3.8)	2,957	1,781
Prosocial Consumption Intentions in G1 (n=120)	0,708	4 items (Q3.2, Q3.4, Q3.6, Q3.8)	2,356	1,492

Group Statistics						
Variable	Construct	Group	N	Mean	S.D.	S.E. Mean
Prosocial Consumption Intentions	MEAN(Q3.2,Q3.4, Q3.6,Q3.8)	0	121	2,957	1,780	0,161
		1	120	2,356	1,491	0,136

Independent Samples Test									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff. Lower	Upper
Assumed	6,435	0,012	2,836	239	0,005	0,600	4,667	0,211	0,183
Not assumed			2,838	233	0,005	0,600	4,600	0,211	0,183

Appendix 14: Study III | Businesses' financial risk assessment – Descriptive Statistics, Paired Samples T-test, Cronbach's Alpha Coefficient and Linear Regression analysis

Descriptive Statistics					
Question	Mean	Std. Deviation	Group	Mean	Std. Deviation
Q4.1	2,45	1,34	0	2,34	1,31
			1	2,57	1,37
Q4.2	5,67	1,41	0	5,62	1,32
			1	5,73	1,49

Q4.3	5,37	1,52	0	5,35	1,44
			1	5,39	1,61
Q4.4	2,91	1,51	0	2,81	1,51
			1	3,01	1,50
Q4.5	5,54	1,37	0	5,47	1,37
			1	5,61	1,37
Q4.6	3,52	1,59	0	3,53	1,64
			1	3,51	1,55
Q4.7	5,79	1,25	0	5,82	1,16
			1	5,76	1,34

		Correlations		Paired Samples Test						
Pair	Q	Corr.	Sig.	Mean	Std. Dev.	Std. Error Mean	95% C.I. of the Diff. Lower	95% C.I. of the Diff. Upper	t	df	Sig. (2-tailed)
1	Q4.1 Q4.2	0,008	0,899	-3,220	1,938	0,125	-3,466	-2,974	-25,794	240	0,000
2	Q4.1 Q4.3	0,065	0,318	-2,917	1,965	0,127	-3,166	-2,668	-23,05	240	0,000
3	Q4.4 Q4.5	-0,065	0,317	-2,631	2,104	0,136	-2,898	-2,364	-19,413	240	0,000
4	Q4.6 Q4.7	-0,085	0,189	-2,270	2,105	0,136	-2,537	-2,003	-16,739	240	0,000

		Independent Samples Test									
	Levene's Test			t-test for Equality of Means							
Q	Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff. Lower	95% C.I. Diff. Upper
Q4.1	Assumed	0,895	0,345	-1,317	239	0,189	-0,228	0,173	-0,568	0,113
	Not assumed			-1,317	238	0,189	-0,228	0,173	-0,569	0,113
Q4.1	Assumed	0,611	0,435	-0,579	239	0,563	-0,105	0,182	-0,463	0,252
	Not assumed			-0,579	235	0,563	-0,105	0,182	-0,463	0,253
Q4.3	Assumed	1,698	0,194	-0,227	239	0,821	-0,045	0,197	-0,432	0,343
	Not assumed			-0,227	235	0,821	-0,045	0,197	-0,432	0,343
Q4.4	Assumed	0,03	0,862	-1,021	239	0,308	-0,198	0,194	-0,581	0,184
	Not assumed			-1,021	239	0,308	-0,198	0,194	-0,581	0,184
Q4.5	Assumed	0,017	0,895	-0,776	239	0,439	-0,137	0,177	-0,486	0,211
	Not assumed			-0,776	239	0,439	-0,137	0,177	-0,486	0,211
Q4.6	Assumed	0,872	0,351	0,100	239	0,920	0,021	0,206	-0,384	0,425
	Not assumed			0,100	238	0,920	0,021	0,205	-0,384	0,425
Q4.7	Assumed	1,714	0,192	0,371	239	0,711	0,06	0,161	-0,258	0,377
	Not assumed			0,371	234	0,711	0,06	0,161	-0,258	0,378

Construct	Cronbach's α	N of Items	M	S.D.
Small businesses' financial risk	0,801	4 items (Q4.2, Q4.3, Q4.5, Q4.7)	5,59	1,10

	Linear Regression - Model Summary					
	Model	R	R^2	Adj. R^2	S.E. of the Est.	Durbin-Watson
Whole Sample (n=241)	1	0,214	0,046	0,029	1,642	1,620
Control Group (n=121)	2	0,175	0,031	-0,003	1,783	0,175
COVID-19 Reminder Group (n=241)	3	0,306	0,093	0,062	1,445	0,306

X: Small businesses' financial risk assessment – Q4.2, Q4.3, Q4.5 and Q4.7
Y: Prosocial Consumption – MEAN(Q3.2,Q3.4,Q3.6,Q3.8)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30,442	4	7,610	2,821	0,026
	Residual	636,566	236	2,697		
	Total	667,008	240			
2	Regression	11,637	4	2,909	0,915	0,458
	Residual	368,823	116	3,180		
	Total	380,460	120			
3	Regression	24,722	4	6,180	2,960	0,023
	Residual	240,111	115	2,088		
	Total	264,833	119			

		Coefficients					
Model		Unstand. Coefficients		Stand. Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	2,943	0,559		5,261	0,000	
	Q3.2	-0,080	0,100	-0,068	-0,803	0,423	
	Q3.4	0,080	0,088	0,073	0,916	0,360	
	Q3.6	-0,288	0,096	-0,237	-2,999	0,003	
	Q3.8	0,231	0,115	0,173	1,999	0,047	
2	(Constant)	2,378	0,914		2,602	0,010	
	Q3.2	0,080	0,155	0,059	0,513	0,609	
	Q3.4	0,111	0,138	0,090	0,807	0,421	
	Q3.6	-0,227	0,144	-0,175	-1,577	0,118	
	Q3.8	0,134	0,187	0,087	0,717	0,475	
3	(Constant)	3,308	0,663		4,989	0,000	
	Q3.2	-0,190	0,125	-0,190	-1,525	0,130	
	Q3.4	0,069	0,108	0,075	0,640	0,524	
	Q3.6	-0,326	0,125	-0,300	-2,614	0,010	
	Q3.8	0,277	0,139	0,247	1,995	0,048	

Appendix 15: Study III | Concern with the COVID-19 pandemic – Descriptive Statistics, Paired Sample T-test, Cronbach's Alpha Coefficient and Independent Sample T-test

		Descriptives		Paired Samples Test								
Pair	Q	Mean	Std. Dev.	Mean	Std. Dev.	Std. Error Mean	95% C.I. of the Diff.		t	df	Sig. (2-tailed)	
							Lower	Upper				
1	Q6.1	4,82	1,417	-1,054	1,461	0,094	-1,239	-0,869	-11,199	240	0,000	
	Q6.8	5,87	1,124									
2	Q6.2	4,09	1,322	-1,149	1,376	0,089	-1,324	-0,975	-12,964	240	0,000	
	Q6.9	5,24	1,231									
3	Q6.3	5,37	1,420	-0,506	1,423	0,092	-0,687	-0,326	-5,521	240	0,000	
	Q6.10	5,87	1,116									
4	Q6.4	5,39	1,157	-0,324	1,167	0,075	-0,472	-0,176	-4,306	240	0,000	
	Q6.11	5,71	1,087									
5	Q6.5	5,75	0,933	1,490	1,333	0,086	1,321	1,659	17,353	240	0,000	
	Q6.12	4,26	1,038									
6	Q6.6	6,46	0,970	1,539	1,440	0,093	1,357	1,722	16,592	240	0,000	
	Q6.13	4,92	1,256									
7	Q6.7	6,36	0,920	1,892	1,493	0,096	1,703	2,082	19,670	240	0,000	
	Q2.14	4,46	1,366									

Construct	Cronbach's α	N of Items	M	S.D.
Concern	0,841	8 items (Q6.1, Q6.2, Q6.3, Q6.4, Q6.8, Q6.9, Q6.10 and Q6.11)	5,293	0,853

Independent Samples Test – "Concern" variable *

Levene's Test			t-test for Equality of Means							
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. Diff.		
								Lower	Upper	
Assumed	0,632	0,427	-0,786	239	0,433	-0,086	0,110	-0,303	0,130	
Not assumed			-0,785	236	0,433	-0,086	0,110	-0,303	0,130	

* "Concern" variable: MEAN (Q6.1, Q6.2, Q6.3, Q6.4, Q6.8, Q6.9, Q6.10, Q6.11)

Appendix 16: Study III | Prosocial behavioural intentions– Descriptive Statistics, Cronbach's Alpha Coefficient and Linear Regression analyses

Variable	Q	Mean	S.D.	Cronbach's α	N	Mean	Cronbach's α if item deleted
Prosocial behavioural intentions Scale	Q7.1_1	3,76	1,820	0,785	5	5,062	0,806
	Q7.1_2	5,44	1,527				0,758
	Q7.1_3	6,01	1,226				0,739
	Q7.1_4	5,28	1,465				0,709
	Q7.1_5	4,82	1,546				0,708

Linear Regression - Model Summary						
	Model	R	R^2	Adj. R^2	S.E. of the Est.	Durbin-Watson
Whole Sample (n=241)	1	0,225	0,051	0,043	1,780	2,344
Control Group (n=121)	2	0,169	0,029	0,012	1,748	2,419
COVID-19 Reminder Group (n=241)	3	0,288	0,083	0,067	1,820	2,253

X: "Give money to charity" – Q7.1_1
Y: Concern with the COVID-19's economic impacts – Q6.3 and Q6.10

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40,243	2	20,121	6,349	0,002
	Residual	754,313	238	3,169		
	Total	794,556	240			
2	Regression	10,666	2	5,333	1,745	0,179
	Residual	360,623	118	3,056		
	Total	371,289	120			
3	Regression	35,123	2	17,561	5,303	0,006
	Residual	387,469	117	3,312		
	Total	422,592	119			

Coefficients						
Model		Unstand. Coefficients		Stand. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,474	0,652		2,261	0,025
	Q6.3	0,126	0,088	0,098	1,435	0,153
	Q6.10	0,273	0,112	0,168	2,444	0,015
2	(Constant)	1,978	0,968		2,043	0,043
	Q6.3	0,016	0,118	0,013	0,134	0,893
	Q6.10	0,280	0,163	0,165	1,721	0,088
3	(Constant)	1,035	0,894		1,158	0,249
	Q6.3	0,250	0,134	0,186	1,871	0,064
	Q6.10	0,239	0,157	0,151	1,524	0,130

Independent Samples Test – "Prosocial behavioural intentions" measure *	
Levene's Test	t-test for Equality of Means

Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	S.E. Diff.	95% C.I. of the Diff.	
								Lower	Upper
Assumed	0,480	0,489	-0,287	239	0,774	-0,043	0,149	-0,335	0,250
Not assumed			-0,287	238	0,774	-0,043	0,149	-0,335	0,250
* "Prosocial behavioural intentions" measure: MEAN (Q7.1_2 ,Q7.1_3, Q7.1_4, Q7.1_5)									

Appendix 17: Study III | Concern, Prosocial Intentions and Cooperation – Descriptive Statistics, Cronbach's Alpha Coefficient and PROCESS macro by Andrew F. Hayes

	Descriptives		Cronbach's Alpha Coefficient			
Q	Mean	Std. Dev.	Cronbach's α	N	Mean	Cronbach's α if item deleted
Q5.1_1	6,600	0,831				0,804
Q5.1_2	6,540	0,885				0,794
Q5.1_3	6,310	1,106	0,835	6	6,470	0,818
Q5.1_4	6,490	0,958				0,784
Q5.1_5	6,620	0,892				0,815
Q5.1_6	6,260	1,112				0,824

Group Statistics							
Variable	Construct		Group	N	Mean	SD	S.E. Mean
Cooperation	MEAN(Q5.1_1,Q5.1_2,Q5.1_3,Q5.1_4,Q5.1_5,Q5.1_6)		0	121	6,453	0,639	0,058
			1	120	6,486	0,804	0,073

Independent Samples Test – "Cooperation" measure *									
Levene's Test			t-test for Equality of Means						
Equal variances	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% C.I. of the Diff.	
								Lower	Upper
Assumed	0,528	0,468	-0,352	239	0,725	-0,033	0,094	-0,217	0,151
Not assumed			-0,352	227	0,725	-0,033	0,094	-0,217	0,152

Run MATRIX procedure:

****************** PROCESS Procedure for SPSS Version 3.5 *******************
    Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
  Documentation available in Hayes (2018). www.guilford.com/p/hayes3
****

Model : 1
  Y : Prosocial behavioural intentions (PBI) - MEAN(Q7.1_2, Q7.1_3, Q7.1_4, Q7.1_5)
  X : Concern (CON) - MEAN(Q6.1, Q6.2, Q6.4, Q6.8, Q6.9, Q6.11)
  W : Cooperation (COOP) - MEAN(Q5.1_1, Q5.1_2, Q5.1_3, Q5.1_4, Q5.1_5, Q5.1_6)
Sample Size: 241
****

OUTCOME VARIABLE: PBI
Model Summary
     R   R-sq   MSE   F   df1   df2   p
   .2185   .0477   1.2766   3.9608   3.0000   237.0000   .0088
Model
              coeff   se   t   p   LLCI   ULCI
constant   5.3539   .0747   71.7116   .0000   5.2068   5.5010
CON   .2764   .0930   2.9723   .0033   .0932   .4597
COOP   .0372   .1170   .3184   .7505   -.1932   .2677

Int_1   .1550   .0734   2.1114   .0358   .0104   .2996
Product terms key:
 Int_1   :   CON   x   COOP
Test(s) of highest order unconditional interaction(s):
        R2-chng   F   df1   df2   p
X*W   .0179   4.4581   1.0000   237.0000   .0358

   Focal predict: CON   (X)
       Mod var: COOP   (W)
Conditional effects of the focal predictor at values of the moderator(s):
      COOP.   Effect   se   t   p   LLCI   ULCI
      -.7246   .1641   .0998   1.6455   .1012   -.0324   .3606
       .0000   .2764   .0930   2.9723   .0033   .0932   .4597
       .5304   .3586   .1062   3.3762   .0009   .1494   .5679
Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.
DATA LIST FREE/
  CON   COOP   PBI .
BEGIN DATA.
   -.8536   -.7246   5.1868
    .0000   -.7246   5.3269
    .8536   -.7246   5.4670
   -.8536   .0000   5.1179
    .0000   .0000   5.3539
    .8536   .0000   5.5898
   -.8536   .5304   5.0675
    .0000   .5304   5.3736
    .8536   .5304   5.6798
END DATA.
GRAPH/SCATTERPLOT= CON   WITH   PBI BY   COOP .
******************** ANALYSIS NOTES AND ERRORS ********************
Level of confidence for all confidence intervals in output: 95.0000
W values in conditional tables are 1 SD below the mean, the mean, and the maximum.
NOTE: One SD above the mean is above the maximum observed in the data for W, so the
maximum measurement for W is used for conditioning instead.
NOTE: The following variables were mean centred prior to analysis: COOP and CON
------ END MATRIX -----

Run MATRIX procedure:
****************** PROCESS Procedure for SPSS Version 3.5 ******************
      Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
   Documentation available in Hayes (2018). www.guilford.com/p/hayes3
****

Model : 1
   Y : Prosocial consumption (CONSUM) - MEAN(Q3.2, Q3.4, Q3.6, Q3.8)
   X : Concern (CONCER) - MEAN(Q6.1, Q6.2, Q6.4, Q6.8, Q6.9, Q6.11)
   W : Cooperation (COOP) - MEAN(Q5.1_1, Q5.1_2, Q5.1_3, Q5.1_4, Q5.1_5, Q5.1_6)

Sample Size: 241
****

OUTCOME VARIABLE: CONSUM

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0589	.0035	2.8046	.2747	3.0000	237.0000	.8436

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6685	.1107	24.1145	.0000	2.4505	2.8865
CONCER	-.0715	.1379	-.5189	.6043	-.3431	.2000
COOP	-.0989	.1734	-.5703	.5690	-.4404	.2427
Int_	-.0478	.1088	-.4395	.6607	-.2622	.1665

Product terms key:

 Int_1   :   CONCER   x   COOP

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

	R2-chng	F	df1	df2	p
X*W	.0008	.1931	1.0000	237.0000	.6607

   Focal predict: CONCER   (X)

      Mod var: COOP   (W)

Data for visualizing the conditional effect of the focal predictor:

Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/

  CONCER   COOP   CONSUM   .

BEGIN DATA.

-.8536	-.7246	2.7716
.0000	-.7246	2.7402
.8536	-.7246	2.7087
-.8536	.0000	2.7296
.0000	.0000	2.6685
.8536	.0000	2.6075
-.8536	.5304	2.6988
.0000	.5304	2.6161
.8536	.5304	2.5334

END DATA.

GRAPH/SCATTERPLOT= CONCER   WITH   CONSUM BY   COOP .

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

Level of confidence for all confidence intervals in output: 95.0000

W values in conditional tables are 1 SD below the mean, the mean, and the maximum.

NOTE: One SD above the mean is above the maximum observed in the data for W, so the maximum measurement for W is used for conditioning instead.

NOTE: The following variables were mean centred prior to analysis: COOP and CONCER

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