



## **How Does Exposure to Organic Food Products Affect Consumer Responses? Exploring the Moderating Role of Consumer Impulsiveness**

**Huaiyu Li**

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor  
of Philosophy

The University of Sheffield  
Faculty of Social Science  
Management School

April 2025

## **Acknowledgements**

I would like to take this opportunity to express my deepest gratitude to my supervisors, Professor Fraser McLeay and Professor Hesam Olya, for their unwavering support, invaluable guidance, and insightful feedback throughout my PhD journey. Whenever I encountered difficulties, they generously shared their expertise and experience, helping me navigate the right path. Even during the most challenging stages, their encouragement and positivity kept me motivated. Their constructive feedback and constant support have given me the confidence to persevere, and I sincerely appreciate the crucial role they have played in the successful completion of my thesis.

I am profoundly grateful to my parents, Yonggui Li and Cuiying Qi, for their unconditional love, care, and unwavering support. Without them, pursuing and completing my PhD would not have been possible. Their belief in me has been a constant source of strength, and for that, I am truly thankful.

I would also like to extend my heartfelt thanks to my tutor, Dr. Dahlia El-Manstrly, for her invaluable advice on my career development and for the care and support she has shown me during my time in Sheffield. Her guidance has been instrumental in helping me adapt to both academic and personal life in a new environment.

Finally, I am grateful to my friends, whose support, advice, and encouragement have made this journey more manageable. Their companionship and kindness have been a source of strength, and I deeply appreciate their presence in my life.

## **Declaration**

*I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means ([www.sheffield.ac.uk/ssid/unfair-means](http://www.sheffield.ac.uk/ssid/unfair-means)). This work has not been previously presented for an award at this, or any other, university.*

Please ensure that any publications arising from the thesis are acknowledged in this section.

## Glossary

|                                          |                                                                                            |
|------------------------------------------|--------------------------------------------------------------------------------------------|
| ANCOVA                                   | Analysis of Covariance                                                                     |
| ANOVA                                    | Analysis of Variance                                                                       |
| Chronic regulatory focus                 | Regulatory focus that originally exists in individuals.                                    |
| Framing                                  | The way information is presented can influence how individuals perceive and respond to it. |
| Ideal-self                               | Desirable end-states related to hopes, wishes, and aspirations.                            |
| Nurturance-related goals                 | Desirable end-states related to hopes, wishes, and aspiration.                             |
| Ought-self                               | Desirable end-states related to duties, responsibilities, and obligations.                 |
| Prime                                    | Activate the stored knowledge.                                                             |
| Priming methods for regulatory focus     | Methods used to activate regulatory focus.                                                 |
| Security-related goals                   | Desirable end-states related to duties, responsibilities, and obligations.                 |
| Self-views                               | How individuals perceive themselves and their relationship with others.                    |
| Situational (temporary) regulatory focus | Regulatory focus that is primed by external elements.                                      |
| Variables related a prevention focus     | Duties, responsibilities, safety, and obligations.                                         |
| Variables related a promotion focus      | Hopes, wishes, growth, and aspirations.                                                    |

## **Abstract**

Prior research suggests that exposure to different product categories can influence consumer behaviour. For instance, consumers exposed to fruit juice or yoghurt tend to favour advertisements emphasising gains (e.g., improving well-being), whereas those exposed to sunscreen or elliptical trainers are more inclined towards advertisements highlighting losses (e.g., protecting skin). Regulatory focus theory explains this phenomenon by suggesting that exposure to specific product categories can prime a regulatory focus orientation within consumers, influencing their subsequent behaviour—even in unrelated contexts. However, scant research has examined whether and how exposure to organic food products affects consumers' regulatory focus orientations and behaviour. This is important, as mismatched advertising for organic food products could have unintended negative effects.

By conducting a comprehensive literature review of research priming methods for regulatory focus, this thesis creatively proposes a novel two-level classification framework for those priming methods. Products per se are selected as a focal priming method for regulatory focus. Drawing on regulatory focus theory, in this thesis, the findings of two online experiments are presented, showing that exposure to organic food products per se can prime a promotion focus among impulsive consumers. In contrast, exposure to organic food products per se can induce a prevention focus among prudent consumers.

This thesis helps conceptually differentiate organic food products from other generic green products, which are usually related to a prevention focus. By testing the moderation role of consumer impulsiveness in the association between exposure to organic food products and regulatory focus motivations, this thesis finds that how organic food products prime regulatory focus depends on consumer impulsiveness. In doing so, this thesis contributes to the literature by identifying organic food products as a new type of priming method for regulatory focus.

This thesis also provides actionable implications for stakeholders seeking effective marketing communication strategies to promote organic food products. Given the moderation effect of consumer impulsiveness on how organic food products influence consumer behaviour, marketers and companies may need to adopt more tailored marketing communication strategies. Additionally, leveraging organic food products as an internal source of regulatory focus is more cost-effective than relying on external information to induce regulatory focus.

# Table of Contents

|                                                                                                                        |             |
|------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Acknowledgements .....</b>                                                                                          | <b>I</b>    |
| <b>Declaration .....</b>                                                                                               | <b>II</b>   |
| <b>Glossary .....</b>                                                                                                  | <b>III</b>  |
| <b>Abstract .....</b>                                                                                                  | <b>IV</b>   |
| <b>Table of Contents .....</b>                                                                                         | <b>V</b>    |
| <b>List of Tables .....</b>                                                                                            | <b>VIII</b> |
| <b>List of Figures .....</b>                                                                                           | <b>X</b>    |
| <b>Chapter 1: Introduction .....</b>                                                                                   | <b>1</b>    |
| 1.1 Chapter overview .....                                                                                             | 1           |
| 1.2 Overview of regulatory focus theory and its relevance to consumer behaviour .....                                  | 2           |
| 1.3 Regulatory focus priming .....                                                                                     | 5           |
| 1.4 Organic food and regulatory focus priming .....                                                                    | 8           |
| 1.5 Research problems, aim and objectives .....                                                                        | 11          |
| 1.5.1 The need for a comprehensive review of priming methods for regulatory focus and a classification framework ..... | 11          |
| 1.5.2 The need for empirical research on organic food per se as a priming method .....                                 | 12          |
| 1.5.3 The need for empirical research that differentiates organic food products from generic green products .....      | 13          |
| 1.5.4 The need for more practical considerations for organic food marketing .....                                      | 13          |
| 1.5.5 Research problem statement .....                                                                                 | 15          |
| 1.5.6 Research aim and objectives .....                                                                                | 16          |
| 1.6 Research contributions .....                                                                                       | 17          |
| 1.6.1 Theoretical contributions .....                                                                                  | 17          |
| 1.6.2 Practical implications .....                                                                                     | 19          |
| 1.7 Conclusion and the structure of this thesis .....                                                                  | 21          |
| <b>Chapter 2: Literature Review .....</b>                                                                              | <b>25</b>   |
| 2.1 Chapter overview .....                                                                                             | 25          |
| 2.2 Regulatory focus theory: concepts, principles, and empirical evidence .....                                        | 25          |
| 2.2.1 Regulatory focus theory and its development .....                                                                | 25          |
| 2.2.2 Regulatory focus and its impact on general psychology .....                                                      | 29          |
| 2.2.3 Impact of regulatory focus on outcomes regarding consumer behaviour .....                                        | 32          |
| 2.3 Regulatory focus priming and consumer behaviour .....                                                              | 61          |
| 2.3.1 Introduction of priming .....                                                                                    | 61          |
| 2.3.2 Regulatory focus priming .....                                                                                   | 62          |
| 2.3.3 Old and new classification frameworks .....                                                                      | 64          |
| 2.4 Justification of the underpinning theory .....                                                                     | 90          |
| 2.5 Conclusion .....                                                                                                   | 91          |
| <b>Chapter 3: Hypothesis Development and Conceptual Framework .....</b>                                                | <b>93</b>   |
| 3.1 Chapter overview .....                                                                                             | 93          |

|                                                                                                                        |     |
|------------------------------------------------------------------------------------------------------------------------|-----|
| 3.2 Hypothesis development (Organic food as a priming method for regulatory focus and the role of impulsiveness) ..... | 94  |
| 3.2.1 Regulatory focus theory and how it influences consumer behaviour .....                                           | 94  |
| 3.2.2 Products per se as a source of regulatory focus .....                                                            | 95  |
| 3.2.3 Organic food per se as a source of regulatory focus .....                                                        | 98  |
| 3.2.4 The moderation role of impulsiveness .....                                                                       | 101 |
| 3.3 Conceptual framework .....                                                                                         | 105 |
| 3.4 Conclusion .....                                                                                                   | 105 |
| Chapter 4: Research Methodology .....                                                                                  | 107 |
| 4.1 Chapter overview .....                                                                                             | 107 |
| 4.2 Research philosophy .....                                                                                          | 107 |
| 4.3 Research methodology .....                                                                                         | 110 |
| 4.3.1 Methodological choice .....                                                                                      | 111 |
| 4.3.2 Research strategy .....                                                                                          | 112 |
| 4.3.3 Time horizon .....                                                                                               | 114 |
| 4.4 Experimental design .....                                                                                          | 115 |
| 4.4.1 Experimental approach .....                                                                                      | 115 |
| 4.4.2 Sampling and data collection .....                                                                               | 116 |
| 4.4.3 Stimulus development .....                                                                                       | 117 |
| 4.4.4 Measurements .....                                                                                               | 120 |
| 4.4.5 Experimental procedures .....                                                                                    | 125 |
| 4.4 Pre-registration .....                                                                                             | 127 |
| 4.5 Common method variance .....                                                                                       | 130 |
| 4.6 Data analysis procedure .....                                                                                      | 131 |
| 4.6.1 Data cleaning and checking .....                                                                                 | 131 |
| 4.6.2 Data preliminary analyses .....                                                                                  | 131 |
| 4.6.3 Hypothesis testing .....                                                                                         | 132 |
| 4.7 Ethical considerations .....                                                                                       | 132 |
| 4.8 Conclusion .....                                                                                                   | 134 |
| Chapter 5: Data Analysis and Results .....                                                                             | 136 |
| 5.1 Chapter overview .....                                                                                             | 136 |
| 5.2 Study 1-Indirect measurement of regulatory focus .....                                                             | 136 |
| 5.2.1 Pretest .....                                                                                                    | 136 |
| 5.2.2 Data preparation .....                                                                                           | 137 |
| 5.2.3 Preliminary analysis .....                                                                                       | 143 |
| 5.2.4 Hypothesis testing .....                                                                                         | 153 |
| 5.3 Study 2-Direct measurement of regulatory focus .....                                                               | 160 |
| 5.3.1 Pretest .....                                                                                                    | 160 |
| 5.3.2 Data preparation .....                                                                                           | 160 |
| 5.3.3 Preliminary analysis .....                                                                                       | 165 |
| 5.3.4 Hypothesis testing .....                                                                                         | 175 |
| 5.5 Conclusion .....                                                                                                   | 181 |
| Chapter 6: Discussion and Conclusion .....                                                                             | 182 |
| 6.1 Chapter overview .....                                                                                             | 182 |

|                                                                                                  |            |
|--------------------------------------------------------------------------------------------------|------------|
| <b>6.2 Discussion of results .....</b>                                                           | <b>182</b> |
| <b>6.2.1 Discussion of literature review on regulatory focus priming .....</b>                   | <b>182</b> |
| <b>6.2.2 Discussion of Study 1 .....</b>                                                         | <b>187</b> |
| <b>6.2.3 Discussion of Study 2 .....</b>                                                         | <b>191</b> |
| <b>6.3 Theoretical contributions .....</b>                                                       | <b>195</b> |
| <b>6.3.1 Novel classification framework .....</b>                                                | <b>195</b> |
| <b>6.3.2 Main effect-conceptual differences between organic and generic green products .....</b> | <b>197</b> |
| <b>6.3.3 Moderation role of consumer impulsiveness and regulatory focus priming .....</b>        | <b>198</b> |
| <b>6.4 Practical implications .....</b>                                                          | <b>200</b> |
| <b>6.4.1 Marketing organic food products with greater precision .....</b>                        | <b>200</b> |
| <b>6.4.2 Marketing organic food products with a cost-effective approach .....</b>                | <b>203</b> |
| <b>6.5 Limitations of the study and suggestions for future research .....</b>                    | <b>206</b> |
| <b>Appendix A: Literature review for health consciousness (rival moderator) .....</b>            | <b>226</b> |
| <b>Appendix B: Ethics application .....</b>                                                      | <b>229</b> |
| <b>Appendix C: Interview themes .....</b>                                                        | <b>236</b> |
| <b>Appendix D: Product claims .....</b>                                                          | <b>237</b> |

## List of Tables

|                                                                                                |     |
|------------------------------------------------------------------------------------------------|-----|
| Table 1 Theoretical contributions and practical implications .....                             | 20  |
| Table 2 Outline of the thesis structure .....                                                  | 22  |
| Table 3 Summary of potential measurements of regulatory focus .....                            | 33  |
| Table 4 Novel classification framework for priming methods .....                               | 77  |
| Table 5 The associations between regulatory focus and perspectives on impulsive behaviour .... | 103 |
| Table 6 Research philosophies .....                                                            | 109 |
| Table 7 Types of variables for experimental research .....                                     | 112 |
| Table 8 Methodological choices and research strategies .....                                   | 114 |
| Table 9 Measurements for key variables .....                                                   | 124 |
| Table 10 Pre-registration table for Study 1 .....                                              | 128 |
| Table 11 Pre-registration table for Study 2 .....                                              | 129 |
| Table 12 The summary of research methodology and techniques .....                              | 134 |
| Table 13 Standard deviation, Mean and Z-Score of key variables .....                           | 139 |
| Table 14 The Kolmogorov–Smirnov and Shapiro–Wilk tests .....                                   | 140 |
| Table 15 Skewness and kurtosis values .....                                                    | 140 |
| Table 16 Harman’s one-factor test .....                                                        | 142 |
| Table 17 Participants’ demographic information .....                                           | 143 |
| Table 18 KMO test and Bartlett’s test of sphericity .....                                      | 146 |
| Table 19 Factor loading .....                                                                  | 146 |
| Table 20 Total Variance Explained (Prudence subscale) .....                                    | 147 |
| Table 21 Total Variance Explained (Hedonic subscale) .....                                     | 147 |
| Table 22 Total Variance Explained (Health consciousness) .....                                 | 148 |
| Table 23 Convergent validity results .....                                                     | 149 |
| Table 24 Correlations and squared AVE .....                                                    | 151 |
| Table 25 Cronbach’s alpha ( $\alpha$ ) results .....                                           | 152 |
| Table 26 Hypotheses, research objectives, and analysis techniques .....                        | 154 |
| Table 27 One-way ANCOVA test .....                                                             | 156 |
| Table 28 The summary of the moderation test results .....                                      | 158 |
| Table 29 The summary of the moderation test results (covariates included) .....                | 159 |
| Table 30 The summary of the moderation test results for health consciousness .....             | 159 |
| Table 31 Standard deviation, Mean and Z-Score of key variables .....                           | 162 |
| Table 32 The Kolmogorov–Smirnov and Shapiro–Wilk tests .....                                   | 163 |
| Table 33 Skewness and kurtosis values .....                                                    | 163 |
| Table 34 Harman’s one-factor test .....                                                        | 164 |
| Table 35 Participants’ demographic information .....                                           | 166 |
| Table 36 KMO test and Bartlett’s test of sphericity .....                                      | 168 |
| Table 37 Factor loading .....                                                                  | 168 |
| Table 38 Total Variance Explained (Prudence subscale) .....                                    | 169 |
| Table 39 Total Variance Explained (Hedonic subscale) .....                                     | 170 |
| Table 40 Total Variance Explained (Regulatory focus scale) .....                               | 170 |
| Table 41 Convergent validity results .....                                                     | 171 |
| Table 42 Correlations and squared AVE .....                                                    | 173 |

|                                                                                                                                 |     |
|---------------------------------------------------------------------------------------------------------------------------------|-----|
| Table 43 Cronbach's alpha ( $\alpha$ ) results .....                                                                            | 174 |
| Table 44 Hypotheses, research objectives, and analysis techniques .....                                                         | 175 |
| Table 45 One-way ANCOVA test .....                                                                                              | 177 |
| Table 46 The summary of the moderation test results .....                                                                       | 179 |
| Table 47 The summary of the moderation test results (covariates included) .....                                                 | 180 |
| Table 48 Summary of the research objectives, proposed hypotheses, and results for empirical studies (Study 1 and Study 2) ..... | 194 |
| Table 49 Overview of theoretical contributions and practical implications .....                                                 | 204 |

## List of Figures

|                                                                              |     |
|------------------------------------------------------------------------------|-----|
| Figure 1 Self-Reported change in purchase drivers over the last decade ..... | 10  |
| Figure 2 Flow diagram of this thesis .....                                   | 24  |
| Figure 3 Conceptual map .....                                                | 35  |
| Figure 4 Conceptual framework .....                                          | 93  |
| Figure 5 Organic food condition in Study 1 .....                             | 119 |
| Figure 6 Conventional food condition in Study 1 .....                        | 119 |
| Figure 7 Organic food condition in Study 2 .....                             | 120 |
| Figure 8 Conventional food condition in Study 2 .....                        | 120 |
| Figure 9 Conceptual framework .....                                          | 154 |
| Figure 10 The moderation effect for Study 1 .....                            | 158 |
| Figure 11 The moderation effect for Study 2 .....                            | 180 |

# Chapter 1: Introduction

## 1.1 Chapter overview

*There are two rival juice brands on the market. Brand A employs a product claim that emphasises the good taste and energy-boosting qualities of its juice products. Brand B, which sells similar products, adopts a different product claim, focusing on the nutritional benefits of its offerings. Brand B's managers find their sales lagging behind those of their competitor. This raises the question: what is causing the sales disadvantage?*

This thesis adopts regulatory focus theory (Higgins, 1997; 1998) as the underpinning theory, given its established relevance in explaining how consumers respond differently to positive and negative information. Regulatory focus theory (Higgins, 1997; 1998) posits that consumers operate within two distinct motivational systems: a promotion system concerned with achieving positive outcomes and a prevention system concerned with avoiding negative outcomes. This theory offers a valuable framework for understanding why two types of product claims could influence marketing outcomes differently.

This chapter introduces the rationale behind the selection of this research topic. The thesis is grounded in regulatory focus theory and examines how regulatory focus motivations influence consumer behaviour. Therefore, it is essential to present the concept and rationale of this theory early on, highlighting its relevance and significance in the fields of marketing and consumer behaviour.

The chapter begins by providing an overview of regulatory focus theory and its connection to the research fields of marketing and consumer behaviour. This is followed by an exploration of regulatory focus priming, with a particular focus on how organic food might serve as a potential priming method for regulatory focus. The research problem, aim and objectives are then outlined, leading into a discussion of the expected research contributions from both theoretical and practical perspectives. Finally, the chapter concludes with a brief outline of the thesis structure.

## **1.2 Overview of regulatory focus theory and its relevance to consumer behaviour**

Many consumers are goal-oriented, and they often fulfil their goals through consumption (Higgins et al., 2020). When a consumer chooses to buy a pack of apples at a grocery store, they may aim to satisfy nurturance-related goals by enjoying the good taste or to achieve security-related goals by obtaining essential minerals and vitamins (Roy and Ng, 2012; Higgins, 1998; Higgins et al., 2020). It is crucial for marketers to understand consumers' goals, motivations, judgments, and evaluations to design marketing strategies that align with these goals (specifically, nurturance-related goals and security-related goals) and drive marketing outcomes. For example, describing apples as "sweet and juicy" in advertising may better appeal to consumers who prioritise taste, while presenting them as "healthy and nutritious" may resonate more with those aiming for a healthier diet. Regulatory focus theory (Higgins, 1998) is a classic motivation theory that provides researchers and practitioners with valuable insights into consumers' goal selection and goal pursuit processes.

Regulatory focus theory (Higgins, 1998) posits that individuals have two motivational systems, grounded in the hedonic principle that individuals approach pleasure and avoid pain. A promotion system reflects an individual's ideal self, encompassing hopes, aspirations, and growth. Individuals with a promotion focus strive to minimise the discrepancy between their actual self with their ideal self (Higgins, 1998; 1987). Conversely, a prevention system reflects an individual's ought self, which includes duties, obligations and safety. Individuals with a prevention focus are inclined to regulate their actual self to align with their ought self (Higgins, 1998; 1987).

The development and sustainment of an individual's regulatory focus may trace back to their childhood and be attributed to interactions with their caretakers (Higgins, 1998). Caretakers with a promotion focus tend to encourage children to pursue accomplishments, hopes, and aspirations. They often reward good behaviour with positive reinforcement, such as kisses or hugs. In contrast, caretakers with a prevention focus prioritise children's safety and security. They emphasise teaching or training children to be responsible, mindful of their manners, and

diligent in meeting obligations. Socialising and interacting with caretakers who exhibit a specific regulatory focus can influence children to adopt the same regulatory focus as their caretakers (Higgins et al., 2020; Higgins, 1998).

In addition, regulatory focus theory (Higgins et al., 2020; Higgins, 1998) posits that regulatory focus is not a fixed individual trait but rather a motivational state that can vary depending on an individual's current circumstances and can change throughout their life. For example, an individual's regulatory focus may develop during childhood, referred to as chronic regulatory focus. Alternatively, external environments can temporarily influence and shift an individual's regulatory focus, known as temporary or situational regulatory focus. For example, it has been well-established that considering one's duties and obligations can situationally activate a prevention focus in this individual (Motyka et al., 2014).

Regulatory focus theory was initially proposed and empirically tested within the domain of general psychology (e.g., Higgins and Tykocinski, 1992; Roney et al., 1995; Higgins et al., 1997; Higgins, 1987; 1998). Scholars in this field have found that individuals' regulatory focus, whether chronic or situational, can influence a wide range of psychological and behavioural aspects, including event sensitivity, emotional experiences, motivations, strategic inclinations, and task performance, and the interactive effects of the product of value and expectancy (Higgins and Tykocinski, 1992; Roney et al., 1995; Crowe and Higgins, 1997; Shah et al., 1998; Shah and Higgins, 1997; Higgins, 1998). For example, Shah and Higgins (1997) suggest that the positive interaction of the value and expectancy of the products on task performance strengthens with an increase in promotion focus, whereas the negative interaction of the value and expectancy of the products on task performance diminishes with an increase in prevention focus.

Although regulatory focus theory was initially proposed within the psychology domain, it quickly attracted substantial scholarly attention across a variety of research areas, including marketing and consumer behaviour, management, finance and accounting, and organizational behaviour. Among these, research on regulatory focus has thrived particularly in the area of

marketing and consumer behaviour, which is the central focus of this thesis. Aaker and Lee (2001) are among the first to introduce regulatory focus theory into the area of marketing and consumer behaviour. With a specific focus on persuasion effects of advertising, Aaker and Lee (2001) reveal an interplay between consumers' regulatory focus motivations and their self-views (see the Glossary). Specifically, the authors suggest that for consumers who possess an independent self-view, promotion-focused advertising has a stronger persuasion effect than prevention-focused advertising. In contrast, for those who have an interdependent self-view, prevention-focused advertising proves more persuasive than promotion-focused advertising.

Over the decades, regulatory focus theory has been widely adopted as a theoretical foundation for consumer behaviour research, with its importance and relevance extensively demonstrated. It is found that regulatory focus can influence a variety of downstream outcome variables, including consumers' attitudinal responses (e.g., attitude and satisfaction), evaluations, behavioural intentions (e.g., purchase intention and willingness to pay), financial decisions, and preferences (Basu and Ng, 2021; Lee et al., 2014; Yeo and Park, 2006; Pham and Avnet, 2004; Kirmani and Zhu, 2007; Zhao and Pechmann, 2007; Westjohn et al., 2009; Choi and Park, 2021; Verma et al., 2019; Petersen et al., 2015; Chernev, 2004).

To provide a comprehensive understanding of what the role of regulatory focus is in consumer behaviour research as well as how regulatory focus affects various types of consumer reactions, this thesis will critically review the regulatory focus literature, organised by categories of those downstream outcome variables, in the chapter of Literature Review. Given that regulatory focus can affect various types of downstream outcome variables, this review process also assists in selecting the most appropriate downstream outcome variables for the empirical studies in this thesis. Furthermore, this literature review process helps this thesis narrow the research scope from a broad domain of regulatory focus to a recent, attention-grabbing topic (Fei et al., 2020; Jia et al., 2022): temporary regulatory focus (see the Glossary) and the priming methods used to activate temporary regulatory focus among consumers (see the Glossary). In light of this, the next section will concentrate on priming

methods for regulatory focus.

### **1.3 Regulatory focus priming**

As discussed earlier, regulatory focus is not an individual difference variable (Higgins, 1998). Instead, regulatory focus can be regarded as a procedural knowledge that can vary chronically or temporarily (Higgins, 1996). Thus, the accessibility of regulatory focus, either a promotion focus or a prevention focus, can be temporarily activated by situational stimuli. A situational promotion focus can be primed by an environmental stimulus, even in an individual who is chronically prevention-focused (Higgins et al., 2020). For example, jewellery, associated with accomplishments (as it is generally expensive and can reflect social identity), can prime a promotion focus in individuals, while helmets, related to security, can induce a prevention focus in individuals (Ghiassaleh et al., 2020).

Over the decades, scholars in the domains of psychology and marketing have created a number of methods used to prime or activate regulatory focus motivational orientations in consumers. Motyka et al. (2014) classify those methods into two groups: the self-generated priming methods (by asking participants to think about something they ideally would like to do (promotion focus) or to think about something they ought to do (prevention focus)), and the situation-generated priming methods (by using a word completion task to prime a promotion (e.g., e\_g\_r [eager]) or prevention (e.g., d\_ty [duty])). Borges and Gomez (2015) adopt a different classification framework and classify priming methods into two groups: situational cues (goal framing and task framing) and marketing objects (products, services, and brands). Higgins (1998) leverages a few task framing methods to prime regulatory focus. For example, participants are told to complete either a promotion-relevant or a prevention-relevant anagram task to achieve the distinct priming goal. Borges and Gomez (2015) also demonstrate that a product per se can induce distinct regulatory focus orientations depending on whether it possesses strong promotion-relevant or strong prevention-relevant attributes. The authors find that fruit juice and yoghurt (as opposed to sunscreen and elliptical trainers) can induce a promotion focus, while sunscreen and elliptical trainers can induce a prevention focus.

Despite efforts to create methods for priming regulatory focus, to the best of the author's knowledge, there is no research conducting a comprehensive review of those methods. More importantly, while prior studies have attempted to classify existing priming methods (Motyka et al., 2014; Borges and Gomez, 2015), their classification frameworks suffer from methodological issues and lack clarity in their rationales. Therefore, the aim of this thesis is to critically review those methods for priming regulatory focus, adopting a different classification framework from Motyka et al. (2014) and Borges and Gomez (2015). Unlike Motyka et al.'s (2014) framework, which emphasises how priming takes place (e.g., through self or situational factors), this thesis pays close attention to the forms of priming methods (e.g., task framing, products, socialisation, etc.), as well as the underlying nature or rationale of priming methods (e.g., gain-loss, ideal-ought, etc.). The classification framework utilised in this thesis is also different from that of Borges and Gomez (2015), which restricts priming methods with situational cues and marketing objects (products, services, and brands). According to regulatory focus theory (e.g., Higgins et al., 2020), regulatory focus motivations can be situationally primed by environmental elements. In this regard, not only situational cues, but also marketing objects, should be able to induce situational or temporary regulatory focus motivations. Classifying situational cues and marketing objects into separate groups may create confusion about whether marketing objects prime situational regulatory focus. In addition, the range of priming methods covered by Borges and Gomez's (2015) framework is limited and warrants further investigations.

In order to provide a comprehensive overview of priming methods for regulatory focus used in marketing- and consumer behaviour-related research, this thesis rigorously reviews the studies on regulatory focus published in quality marketing journals (Academic Journal Guide (AJG) 4\* and 4), comprising Journal of Marketing, Journal of Marketing Research, the Journal of Consumer research, Marketing Science, Journal of Consumer Psychology, Journal of the Academy of Marketing Science, International Journal of Research in Marketing, Journal of Retailing, and Journal of Service Research. The reason for selecting AJG 4\* and 4 journals (2024 version) is that this thesis is conducted within the UK higher education system,

where AJG serves as a key reference for academic journals.

Given that regulatory focus theory originates in the research field of psychology, this thesis also takes into consideration a number of studies published in quality psychology journals, such as *Psychological Science*, *Personality and Social Psychology Bulletin*, and *Journal of Personality and Social Psychology*. Compared to Motyka et al. (2014) and Borges and Gomez (2015), this thesis offers a more comprehensive and thorough examination of the relevant literature.

By spotting the similarities and differences among those priming methods, in this thesis it is argued that classifying those priming methods based on their forms and underlying nature is both logical and practical. Consequently, after comprehensive and thorough examination of the relevant literature, this thesis proposes the following categories that can encompass all the priming methods based on their forms (for more details, see Table 4 and Section 2.3.3 in the Literature Review chapter): including task framing, message framing, value-framing, physical and mental exercises, self-view (independent vs. interdependent), marketing cues (discount, expiration dates, and familiarity), time metaphors (ego-moving metaphor vs. event-moving metaphor), socialisation (giver–recipient relationship, friend vs. family, cats vs. dogs), short-term mating mindsets, products per se, social approval, product newness and its relationship with perceived cost to purchase, temporal distance from the receipt of last salary, information on a green company or a green product, hedonic food for impulsive consumers, and role models (positive vs. negative).

In addition to the forms of priming methods, this thesis also considers the underlying nature or rationale of these methods. In light of this, the priming methods are further categorised into several pairs, consisting of ideal-ought and gain-loss (see Table 4 in the Literature Review chapter). The priming method coined by Freitas and Higgins (2002) can serve as an effective example, as this method is one of the most widely cited methods used to prime regulatory focus. In this method, participants assigned to a promotion focus condition are asked to think about and write down a hope or an aspiration they currently have. In contrast, those assigned

to a prevention focus condition are required to think about and write down a duty or an obligation they currently have. Based on regulatory focus theory (Higgins, 1987;1998), individuals have two distinct self-guides: ideal self-guides or ought self-guides. Ideal self-guides have a promotion focus, which motivates individuals to attain hopes, wishes and aspirations, whereas ought self-guides motivate individuals to fulfil duties, responsibilities and obligations. Therefore, this priming method is initially categorised as task framing based on its form, as participants are required to imagine either a hope or an aspiration or a duty or an obligation they currently have, and to complete the corresponding writing task. Furthermore, the method is classified as ideal-ought based on its underlying nature.

This thesis documents priming methods in Table 4, and critically discusses those methods in the Literature Review chapter. To the best of the author's knowledge, this research is the first to thoroughly and comprehensively review the literature on regulatory focus priming and advance a feasible classification framework for these methods. Among those priming methods, the empirical section of this thesis selects products per se as a source of regulatory focus, due to its research significance and novelty (Higgins et al., 2020; Borges and Gomez, 2015; Ghiassaleh et al., 2020). More specifically, this thesis focuses on organic food products themselves as the priming method, which will be discussed in greater depth in the following section.

#### **1.4 Organic food and regulatory focus priming**

This thesis selects organic food as the research context for two main reasons. The first and primary reason is the practical significance of the topic. This section begins by introducing its practical importance, followed by a discussion of its research relevance and significance. According to the United States Department of Agriculture (USDA)'s definition, organic food is grown and processed within a system governed by strict regulations regarding soil health, animal welfare, pest and weed management, and additive usage (USDA, 2012). In this system, most synthetic chemicals (e.g., fertilisers and pesticides) are prohibited, and animals must be fed 100% organic feed and raised in a manner that allows for their natural behaviours (USDA, 2012). In recent decades, the organic food market has undergone rapid growth and has now

become a mainstream food market (Van Doorn and Verhoef, 2015). According to the Soil Association 2021 Organic Market Report (Soil Association, 2021), the UK organic sector sees strongest annual growth in over 15 years, increasing by 12.5% to reach £2.79 billion. This marks the 10th consecutive year of growth for the sector. The increase in sales of organic products signals the significance of this market.

Strong support for the transition from conventional to organic agriculture has been shown from governments, policy-makers, public figures, and companies, highlighting the remarkable significance of organic food products. For instance, the European Commission (EU) has set an ambitious action plan for at least 25% of the EU's farmland to transition into organic farming practices by 2030, signalling significant growth in the EU's organic agriculture (EU, 2022). Additionally, the first-ever EU Organic Awards aim to recognise "the best and most innovative actors in organic production within the EU" (EU, 2022). This action plan consists of three interconnected axes, with the first focusing on stimulating consumer demand and trust in organic products (EU, 2022). As a key player in fostering organic agriculture, the United States continues to increase its investment in organic agriculture. On September 10, 2024, the United States Department of Agriculture (USDA) announced a \$50.5 million investment in 30 organic agriculture projects, aimed at supporting organic farmers and ranchers in growing and marketing high-quality organic produce and products (USDA, 2024).

Recent global issues have significantly boosted global demand for organic products by shifting consumer priorities toward health-related choices. COVID-19 appears to be one of the drivers of global organic food consumption. The 2020 Food and Health Survey suggests that COVID-19 has amplified public concern for health, resulting in a noticeable move towards healthier buying patterns. (IFIC, 2020). As shown in Figure 1, compared to the last ten years, more than half of shoppers in 2020 give greater priority to health when selecting food products. The Global Health and Wellness Report by NielsenIQ, covering 17 global markets, reveals that over half of global consumers are now willing to pay a premium for organic, GMO-free, or natural products, influenced by the changes COVID-19 has brought to daily life. Among the surveyed markets, Indonesia reports the highest proportion of such

consumers at 88%, while Canada has the lowest at 50% (NielsenIQ, 2021). In addition, the food safety issue serves as the other health-related issue, influencing consumers' purchasing behaviour, in particular consumers who live in developing countries. Many consumers in Bangladesh have also become aware of food safety hazards, including the illegal use of harmful chemicals in food products (Hossain et al., 2008). In China, various food scandals have resulted in massive mistrust among consumers. A poll conducted in 2014 across 20 cities shows that 80% of Chinese participants are concerned about food safety (Duggan, 2015). China's middle class thus turn to organic food stores or trusted farms that grow vegetables without chemicals (Duggan, 2015).

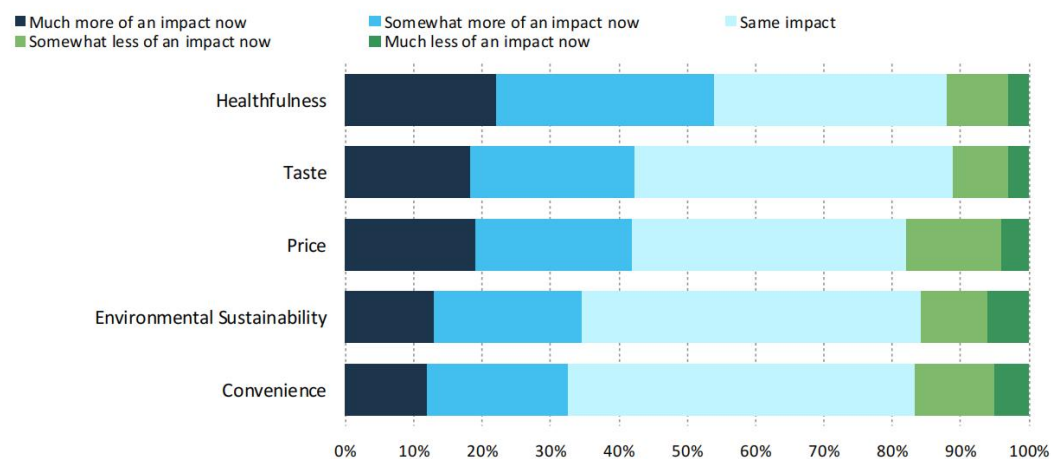


Figure 1 Self-Reported change in purchase drivers over the last decade  
Source: IFIC (2020)

Given the growing support for organic farming at the policy level and the increasing demand for organic products among consumers, scholars have recognised the importance of the topic of organic food. Over the past two decades, academic interest in this area has steadily grown (Mai et al., 2021). Nonetheless, a deeper understanding of organic food could benefit marketers and companies seeking to promote organic food products.

The second reason for selecting organic food as a research context is that the focus of this thesis is products per se as a priming method for regulatory focus orientations. As discussed earlier, the strength and accessibility of a regulatory focus can vary across temporary

situations as well as individuals (Higgins, 1996). Therefore, it is possible to temporarily activate either a promotion focus or a prevention focus orientation (Higgins, 1998). The product category (a product itself) that plays a vital role in activating regulatory focus has garnered relatively scant scholarly attention (Higgins et al., 2020). One illustrative example of product categories as a source of regulatory focus is that jewellery can evoke a sense of luxury in consumers (promotion-focused orientations), whereas helmets provide consumers with the means to guard against potential dangers (prevention-focused orientations). This thesis is interested in the role that organic food products play in priming regulatory focus motivational orientations in consumers, due to its research significance and novelty (Higgins et al., 2020; Borges and Gomez, 2015; Ghiassaleh et al., 2020). This thesis seeks to investigate which type of regulatory focus organic food is capable of priming.

## **1.5 Research problems, aim and objectives**

### **1.5.1 The need for a comprehensive review of priming methods for regulatory focus and a classification framework**

Regulatory focus theory proposes that individuals' regulatory focus varies across individuals (chronic regulatory focus) and temporary situations (primed regulatory focus) (Higgins, 1998). In the early stages of the development of this theory, Higgins creates a number of priming methods for regulatory focus (e.g., Higgins et al., 1994; Higgins, 1998; Freitas and Higgins, 2002; Förster et al., 1998; Friedman and Förster, 2001). Those classic priming methods have been extensively used and validated by scholars in the field of marketing (e.g., Wang et al., 2020; Chang et al., 2023; Das et al., 2020; Ghiassaleh et al., 2020). During the development of regulatory focus theory, a wide range of novel and creative priming methods have gradually been created by scholars. For instance, subsequent investigations have reported that marketing cues (e.g., familiarity of brands, Ramanathan, and Dhar, 2010; product newness, Luo et al., 2016) and socialisation (exposure to dogs vs. cats, Jia et al. (2022); social relationships with friends vs. family members, Fei et al., 2020) can serve to temporarily induce distinct regulatory focus orientations. Surprisingly, no research available has attempted to undertake a thorough review of those priming methods published in quality marketing journals, as listed in Section 1.3. A recent review conducted by Higgins et al. (2020) discusses

several priming methods for regulatory focus. However, this review research primarily focuses on the different categories of regulatory fit, rather than the priming methods themselves. In addition, this is not a comprehensive review of relevant research, as many papers are overlooked. Therefore, the aim of this thesis is to conduct a thorough review of priming methods to gain a deeper understanding of priming methods that effectively activate temporary regulatory focus in participants.

Moreover, previous studies have attempted to classify existing priming methods (Motyka et al., 2014; Borges and Gomez, 2015). However, their classification frameworks suffer from methodological issues and unclear rationales. Therefore, the aim of this thesis is to develop a novel framework that is capable of categorizing all the reviewed priming methods for regulatory focus while overcoming the limitations of these earlier approaches (Motyka et al. (2014) and Borges and Gomez (2015)). This review procedure and classification framework lead the following empirical section to concentrate on products themselves as a regulatory focus priming method, and specifically, organic food as a regulatory focus priming method.

### **1.5.2 The need for empirical research on organic food per se as a priming method**

While a variety of priming methods have been created by scholars (e.g., marketing cues, Ramanathan and Dhar, 2010; socialisation, Jia et al., 2022), relatively little research has focused on products themselves as a source of regulatory focus. Borges and Gomez (2015) show that fruit juice or yoghurt can induce a promotion focus in consumers, whereas sunscreen and elliptical trainers can evoke a prevention focus. Similarly, Kordrostami et al. (2021) indicate that teeth whitening is a source of a promotion focus, while teeth floss can be used to prime a prevention focus. In the study by Ghiassaleh et al. (2020), perfume, nail polish, and jewellery are identified as priming methods for a promotion focus. In contrast, sunscreen, helmets, and safety glasses serve as priming methods for a prevention focus. Despite the research significance of organic food in consumer research, its role in activating promotion or prevention focus is still not well understood. Borges and Gomez (2015) call for further research on how various products may induce regulatory focus motivations. Hence, more empirical investigations into organic food as a regulatory focus priming method are

warranted.

### **1.5.3 The need for empirical research that differentiates organic food products from generic green products**

Green products refer to products that have reduced impact on society and the environment, such as protecting living standards, wages, and ecosystems (Scott et al., 2020). The United States Department of Agriculture (USDA) defines organic food as that which is grown and processed under a system with strict regulations (USDA, 2012). This system governs soil health, animal welfare, pest and weed management, and additive usage. It prohibits most synthetic chemicals, such as fertilisers and pesticides, and requires animals to consume 100% organic feed and be raised to exhibit their natural behaviours (USDA, 2012). Due to their reduced impact on society and the environment, organic food products are often treated as one type of green products in the existing literature.

Previous research indicates that green products themselves can prime a prevention-focused orientation among consumers (Bullard and Manchanda, 2013; Ku et al., 2012), as consumers appear to easily associate those green products with safety, hygiene and environmental protection, which is more related to prevention-focused concerns (Higgins, 1998). Although organic food can be related to a prevention focus, in this thesis, it is argued that organic food may also prime a promotion focus. This is because consumers often perceive organic food products as a form of luxury commodity (Mann, 2003; Septianto et al., 2019), and associate them with hedonism (e.g., enjoyment and pleasure) rather than environmental commitment or benevolence (Mai et al., 2021).

In light of this, this thesis contends that organic food products are different from the broader category of general green products in terms of the activation of regulatory focus, as organic food products possess both promotion-focused attributes (e.g., premium, enjoyment, and pleasure) and prevention-focused attributes (e.g., safety, obligation, and protection).

### **1.5.4 The need for more practical considerations for organic food marketing**

For marketers and companies who seek to promote organic food products, it is crucial to consider the regulatory focus features of organic food. According to regulatory focus theory (Higgins, 1998), consumers will exhibit more positive responses towards the frame that fits (than does not fit) with their regulatory focus orientations (Jia et al., 2022). The UK grocery brand Waitrose adopts a promotion-focused frame, “flavoursome and beautifully versatile”, for organic bananas, yet applies a prevention-focused frame, “milled from wheat grown without reliance on artificial chemicals and fertilisers”, for organic flour. However, if organic food inherently induces a promotion focus in consumers, a promotion-focused frame (e.g., a product claim) would be more suitable for organic food products (Jia et al., 2022). The reverse would be true. Mixing regulatory focus frames (such as presenting promotion-focused consumers with prevention-focused frames) might backfire, potentially yielding less favourable results (Jia et al., 2022).

Furthermore, products themselves can inherently prime regulatory focus, which reduces the expenditure and effort required by marketers to promote them. Compared to products as an internal source of regulatory focus, other types of regulatory focus priming methods demand additional investment and effort from marketers to achieve the desired effect. When regulatory focus is induced by an external source, such as task framing, rather than by an internal source (e.g., the product itself), a well-established method involves asking consumers to think about and write down either a hope or aspiration (promotion-focused priming) or a duty or obligation (prevention-focused priming) (Freitas and Higgins, 2002). However, executing such priming effectively can be challenging for marketers. For instance, elliptical trainers are identified as having strong prevention-focused features (Borges and Gomez, 2015). Simply framing an elliptical trainer as a prevention-focused product in advertising (e.g., highlighting its role in protecting consumers from certain diseases) generates more positive consumer responses compared to framing it as a promotion-focused product (e.g., emphasising its ability to boost energy) (Borges and Gomez, 2015). In contrast, employing an external source to prime regulatory focus independently of the product itself, as exemplified by Lee et al. (2010), requires consumers to complete a writing task before being exposed to the persuasive messaging. This method is unlikely to be a pragmatic solution in real-world

retail scenarios. Therefore, there is a need to examine priming methods that can save time and budgets for marketers, such as products per se as a priming method.

### **1.5.5 Research problem statement**

This subsection intends to summarise the four research problems discussed in Section 1.51-Section 1.54. Overall, this thesis aims to address the following four research problems:

1. No known research has attempted to undertake a comprehensive review of priming methods published in quality marketing journals. Existing classification frameworks for priming methods suffer from methodological issues and unclear rationales. There is a need for a comprehensive review of priming methods and a classification framework to gain a deeper and more thorough understanding of priming methods.
2. While a variety of priming methods have been created by scholars (e.g., marketing cues, socialisation), relatively little research has focused on products per se as a priming method for regulatory focus. Borges and Gomez (2015) call for more research on how various products may prime regulatory focus motivations. Thus, there is a need for empirical research on organic food per se as a priming method.
3. Previous research indicates that green products themselves can prime a prevention-focused orientation and organic food products are often viewed as a type of green products. However, this thesis contends that organic food may also prime a promotion focus, as consumers often perceive organic food products as a form of luxury commodity and associate them with hedonism (e.g., enjoyment and pleasure) rather than environmental commitment or benevolence. Therefore, there is a need for empirical research that differentiates organic food products from generic green products.
4. Marketers and companies such as Waitrose tend to use a mixed advertising approach (both promotion-focused frames and prevention-focused frames), which may backfire. It is urgent to know which type of frame fits with organic food products. Further, using an external source,

such as task framing, to prime regulatory focus is time-consuming and costly. There is a need to examine priming methods that can save time and budgets for marketers, such as products per se as a priming method.

#### **1.5.6 Research aim and objectives**

Based on the research problem outlined in the last section, this thesis has one overarching research aim:

The aim of this thesis is to empirically examine how organic food products themselves might prime regulatory focus among consumers. For this purpose, in this thesis two pretests and two main studies are conducted based on a deductive research method and an experimental approach.

To achieve this overarching research aim, four specific research objectives have been set, with each research objective addressing a distinct research problem:

1. The first objective of this thesis is to conduct a comprehensive review of the existing research on regulatory focus priming, published in quality marketing journals, in order to gain a deeper understanding of priming methods that can effectively activate temporary regulatory focus in individuals. This is the first research that attempts to undertake this academic inquiry. Further, this thesis aims to propose a novel classification framework (see Table 4) that classifies those priming methods into distinct categories based on two key rationales: the forms of priming methods and the underlying nature behind them. In doing so, this novel classification framework overcomes the limitations of prior frameworks. This process also helps navigate the research focus to a specific priming method: products per se.

2. The second objective of this thesis is to conduct two empirical studies to examine whether and how organic food products may prime regulatory focus in consumers, using an indirect measurement of regulatory focus in Study 1 and a direct measurement of regulatory focus in Study 2. By using two types of measurements of regulatory focus and two contexts across two

studies, this thesis increases the generalisability of the results. To the best of the author's knowledge, this is the first research examining organic food products per se as a priming method for regulatory focus.

3. The third objective of this thesis is to conceptually differentiate organic food products from generic green products through two empirical studies. Previous literature suggests that green products can prime a prevention focus. However, this thesis contends that organic food products are related to promotion focus and prevention focus orientations.

4. The fourth objective of this thesis is to provide valuable practical implications for companies and policy-makers who aim to promote organic food products. Currently, they are using a less effective framing approach or complex marketing events in their marketing communications. This thesis aims to shed light on how companies and policy-makers can promote organic food products in a more effective and cost-efficient way.

## **1.6 Research contributions**

### **1.6.1 Theoretical contributions**

This thesis contributes to the existing literature on regulatory focus and organic food in three ways. First, to the best of the author's knowledge, this thesis is the first to undertake a comprehensive examination of the existing literature on priming methods for regulatory focus. The existing literature has developed and examined a variety of priming methods (e.g., Freitas and Higgins, 2002; Higgins, et al., 1994; Higgins, 1998; Lee et al., 2010; Ramanathan and Dhar, 2010; Xu and Chen, 2020; Givi and Das, 2023; He and Cunha, 2020). However, no comprehensive review focuses specifically on these priming methods for regulatory focus. While Higgins et al. (2020) mention a few priming methods, their review primarily emphasises the categories of regulatory fit, offering limited insight into the priming methods themselves. This thesis thus aims to address this gap by critically and comprehensively reviewing the relevant research. More importantly, this thesis develops a new classification framework for those priming methods. This thesis critiques the frameworks employed by Motyka et al. (2014) (situation-generated and self-generated priming methods) or Borges and

Gomez (2015) (situational cues and marketing objects), arguing that these frameworks are insufficient and fail to encompass all types of priming methods. Therefore, by classifying those priming methods into distinct categories based on the forms of priming methods and the underlying nature behind them, this thesis contributes to a better understanding of how scholars could select and apply these methods in appropriate contexts. More importantly, it clarifies the rationale behind adopting specific priming methods.

Second, this thesis contributes to the literature on regulatory focus by investigating the role of organic food products in priming regulatory focus orientations. While a variety of regulatory focus priming methods have been examined (e.g., marketing cues, Ramanathan and Dhar, 2010; socialisation, Jia et al., 2022; task framing, Freitas and Higgins, 2002; “physical” and “mental” exercises, Higgins, 1998; self-view, Aaker and Lee, 2001), there is a lack of research on products per se as a source of regulatory focus. Limited research shows that certain products, such as fruit juice, yoghurt, teeth whitening, perfume, nail polish, and jewellery, can induce a promotion focus in consumers (Borges and Gomez, 2015; Kordrostami et al., 2021; Ghiassaleh et al., 2020). In contrast, products such as sunscreen, elliptical trainers, teeth floss, sunscreen, helmets, and safety glasses are identified to activate a prevention focus (Borges and Gomez, 2015; Kordrostami et al., 2021; Ghiassaleh et al., 2020). However, little research attention has been given to organic food products, a potential source of regulatory focus. This thesis also addresses the call for further investigations on how various products may prime regulatory focus motivations (Borges and Gomez, 2015).

Third, this thesis adds knowledge to the literature on green products- and organic food-related consumer behaviour. Existing literature demonstrates that generic green products (see Section 1.5.3 for the definition) are associated with a prevention focus orientation (Bullard and Manchanda, 2013; Ku et al., 2012), as the attributes of green products (e.g., care, compassion, safety, and protectiveness) align with prevention-oriented concerns, such as security, protection, and responsibility (Higgins, 1998; Higgins et al., 2020). However, in this thesis, it is argued that organic food (see Section 1.5.3 for the definition) products may differ from green products, as in addition to safety and responsibility, consumers also associate organic

food with hedonism and luxury, which are promotion-focused attributes (Mann, 2003; Septianto et al., 2019; Fifita et al., 2020; Kong and Ko, 2017; Nadricka et al., 2020; Baker et al., 2004; Lee and Yun, 2015). Thus, by examining how organic food products might inherently induce regulatory focus orientations, this thesis contributes to the literature on organic food and consumer behaviour (Maesen and Lamey, 2023; Mai et al., 2021; Leonidou et al., 2022; Giray et al., 2022; Hoskins et al., 2024) and the regulatory focus literature (Jia et al., 2022; Fei et al., 2020; Gupta et al., 2024; Pandey and Tripathi, 2023; Baek and Kim, 2023).

### **1.6.2 Practical implications**

This thesis offers valuable practical implications for marketers and companies. First, this thesis delves into how organic food products activate regulatory focus motivational orientations among consumers. Marketing messages regarding organic food products can be framed in two ways: positively, by emphasising promotion goals that organic food can help consumers achieve (e.g., premium quality, good taste), or negatively, by stressing prevention goals that organic food can help consumers fulfil (e.g., safety, security) (Jia et al., 2022). Currently, many brands, such as Waitrose, employ a mixed-message approach to marketing organic food products. However, this approach may yield unfavourable consumer responses (Borges and Gomez, 2015; Ghiassaleh et al., 2020; Kordrostami et al., 2021). By uncovering the regulatory focus features of organic food, this thesis provides crucial insights for marketers and companies into how marketing messages regarding organic food products can be appropriately framed, enabling companies to achieve their goals with greater precision.

Second, this thesis provides marketers and companies with a cost-effective approach to promoting organic food products. When applying regulatory focus theory to their marketing strategies, marketers and companies have several options that can potentially situationally change consumers' regulatory focus orientations (see Table 4). However, relying on an external source of regulatory focus, such as task framing (Freitas and Higgins, 2002) or physical exercises (Higgins, 1998), can be cumbersome and even impractical. This thesis demonstrates that organic food products per se can inherently induce regulatory focus

orientations in consumers. This insight suggests that those unnecessary marketing efforts, such as tasks and physical exercises, can be eliminated, thereby saving time and resources (see Table 1 for an overview of contributions).

Table 1 Theoretical contributions and practical implications

| Contributions | Theoretical contributions                                                                                                                                                                                                                                                                                                                                                | Practical implications                                                                                                                                                                                                       |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | This thesis is the first to undertake a comprehensive examination of the existing literature on priming methods for regulatory focus. More importantly, this thesis contributes to a better understanding of these priming methods by developing a novel classification framework. In this process, it clarifies the rationale behind adopting specific priming methods. | This thesis provides crucial insights for marketers and companies into how marketing messages regarding organic food products can be appropriately framed, enabling companies to achieve their goals with greater precision. |
| 2             | This thesis adds knowledge to the literature on regulatory focus priming by investigating the role of organic food products in priming regulatory focus orientations.                                                                                                                                                                                                    | This thesis provides marketers and companies with a cost-effective approach to promoting organic food products.                                                                                                              |
| 3             | This thesis adds knowledge to the literature on green products- and organic                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                              |

|  |                                                                                                                                         |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <p>food-related consumer</p> <p>behaviour by differentiating</p> <p>organic food products from</p> <p>other generic green products.</p> |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------|--|

## 1.7 Conclusion and the structure of this thesis

This thesis is organized into six chapters, as shown in Table 2. Chapter 1 (Introduction) starts by exploring the underpinning theory of this thesis, regulatory focus theory, and the mechanisms of regulatory focus priming. Then, it introduces organic food as the core research context of this thesis, and links this context to regulatory focus priming. The next section continues with the research problem identified from both theoretical and practical aspects, followed by the aims and objectives of this research. It also highlights the potential theoretical contributions and practical implications of this thesis. Chapter 1 concludes with an outline of the thesis structure and a brief chapter summary.

Chapter 2 (Literature Review) consists of three parts. The first part elaborates on the concepts, principles of regulatory focus theory, and the empirical evidence on regulatory focus and consumer behaviour. The second part provides a comprehensive and critical review of the existing literature (with a special focus on quality marketing journals) on regulatory focus priming. By doing so, this part also develops a novel framework used to classify priming methods for regulatory focus. The third parts justify the underpinning theory by contrasting it with other two competing theories.

Chapter 3 (Hypothesis Development and Conceptual Framework) details the research hypotheses and conceptual framework of the current research. This chapter delves into the theories and relevant literature, formulates hypotheses grounded in those theories and, proposes a conceptual framework that includes the focal variables.

Chapter 4 (Research Methodology) presents the selected methodology for addressing the research problems and achieving the research objectives. It discusses key aspects related to

the research philosophy, the chosen methodology, and research design and techniques. Additionally, Chapter 4 outlines the data analysis procedure undertaken in this thesis. The ethical considerations are also discussed later in this chapter.

Chapter 5 (Data Analysis and Results) primarily presents the findings of data analysis. This chapter comprises two studies that are organized in a similar structure. Specifically, each study begins with a pretest, aimed at testing the stimuli and the manipulations. It then proceeds with a data preparation section, detailing the process of cleaning and preparing raw data for further analysis. It then presents a set of preliminary analyses regarding demographic information, convergent and discriminant validity tests, reliability assessments, multicollinearity tests, and realism checks. The last section shows the testing of hypotheses through a list of techniques and the results of this study.

Chapter 6 (Discussion and Conclusion) offers a detailed interpretation of the findings, connecting them to prior research. Additionally, it highlights the theoretical contributions and practical implications derived from the findings of this thesis. The chapter concludes by addressing the limitations of the study and providing recommendations for future research.

Table 2 Outline of the thesis structure

| <b>Chapter 1: Introduction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● Introduces the underpinning theory of this thesis: regulatory focus theory.</li> <li>● Explains the mechanisms of regulatory focus priming.</li> <li>● Introduces organic food as the research context, linking this context to regulatory focus priming.</li> <li>● Identifies the research problems, the research aim and objectives.</li> <li>● Highlights the expected theoretical contributions and practical implications.</li> </ul> |
| <b>Chapter 2: Literature Review</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>● Elaborates on the concepts, principles of regulatory focus theory, and the empirical evidence.</li> <li>● Provides a comprehensive and critical review of the existing literature on regulatory</li> </ul>                                                                                                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>focus priming.</p> <ul style="list-style-type: none"> <li>● Develops a novel classification framework for regulatory focus priming methods.</li> <li>● Justifies the underpinning theory.</li> </ul>                                                                                                     |
| <b>Chapter 3: Conceptual Framework and Hypothesis Development</b>                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>● Details the research hypotheses and conceptual framework of this thesis.</li> </ul>                                                                                                                                                                                |
| <b>Chapter 4: Research Methodology</b>                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>● Discusses the research philosophy, the chosen methodology, and research design and techniques.</li> <li>● Outlines the data analysis procedure.</li> <li>● Discusses the ethical considerations.</li> </ul>                                                        |
| <b>Chapter 5: Data Analysis and Results</b>                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>● Presents data cleaning and preparation.</li> <li>● Describes a set of preliminary analyses.</li> <li>● Presents the testing of hypotheses.</li> </ul>                                                                                                              |
| <b>Chapter 6: Discussion and Conclusion</b>                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>● Offers an in-depth discussion of the results in relation to existing literature.</li> <li>● Highlights the theoretical contributions and practical implications.</li> <li>● Provides limitations of the thesis and recommendations for future research.</li> </ul> |

In conclusion, this chapter establishes the theoretical foundation and research background of the thesis. It identifies the research problems and outlines the research aim and objectives designed to address it. Additionally, the chapter highlights the anticipated theoretical contributions and practical implications. The structure of the thesis is then presented. To help readers establish a more comprehensive understanding of the logic and steps of this thesis, a flow diagram is provided (see Figure 2). The next chapter reviews the existing literature on regulatory focus, with a particular emphasis on regulatory focus priming.

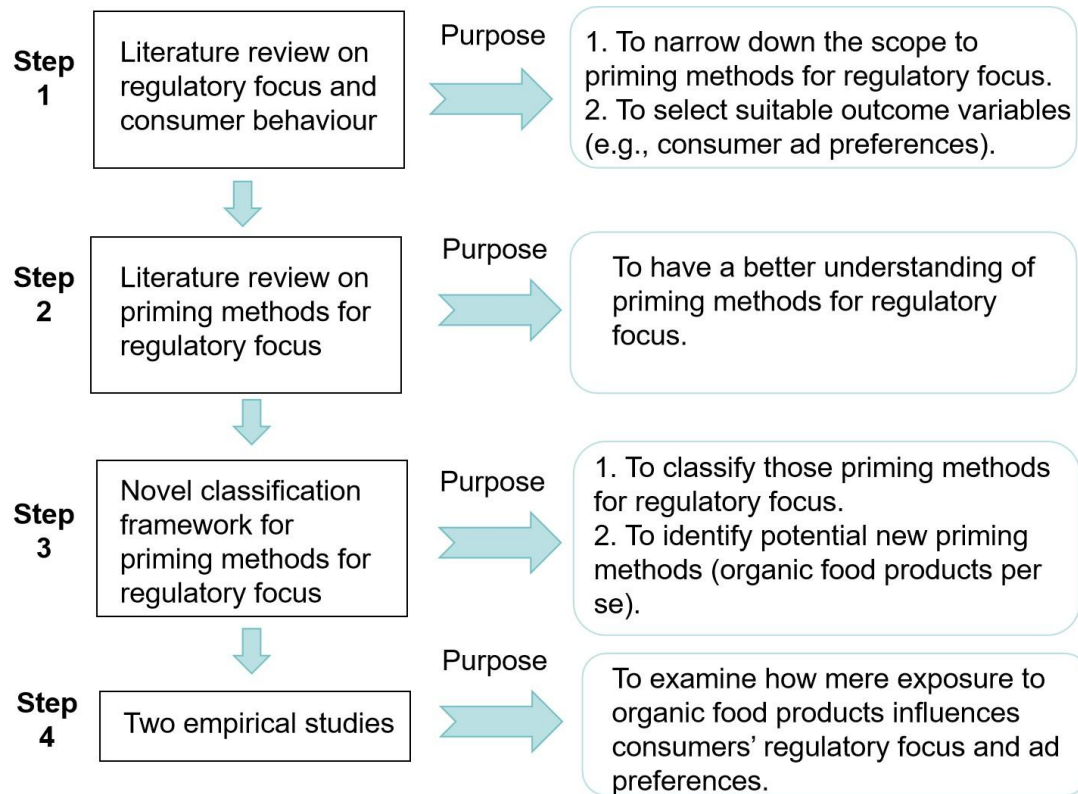


Figure 2 Flow diagram of this thesis

## **Chapter 2: Literature Review**

### **2.1 Chapter overview**

This chapter will critically review the extant literature on regulatory focus theory in various topics included in this research. Primarily, the concepts, principles, and empirical evidence of regulatory focus theory will be introduced and interpreted in more detail compared to the last chapter. This aims to provide the audience with a comprehensive and deep understanding of the core theory, regulatory focus theory, of this research.

Importantly, this section aims to select suitable outcome variables that can measure regulatory focus. To this end, this thesis will critically review the regulatory focus literature, in particular literature in the field of consumer behaviour, organised by categories of those downstream outcome variables, including consumers' attitudinal responses (e.g., attitude and satisfaction), evaluations, behavioural intentions (e.g., purchase intention and willingness to pay), financial decisions, and preferences. Therefore, this process helps select the most appropriate downstream outcome variable for two empirical studies, which are consumer ad preferences (indirect measurement of regulatory focus) and regulatory focus (direct measurement of regulatory focus). Furthermore, this literature review helps narrow the research scope from a broad domain of regulatory focus to a recent, attention-grabbing topic: temporary regulatory focus and priming methods for regulatory focus (Fei et al., 2020; Jia et al., 2022).

Then, a wide range of documented methods designed for priming or manipulating regulatory focus will be examined to improve the understanding of priming methods for regulatory focus. During this procedure, a novel framework for classifying those priming methods will be developed and interpreted. Products per se (specifically, organic food products themselves) as an interesting and significant priming method is identified. This chapter will conclude by outlining the development of the literature review and connecting it to the next chapter.

### **2.2 Regulatory focus theory: concepts, principles, and empirical evidence**

#### **2.2.1 Regulatory focus theory and its development**

Regulatory focus theory is rooted in the hedonic principle that individuals approach pleasure and avoid pain (Higgins, 1998). This motivational principle has long been one of the theoretical foundations across various areas of psychology research (e.g., Gray, 1982). Higgins (1998) acknowledges the significance of the hedonic principle and its empirical evidence that individuals are motivated to approach pleasure and avoid pain. However, he points out the limitation of this hedonic principle and argues that this principle might not be sufficient to explain human strategic behaviours. He argues that individuals may have different motivations when approaching various types of pleasure (e.g., the pleasure of serenity and the pleasure of accomplishment) or when avoiding different types of pain (e.g., the pain of hunger and the pain of thirst). Thus, Higgins (1998) proposes that the hedonic principle operates in two different ways: a promotion focus versus a prevention focus. As such, individuals regulate pleasure and pain in these two ways, which influences their feelings, thoughts and behaviours, independent of the hedonic principle itself (Higgins, 1998).

Before introducing the concept and the principle of regulatory focus theory, a vital concept must be explained, that is, regulatory reference (Higgins, 1998; 1987). Literature on self-regulation (Carver, 1990; Carver and Scheier, 2012) shows that a self-regulatory system with the desired end state as a reference point attempts to reduce the discrepancy between currently perceived actual-self-state and the desired end state. In contrast, a self-regulatory system with the undesired end state seeks to increase the discrepancy between currently perceived actual-self-state and the undesired end state. Given that most literature and theories concern desired end states and positive reference points, the regulatory focus theory also focuses on a self-regulatory system with the desired end state as a reference point (Higgins, 1998).

Different from previous research that has paid little attention to identifying how individuals might be distinctly motivated to pursue their desired end states or goals, self-discrepancy theory (Higgins, 1987) distinguishes between two distinct ways in which individuals attain their desired end states. In this theory, the desired end states are referred to as self-guides. As such, individuals have two types of self-guides, consisting of ideal self-guides and ought

self-guides. Ideal self-guides represent certain attributes that some people (themselves or other people) would like them to ideally possess, such as hopes, wishes and aspirations. By contrast, ought self-guides represent certain attributes that some people (themselves or other people) believe that they should or ought to possess, such as duties, responsibilities and obligations (Higgins, 1987; 1998). Individuals attain desired end states by reducing discrepancies between their current state and the desired end states or self-guides (Higgins, 1987; 1998).

Humans learn how to regulate pleasure and pain from the surrounding social environment in childhood (Buss, 1996). Higgins (1998) assumes that one would develop ideal self-guides or ought self-guides to fulfil fundamentally different survival needs. To build and maintain relationships with caretakers, children must learn and behave to ensure their survival. Children acquire ideal self-guides (e.g., hopes, wishes and aspirations) from a promotion focus caretaker-child interaction, while they acquire ought self-guides (e.g., duties, responsibilities and obligations) from a prevention focus caretaker-child interaction. Thus, ideal self-guides involve a promotion focus while ought self-guides involve a prevention focus (Higgins, 1998). As a consequence, in an attempt to align their actual selves with their ideal-selves, promotion-focused individuals are more motivated to attain accomplishments and aspirations, and are more concerned with the presence or absence of positive outcomes (gains versus non-gains). In contrast, prevention-focused individuals in an attempt to align their actual selves with their ought-selves are more motivated to fulfil responsibilities and obligations, and are more concerned with the absence or presence of negative outcomes (non-losses versus losses) (Higgins, 1998; Higgins et al., 2020).

It is important to note that a single individual can have either a strong promotion focus or a strong prevention focus, or both are acquired, as sometimes interactions with others may involve different types of regulatory focus. For example, it is possible for an individual to be high in prevention and low in promotion, or vice versa, or to be either strong or weak in both domains (Higgins, 1998; Higgins et al., 2020). Both regulatory systems “promotion focus” and “prevention focus” are related to the desired end states, though these end states are

distinct from one another (Higgins, 1998; Higgins et al., 2020).

The distinction between a promotion focus and a prevention focus mirrors the difference between ideal and ought self-regulation, but it extends beyond this. In fact, regulatory focus is not inherently an individual difference variable. Rather, as a kind of motivational condition, regulatory focus can vary chronically or situationally. Additionally, by conducting a series of correlational studies, Higgins et al. (1997) find that regulatory focus (as measured by self-guide accessibility) is independent of individuals' self-guides per se (as measured by actual self-mismatches and matches to self-guides) (Higgins, 1998). There is considerable evidence that regulatory focus can be temporarily induced (Higgins et al., 2020).

The more recent research has re-framed a “story of 0,” emphasising the fundamentally different ways these two regulatory systems (including promotion and prevention self-regulation systems) interpret “0” as the status quo (Higgins, 2014; Higgins, 2018). Individuals in a predominant promotion focus state view achieving a “+1” gain as a success, and therefore perceive maintaining a “0” status quo (or anything below it) as a failure. Conversely, those in a predominant prevention focus state view maintaining a satisfactory “0” status quo (or any non-loss above it) as a success, while a “-1” loss is perceived as a failure. Different from traditional approach-avoidance theories that construe a “0” status quo state as neutral in valence, regulatory focus theory contends that individuals with a promotion focus view a “0” status quo as an undesired end state, whereas individuals with a prevention focus regard a “0” status quo as a desired end state. This is a significant distinction between regulatory focus theory and traditional approach-avoidance theories.

Following the discussion of the conceptual foundations and theoretical advancements of regulatory focus theory, it is pertinent to examine the body of empirical research that has substantiated its core tenets. The subsequent section critically reviews the empirical studies that have investigated regulatory focus across a range of domains, thereby providing a comprehensive understanding of how the theory has been operationalised and validated.

### **2.2.2 Regulatory focus and its impact on general psychology**

Given that regulatory focus theory originates in the research area of psychology, a few core studies (e.g., Higgins and Tykocinski, 1992; Roney et al., 1995) on regulatory focus theory and its impact on general psychology are discussed first. The work by Higgins and Tykocinski (1992) indicates that regulatory focus has an impact on influence event sensitivity. They find that situational regulatory focus, induced by asking participants to place cotton balls with different flavours (sweet, neutral or bitter) in their mouths in the first task, affects their sensitivity to story events (“presence of positive” story, “presence of negative” story, “absence of positive” story or “absence of negative” story) in the second task.

#### **2.2.2.1 Regulatory focus and emotional experiences**

It has also been found that regulatory focus can influence an individual’s emotional experiences. For instance, Roney et al. (1995) observe that individuals with a promotion focus tend to feel more cheerful upon reaching their goal, whereas those with a prevention focus experience a heightened sense of calm. This research also indicates that individuals with a promotion focus tend to feel more disappointed after failing to achieve their goal, while those with a prevention focus experience greater agitation. These findings demonstrate that regulatory focus influences the emotional responses individuals have to success or failure.

#### **2.2.2.2 Regulatory focus and motivations**

Regulatory focus can exert an influence on motivations. For instance, the first study by Roney et al. (1995) suggests that promotion-focused participants persist over one-third longer on the unsolvable tasks than prevention-focused ones. In their second study, participants are allowed to quit before the task ends. While prevention-focused participants quit 19% of the unsolvable tasks before the time limit, only 4% of promotion-focused participants do the same. The second study has also assessed performance on solvable tasks and found that promotion-focused participants perform better than their prevention-focused counterparts (Roney et al., 1995).

#### **2.2.2.3 Regulatory focus and strategic inclinations**

As discussed before, a promotion focus is concerned with hopes, growth, and aspirations, while a prevention focus is concerned with duties, safety, and responsibility. Higgins (1998) proposes that regulatory focus should also have an impact on people's strategic inclinations during their decision-making procedure. Promotion-focused people should be eager to attain advancement and gains to approach the matches to the desired end state, whereas prevention-focused people should be vigilant to ensure safety and non-losses to avoid mismatches to the desired end state. In order to test these assumptions, Crowe and Higgins (1997) conduct a series of empirical studies. In the first study, participants are given an anagram task, which requires them to identify one or more words hidden within a string of letters. Successfully identifying a word is considered a correct acceptance or "hit," while failing to find a word is classified as an error of omission. It is predicted that promotion-focused participants should be eager to accomplish "hits" (presence of positive outcomes) and ensure against omitting any possible words (absence of positive outcomes). In contrast, prevention-focused participants should be vigilant against non-words (presence of negative outcomes) and avoid committing the error of producing them (absence of negative outcomes). The results support the proposition that participants in a promotion focus state tend to accomplish "hit" and to avoid errors of omission, whereas participants in a prevention focus state tend to attain correct rejections and to avoid errors of commission.

Additionally, regulatory focus theory (Higgins, 1998) suggests that the strategic fit between individuals' regulatory focus condition and an incentive influences their task performance. As discussed earlier, individuals in a promotion focus condition are strategically inclined to approach matches to the desired end state (or goals). Individuals in a prevention focus condition are strategically inclined to avoid mismatches to the undesired end state (or goals). Therefore, an incentive compatible with an individual's strategic inclination should be seen as more relevant to the goal than one that is not (Higgins, 1998). Shah et al. (1998) provide empirical supports to these propositions. In their first study, participants are instructed to perform the same goal and an anagram task. All participants receive \$5 as a monetary incentive if they succeed the task and \$4 as a monetary incentive if they fail it. However, this incentive is framed to be either promotion-focused or prevention-focused in terms of strategic

inclination. In the promotion-framed condition, the strategy of “approaching a match” to the goal is stressed by informing participants that they would earn an additional dollar if they identify 90% or more of the possible words. Conversely, in the prevention-framed condition, the focus is on “avoiding a mismatch,” with participants being told they would avoid losing a dollar they already have if they miss no more than 10% of the possible words. Each participant’s chronic regulatory is measured by the strength of self-guides. As a result, individuals with a predominant promotion focus show better performance when presented with the promotion-framed than prevention-framed incentive, whereas individuals with a predominant prevention focus show better performance when presented with the prevention-framed than promotion-framed incentive. In the second study, the anagram tasks given to participants are colour-coded. Participants are told that they would earn a point by completing green anagrams, whereas they would not lose a point by completing red anagrams. Completing green anagrams thus involves a strategy of approaching a match, which is compatible with a promotion focus. Conversely, solving red anagrams involves a strategy of avoiding a mismatch, which is compatible with a prevention focus. Similar to the first study, this study demonstrates that a strategic compatibility between participants’ chronic regulatory focus state and incentive framing improves their motivation and task performance.

#### **2.2.2.4 Regulatory focus and the interactive effect of value and expectancy**

Further, regulatory focus theory offers opportunities to predict the interactive effect of value and expectancy (Higgins, 1998). Shah and Higgins (1997) propose that decision-makers with a promotion focus are strategically inclined to approach matches in an attempt to pursue highly valued goals with the highest expected utility, which maximises the interactive effect of value and expectancy. In contrast, decision-makers with a prevention focus are strategically inclined to avoid mismatches in an attempt to prioritise responsibilities that are either clearly essential (e.g., high value prevention goals) or safely achievable (e.g., high expectancy of attainment). Shah and Higgins (1997) examine these predictions in a few studies involving anagrams tasks. The value is measure by participants’ subjective assessment of the value of earning an extra dollar for succeeding at the task and the expectancy is measured by their

subjective estimate of the likelihood of their success. As predicted, it is confirmed that as participants' promotion focus increases, the interaction between value and expectancy has a more positive effect on performance. In contrast, as participants' prevention focus increases, the interaction between value and expectancy has a more negative impact on performance.

In summery, regulatory focus theory (Higgins, 1998) proposes that the hedonic principle operates in two distinct ways, comprising a promotion-focused self-regulation that is concerned with advancement, growth, and accomplishment, and a prevention-focused self-regulation that is concerned with security, safety, and responsibility. Individuals' regulatory focus condition, whether chronic or situational, can affect their feelings, thoughts, and actions that is independent of the hedonic principle per se. Furthermore, regulatory focus can affect individual's preferred strategies and tactics for achieving those goals (Higgins, 1998; Higgins et al., 2020). Individuals in a promotion-focused state have a strategic inclination to attain desired states by approaching matches to them. Conversely, individuals in a prevention-focused state have a strategic inclination to attain desired states by avoiding mismatches to them. It has also been confirmed that these strategic differences can shape how individuals approach problem-solving and decision-making in their daily lives. The next section transitions from the discussion of general psychology research to consumer behaviour research, which is the central focus of this thesis. A variety of consumer behaviour outcome variables are critically discussed to help select suitable measurements of regulatory focus for two experiments.

### **2.2.3 Impact of regulatory focus on outcomes regarding consumer behaviour**

While regulatory focus theory was first proposed in the psychology domain (Higgins, 1998), marketing researchers soon began applying this theory to marketing and consumer behaviour studies (e.g., Aaker and Lee, 2001). This section will critically review and discuss literature on regulatory focus with a special emphasis on consumer behaviour. The majority of the literature reviewed in this section leverages regulatory focus, either chronic or situationally manipulated, as a moderator in the research framework. A few studies (e.g., Jia et al., 2022) utilise regulatory focus as a mediator to explain the psychological mechanisms behind the

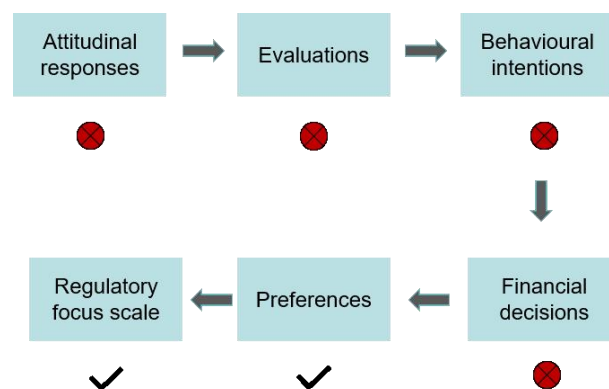
certain phenomena, which will also be discussed. In this process, the impact of regulatory focus on a series of outcome variables related to consumer behaviour will be interpreted, including attitudinal responses, evaluations, behavioural intentions, financial decisions, and preferences. One of the research objectives of this thesis is to conduct two empirical studies to examine whether and how organic food products may prime regulatory focus in consumers, using both indirect and direct measurements of regulatory focus. This review process aims to select suitable outcome variables as measurements of regulatory focus for the following Study 1 and Study 2. A table of a summary of potential measurements of regulatory focus is provided. Figure 3 shows the logic of the review and selection process.

Table 3 Summary of potential measurements of regulatory focus

| <b>Outcome variables</b> | <b>Specific variables (authors)</b>                                                |
|--------------------------|------------------------------------------------------------------------------------|
| Attitudinal responses    | Brand attitude (Aaker and Lee, 2001)                                               |
|                          | Attitude towards temporal frames (Basu and Ng, 2021)                               |
|                          | Attitude towards pricing strategies (Lee et al., 2014)                             |
|                          | Satisfaction (Trudel et al., 2012; Das et al., 2020)                               |
| Evaluations              | Evaluations of brand extensions (Yeo and Park, 2006; Shine et al., 2007)           |
|                          | Evaluations of comparison brands (Jain et al., 2006; 2007)                         |
|                          | Brand evaluations (Pham and Avnet, 2004; Yoon et al., 2012; Kirmani and Zhu, 2007) |
|                          | Product evaluations (Zhu and Meyers-Levy, 2007)                                    |
|                          | Evaluations of the service experience (Liu et al., 2018)                           |

|                        |                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | Service evaluations of frontline employee behaviour (Lechner and Mathmann, 2021)                                                                |
| Behavioural intentions | Intentions not to smoke (Zhao and Pechmann, 2007)                                                                                               |
|                        | Repurchase intention (Dutta et al., 2011; Louro et al., 2005)                                                                                   |
|                        | Purchase intention of new products (Herzenstein et al., 2007)                                                                                   |
|                        | Expedited shopping intention (Chen et al., 2005)                                                                                                |
|                        | Self-service technology usage (Westjohn et al., 2009)                                                                                           |
|                        | Donors' charitable giving (Choi and Park, 2021)                                                                                                 |
|                        | Purchase intention (Verma et al., 2019; Das et al., 2018; Labroo and Lee, 2006; Luan et al., 2023; Kordrostami et al., 2021; Zhou et al., 2023) |
|                        | Likelihood of choosing (Som and Lee, 2012)                                                                                                      |
|                        | Commitment to a final decision (Ghiassaleh et al., 2020)                                                                                        |
|                        | Purchase intention of art-infused and non-art-infused products (Gupta et al., 2024)                                                             |
|                        | Post-purchase consumption of service bundles (Pandey and Tripathi, 2023)                                                                        |
|                        | Purchase intention of luxury goods (Wang et al., 2020; Mo et al., 2022)                                                                         |
|                        | Pro-environmental behaviours (Lagomarsino et al., 2020)                                                                                         |

|                     |                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------|
| Financial decisions | Willingness to pay (Chang et al., 2023)                                                    |
|                     | Reactions to personalized chatbot advertising (Kim et al., 2023)                           |
|                     | Savings rate, use of credit, and spending pattern (Petersen et al., 2015)                  |
|                     | Financial investment intention (Jiang et al., 2009; Baek and Kim, 2023)                    |
| Preferences         | Choices of financial assets (Hamilton and Biehal, 2005)                                    |
|                     | Financial decisions on hedging (Grant and Xie, 2007)                                       |
|                     | Ad preferences (Chernev, 2004; Septianto et al., 2020)                                     |
|                     | Product preferences (Mishra et al., 2010; Hazlett et al., 2011; Khare and Chowdhury, 2015) |
|                     | Safety-related options (Maeng et al., 2013)                                                |
|                     | Preferences for drugs (Jie, 2020)                                                          |
|                     |                                                                                            |
|                     |                                                                                            |



### 2.2.3.1 Attitudinal responses as a potential measurement

Attitudinal responses (e.g., attitudes and satisfaction) can be a measurement of regulatory

focus. In this section, a number of studies that examine how regulatory focus affects attitudinal responses are discussed. Aaker and Lee (2001), among the pioneers bringing regulatory focus theory into the field of consumer behaviour, point out the consistency between individual's self-views and regulatory focus goals. By harnessing product claims framed by different regulatory-focused benefits, the authors find that consumers with a more accessible independent self-view exhibit increased brand attitude when present with a promotion-focused frame due to a goal compatibility. In contrast, consumers with a more accessible interdependent self-view exhibit increased brand attitude when present with a prevention-focused frame. The results remain unchanged regardless of whether individual's self-views are chronic, such as Chinese tending to hold a more accessible independent self-view and Americans tending to hold a more accessible interdependent self-view, or situationally manipulated by researchers.

Basu and Ng (2021) demonstrate that consumers' regulatory focus state can influence their attitude towards temporal frames. Compared to prevention-focused consumers, promotion-focused consumers are more sensitive to perceived loss and feel more disappointed when viewing the aggregate loss-frame (e.g., pay \$1,800 over the next 2 years in equal monthly instalments) than the periodic loss-frame (e.g., pay \$75 per month over the next 2 years). This is because the information processing strategy used by promotion-focused consumers, such as eagerness, renders them more susceptible to temporal frame effects than prevention-focused consumers, who tend to use a vigilant information processing strategy (Basu and Ng, 2021; Higgins, 1998).

Lee et al. (2014) investigate how regulatory focus affects consumers' attitude towards pricing strategies. Across four experiments, this study reveals that promotion-focused consumers perceive partitioned pricing (e.g., \$34.99 for handling + \$11.00 for delivery) more attractive than combine pricing (e.g., \$45.99 in total), as a promotion focus motivates consumers to process information more globally, paying more attention to the base price while ignoring surcharge information. In contrast, prevention-focused consumers are not affected by the two pricing strategies, as they are inclined to utilise a local information processing strategy,

signalling a more focus on an assessment of the total cost (Trope and Liberman, 2000).

Existing literature shows that consumers' regulatory focus can exert an impact on satisfaction. For instance, Trudel et al. (2012) find that consumers with a prevention focus show a higher satisfaction than those with a promotion focus when encountering a negative product experience, and this effect is independent of consumer expectations. On the contrary, the dynamic reverses in a positive product experience condition. The findings of this study can be explained by a conservative bias documented in prior literature, which indicates that prevention-focused individuals tend to protect against making mistakes, leading to more reserved and conservative evaluations (Crowe and Higgins, 1997).

Das et al. (2020) examine the interplay of regulatory focus, arousal and affect in a context of service failure. Arousal is an affective dimension that ranges from states of drowsiness (low arousal) to intense excitement (high arousal) and is typically assessed through self-reported measures (Das et al., 2020). Manipulating arousal levels using three different means including pictures, background colours, and music across three studies, they find that following a service failure situation, exposing promotion-focused consumers to high (vs. low) incidental arousal-inducing stimuli can increase their satisfaction, loyalty, and referral for brands. Conversely, exposing prevention-focused consumers to low (vs. high) incidental arousal-inducing stimuli can increase their satisfaction, loyalty, and referral for brands. The findings from this research echo those from prior literature which suggests that high arousal increases consumption for consumers with a recreation motivation, whereas it reduces consumption for consumers with task-related motivation (Kaltcheva and Weitz, 2006). Changes in arousal levels and changes in valence levels are identified as two underlying mechanisms of these effects. The authors propose that service failures may cause promotion- and prevention-focused consumers to deviate from their ideal state, leading to an undesirable state (Das et al., 2020). Exposure to incidental stimuli with high or low arousal levels allows promotion-focused individuals to align with their preferred arousal state, such as excitement (positive valence, high arousal). In contrast, prevention-focused individuals tend to favour calmness (positive valence, low arousal). In the next section, how regulatory focus affects

consumer evaluations will be discussed.

#### **2.2.3.2 Evaluations as a potential measurement**

Literature has documented that regulatory focus affects how consumers evaluate brands, brand extensions, products and service experience. Thus, consumer evaluations may serve as a potential measurement of regulatory focus. Yeo and Park (2006) suggest that chronic or situational prevention-focused consumers evaluate similar brand extensions more favourable than less similar brand extensions. However, when consumers are chronic or situational promotion-focused, this effect is attenuated or even reversed. Such a discrepancy can result from the different cognitive processes of promotion-focused and prevention-focused consumers during their evaluation. Specifically, promotion-focused individuals are prone to place greater weight on perceived hedonic values of brand extensions, whereas prevention-focused individuals are inclined to focus more on perceived risks of extensions. Shine et al. (2007) report a brand synergy effect, which is that the simultaneous launch of two brand extensions can positively impact their evaluations, regardless of the similarity between the parent brand and the extensions. Importantly, this effect is observed when the extensions are complementary (e.g., a digital camera and a digital photo printer) but does not occur when they belong to the same category (e.g., two models of digital cameras) or unrelated categories (e.g., a digital camera and a snowboard). Furthermore, this effect is limited to extensions introduced by the same manufacturer. Finally, it is noteworthy that such effect is observed only in promotion-focused participants, who are inclined to focus on the benefits of owning the brand extensions rather than the potential drawbacks.

Jain et al. (2006; 2007) conduct a series of studies examining the effects of regulatory focus on consumers' evaluations of comparison brands under different framing conditions. Jain et al. (2006) find that maximal frames (e.g., "brand A is superior to brand B") are more effective than minimal frames (e.g., "brand A is equivalent or similar to brand B") for promotion-focused participants, as more positive and less negative information present in maximal frames is consistent with their gain-driven goals. The authors also indicate that minimal frames are equally effective for prevention-focused participants, as both types of

comparative frames represent non-losses and, thus, should be equally desirable. Jain et al. (2007) examine the interactive effects between consumers' regulatory focus motivations and framing effects (positive vs. negative) on brand evaluations of both advertised brands and comparison brands. In line with regulatory focus literature (Lee and Aaker, 2004), Jain et al. (2007) demonstrate that promotion-focused participants show more desirable evaluations of advertised brands when framed positively than when framed negatively. In contrast, prevention-focused participants evaluate advertised brands when framed negatively than when framed positively. However, promotion-focused participants express comparable evaluations between positively and negatively framed comparison brands, while prevention-focused participants display less favourable evaluations of negatively framed than positively framed comparison brands. The results can be attributed to differences in strength among promotion-focused and prevention-focused participants, as prevention-focused consumers possess a stronger preference for consistency relative to prevention-focused consumers (Higgins, 1996; Jain et al., 2007).

Selective information processing literature (Yoon et al., 2012) suggests that individuals tend to streamline the process of forming and evaluating judgments by concentrating on information that aligns with their decisions, while disregarding information that does not. Pham and Avnet (2004) reveal that consumers with different motivations rely on distinct information processing styles when making brand evaluations. Consumers with higher accessibility to ideals (promotion-focused consumers) rely more on their subjective affective responses, whereas those with higher accessibility to oughts (prevention-focused consumers) depend more on the substance of the message. This effect is found to result from differences in perceived diagnosticity of the two types of information (message substance and subjective affective responses), and is unrelated to consumer involvement. In particular, promotion-focused consumers are more likely to perceive their subjective affective responses more useful and relevant for forming evaluations, while prevention-focused consumers tend to perceive the substance of the message more relevant and useful for forming evaluations. Likewise, Yoon et al. (2012) show that when information load is high, promotion-focused (vs. prevention-focused) consumers rely more on positive (vs. negative) information, thereby

generating higher brand evaluations. When information load is low, prevention-focused (vs. promotion-focused) consumers show higher brand evaluations, due to a relative reliance on positive (vs. negative) information.

Kirmani and Zhu (2007) investigate how regulatory focus affects consumers' sensitivity to advertisers' manipulative intent and their subsequent brand evaluations. The authors propose that a prevention focus increases consumers' sensitivity to manipulative intent (negative signals), leading them to activate persuasion knowledge and form less favourable brand evaluations compared to promotion-focused consumers, particularly when manipulative intent is moderately salient. However, when manipulative intent is either highly salient in message cues or not salient, brand evaluations remain consistent across different regulatory focus types. This study also delves into the underlying mechanisms, exploring how perceived diagnosticity and desirability of manipulative intent affect brand evaluations.

Different from much literature that seeks to look into the effects of regulatory focus through the distinct psychological states (e.g., eagerness versus vigilance) experienced by individuals adopting different regulatory focus strategies, Zhu and Meyers-Levy (2007) unpack the cognitive mechanism underlying these regulatory focus effects. They find that individuals with a promotion focus, relative to those with a prevention focus, engage more in relational elaboration, which involves identifying commonalities or abstract connections among different items. This is because promotion-focused individuals attempt to maximise matches to their goals, driving them to take more possible options into account to help achieve their goals. Conversely, individuals with a prevention focus, relative to those with a promotion focus, engage more in item-specific elaboration, concentrating on the unique attributes of each item independently. This can be explained by the evidence that prevention-focused individuals seek to avoid mismatches to their goals. As a consequence, they only consider options they deem appropriate (Higgins, 1998). The findings from Zhu and Meyers-Levy (2007) reveal that individuals with a promotion focus show more positive product evaluations and more net positive thoughts when exposing to an ad with high versus low thematic ambiguity. In contrast, individuals with a prevention focus show more positive product

evaluations and more net positive thoughts when exposing to an ad with low versus high thematic ambiguity.

Liu et al. (2018) investigate how service companies can market their service offerings that simultaneously deliver pain and pleasure (e.g., roller-coaster rides and Thai massage therapy) based on regulatory focus theory. This research finds that hedonic frames emphasising pain elicit more favourable reactions from promotion-focused than from prevention-focused consumers, whereas hedonic frames emphasising pleasure evoke more favourable reactions from prevention-focused than from promotion-focused consumers. According to regulatory focus literature (Zhou and Pham, 2004), the reasoning behind this is that events involving pains signal a risk-taking propensity, which is a characteristic salient to promotion-focused individuals. When it comes to prevention-focused individuals, they are more sensitive to safety, security and tend to be risk-averse (Higgins, 1998; Zhou and Pham, 2004). For example, it has been revealed that promotion-focused investors prefer riskier financial products, such as stocks, over less risky financial products, such as mutual funds, while prevention-focused investors do the opposite (Zhou and Pham, 2004). Therefore, the alignment between consumers' regulatory focus traits and framing styles leads to heightened evaluations of the service experience. Furthermore, Liu et al. (2018) contend that events such as roller-coaster rides that mix pleasure and pain likely cause physical and psychological discomfort. A higher level of alignment between regulatory focus traits and framing styles can alleviate such discomfort, thus resulting in improved outcomes.

Similarly, Lechner and Mathmann (2021) examine how consumers' regulatory focus states influence their service evaluations in the context of frontline employee behaviour. This study finds that prevention-focused consumers, compared to promotion-focused consumers, are more sensitive to inauthentic emotional displays (e.g., smiles) from frontline employees. This heightened sensitivity is due to prevention-focused consumers being more vigilant and paying closer attention to manipulative information in service encounters, leading them to infer a higher level of deception from inauthentic emotional displays. Promotion-focused consumers, on the other hand, are less likely to perceive inauthentic displays as deceptive. Their emphasis

on growth over safety leads them to interpret inauthentic emotional expressions more benevolently, even if it does not reflect genuine positive feelings. This effect does not hold for authentic emotional displays, as these displays surpass the expectations of most customers and enable both prevention- and promotion-focused individuals to achieve their consumption goals (Lechner and Mathmann, 2021). In the next section, a number of studies that use behavioural intentions to measure regulatory focus will be carefully reviewed.

### **2.2.3.3 Behavioural intentions as a potential measurement**

A large body of literature has shown that regulatory focus plays a significant role in influencing consumers' behavioural intentions in a variety of contexts. For instance, Zhao and Pechmann (2007) indicate that regulatory focus, which is operationalized on two levels (the individual level and the message level), along with message framing, can be utilised to enhance the effectiveness of advertising campaigns. The authors report a synergistic effect between two-level regulatory focus and message framing in a setting of anti-smoking campaigns for adolescents. Specifically, they demonstrate that promotion-focused adolescents show higher intentions not to smoke after their exposure to anti-smoking campaigns using positive and promotion-focused framing. Conversely, prevention-focused adolescents react more favourably to campaigns using negative and prevention-focused framing. Moreover, when adolescents' regulatory focus aligns with both message's regulatory focus and message valence, adolescents find the campaigns more accessible and diagnostic, leading to higher intentions not to smoke.

Dutta et al. (2011) examine consumer regret stemming from post-purchase prices drop and suggest that whether refunds work depends on how they perceive refunds. In the first two studies, the authors look into consumers' signal focus as an individual trait. They find that information-focused consumers view the promise of a refund solely as a source of information about the retailer's price status. As a result, this group of consumers experience higher regret and lower repurchase intention, relative to protection-focused consumer, who regard this as a protective tool. In addition, a guarantee with a disclaimer is identified as a boundary condition, which leads to lower consumer regret and higher repurchase intention

among information-focused consumers. The authors also argue that regulatory focus is the motivational basis of signal basis, as individuals in a promotion-focused state would focus on different aspects of a message and seek accomplishments and gains (consistent with the information-focused trait), whereas those in a prevention-focused state would prefer security and protection and avoid risks and losses (consistent with the protection-focused trait). The authors test their arguments by replicating the findings of the first two studies in following studies.

Likewise, Louro et al. (2005) examine the intersection of feelings of pride and regulatory focus goals on repurchase intention in a context of price negotiation. Given that pride is an emotional consequence of goal attainment, it is likely that consumers with different levels of pride pursue their goals using different strategies. This research indicates that the effect of pride on repurchase intentions depends on consumers' regulatory focus, but this is only the case for consumers with high levels of pride. This is because consumers low in pride believe that their negotiation success is due to the actions of others. Specifically, consumers with high prevention pride are prone to exhibit lower repurchase intention than those with high promotion pride do. However, no significant difference in repurchase intention is observed between consumers with low promotion pride and those with low prevention pride.

Herzenstein et al. (2007) reveal that consumers' regulatory focus has an impact on their ownership and purchase intention of new products. By conducting a field study that recruited 250 mall visitors, the authors find that ownership of repeat-purchase new products is higher in chronic promotion-focused consumers than in chronic prevention-focused consumers. This effect, however, is not significant for established products. In two subsequent laboratory experiments, the authors test the situationally manipulated regulatory focus in consumers and identify a boundary condition. They demonstrate that a dominance of promotion focus over prevention focus can lead to enhanced purchase intention of new products, when risks related to the new products are not salient. However, when risks are made explicit to consumers, consumers with either a prevention or promotion focus are equally unlikely to buy the product. It has been further revealed that the impact of regulatory focus on purchase intention of new

products stems from concerns about the performance of the new technology, with these concerns being more pronounced among prevention-focused consumers. New product performance uncertainty encompasses all potential reasons a new product might not perform as expected, and if this uncertainty is high, it may deter consumers from making a purchase. According to regulatory focus theory (Higgins, 1998), prevention-focused individuals tend to avoid risks and potential losses associated with new products, leading them exhibit a lower purchase intention. In contrast, promotion-focused individuals tend to emphasise the gains and potential benefits of new products, such as addressing unmet needs or better satisfying existing needs. As a consequence, they are less sensitive to relevant risks and performance uncertainty.

Significant scholarly attention has been paid to cultural differences between Eastern and Western countries and their relationship with regulatory focus (e.g., Aaker and Lee, 2001). For example, Chen et al. (2005) investigate how regulatory focus and cultural differences influence consumer impatience and their expedited shopping intention (e.g., one-day delivery of a product rather than a standard shipping option). By manipulating cultures using iconic pictures and regulatory focus through message framing, this study suggests that Easterners are more impatient when present with the threat of a delay in receiving a product (prevention loss), whereas a promotion loss that stresses the threat of not being able to enjoy a product early elicits Westerners' impatience. Such increased impatience leads them to have a higher willingness to pay for one-day delivery of a product. The findings from this study are in line with those from previous research (e.g., Aaker and Lee, 2001). Given that Easterners tend to have a more accessible independent self-view and Westerners tend to have a more accessible interdependent self-view, when a goal (e.g., regulatory focus) aligns with an individual's dominant self-view, they are likely to find the message more persuasive (Aaker and Lee 2001). This, in turn, may make them more impatient and increase their eagerness to engage in immediate consumption.

Westjohn et al. (2009) utilise a social-identity framework of motivation to explore whether regulatory focus motivations can predict technology readiness and the usage of self-service

technology (e.g., self-checkout; online shopping and ATM usage) in two different cultures (U.S. and China). Overall, this research finds that a promotion focus motivation positively predicts both technology readiness and self-service technology usage. In addition, a significant and positive indirect effect from promotion focus to self-service technology usage through technology readiness is identified. Given that self-service technologies were perceived as new innovations and technologies by consumers during the period of this research, consumers with a promotion focus may be more eager to learn and embrace new technologies to pursue their accomplishment goals. In contrast, consumers with a prevention focus may be more averse to new technologies to fulfil their safety goals. As predicted, a prevention focus motivation is found to negatively predict self-service technology usage. Moreover, this research suggests weaker results from Chinese samples compared to the U.S. samples. This may be due to cultural differences between the two (e.g., individualism and collectivism; Aaker and Lee, 2001) and the limited availability of self-service technologies in China during that period.

Literature also demonstrates the effects of regulatory focus on individuals' charitable giving and intention to donate. For example, Choi and Park (2021) find that regulatory focus determine the effectiveness of charity ads that evoke sadness. Specifically, sadness charity appeals reduce prevention-focused donors' charitable giving, yet do not change promotion-focused donors' charitable giving. Compared to promotion-focused donors, prevention-focused donors' are more vigilant against manipulative intent and persuasion attempts behind ad appeals and tend to avoid being influenced by the appeals (Kirmani and Zhu, 2007). Sadness charity appeals that highlight the loss of personal control should be more likely to elicit persuasion knowledge among prevention-focused donors rather than among promotion-focused counterparts (Choi and Park, 2021). As such, prevention-focused donors tend to scrutinize the appeals, which in turns increases their scepticism and reduces sympathy. As a consequence, prevention-focused donors should display decreased intention to donate relative to promotion-focused donors. Further, Choi and Park (2021) also suggest that other charity appeals, such as happiness or guilt appeals, do not show such effects as they pose less of a threat to donors' sense of control than sadness appeals do.

Verma et al. (2019) examine the impact of consumers' regulatory focus on their perceptions of price match guarantee (PMG) and low price guarantee (LPG) and purchase intention. This research suggests that although both price guarantees provide protection against high prices, promotion-focused (vs. prevention-focused) consumers—who aim to achieve favourable outcomes such as paying a lower price—are more likely to perceive the information in the LPG label as signalling lower prices. As a result, these consumers are expected to exhibit higher purchase intention when they encounter an LPG (“...will refund, in cash, 100% of the price difference to anyone who buys their products, and then finds a lower price for the same product”, Verma et al., 2019, p.100) compared to a PMG (“If you buy a product at our store and find the identical product for a lower price elsewhere...we will gladly refund the difference”, Verma et al., 2019, p.100).

Likewise, Das et al. (2018) examine both scarcity cues and popularity cues and their relationships with regulatory focus. Through three studies, this research suggests that a compatibility between promotion focus (vs. prevention focus) and popularity (vs. scarcity) signs enhance consumers' purchase intention. By measuring consumers' chronic regulatory focus state and manipulating regulatory focus state through a proxy, product type (with hedonic products aligning with a promotion focus and utilitarian products aligning with a prevention focus), the results remain robust across different studies. Additionally, perceived risk and perceived product uniqueness serve as psychological mechanisms underlying these relationships. One possible explanation is that scarcity cues, such as a limited edition, imply the exclusiveness of the products and give buyers a sense of achievement, which aligns with individuals' promotion goals. Conversely, popularity cues, such as a best seller, offers social proof or validation of the product's quality, which in turn lowers perceived risk. Therefore, prevention-focused consumers tend to be more swayed by popularity cues and display heightened purchase intention.

Given the inconsistent evidence on whether large assortments have positive or negative effects on consumers' choice confidence and likelihood, Som and Lee (2012) suggest that

consumers' regulatory focus may play a key role in shaping this dynamic. Specifically, the findings show that when consumers have a promotion-focused regulatory orientation, increasing the size of an alignable assortment (options differing along a single comparable dimension) enhances their choice confidence and likelihood of choosing, compared to a non-alignable assortment (options differing along non-comparable or distinct dimensions), which reduces these outcomes. Conversely, for consumers with a prevention-focused regulatory orientation, increasing assortment size positively influences their choice confidence and likelihood, regardless of whether the assortment is alignable or non-alignable.

Using biometric evidence collected via eye-tracking devices in two lab experiments, Luan et al. (2023) examine the two-way interaction of regulatory focus and self-construal (independent vs. interdependent self-views), as well as the three-way interaction involving regulatory focus, self-construal, and temporal distance. The findings of the first study indicate that consumers with an independent self-view exhibit higher purchase intention of solar air conditioners when exposed to a promotion-framed product message on social media, compared to a prevention-framed message. Conversely, consumers with an interdependent self-view show higher purchase intention of solar air conditioners when presented with a prevention-framed product message, as opposed to a promotion-framed message. The second study reveals that temporal distance further amplifies this interactive effect. Specifically, the compatibility between promotion-framed messages and independent self-views leads to higher purchase intention of electric cars when a distal future, rather than a proximal future, is emphasised. On the other hand, the compatibility between prevention-framed messages and interdependent self-views results in higher purchase intention of electric cars when a proximal future, rather than a distal future, is emphasised. Importantly, these results are also supported by the eye-tracking data (e.g., fixation).

Given inconsistent empirical evidence on the relative effectiveness of online review volume and valence on consumers' purchase decisions from prior literature, Kordrostami et al. (2021) point out that regulatory focus may play a vital role in this relationship. By leveraging one online experiment and one field study using Amazon data to examine how regulatory focus

affects the relative effectiveness of these two factors, Kordrostami et al. (2021) confirm the moderation roles of both situationally induced regulatory focus and chronic regulatory focus. The online experiment suggests that online review valence leads to higher purchase intention for promotion-focused consumers than for prevention-focused consumers. In contrast, online review volume results in higher purchase intention for prevention-focused consumers than for promotion-focused consumers. The findings of the field study align with those of the online experiment, which demonstrates that online review valence is more effective for promotion-focused products (teeth whitening), while online review volume is more effective for prevention-focused products (dental floss). This is because promotion-focused consumers pay closer attention to positive outcomes and thus, are more likely to be persuaded by positively valenced online review. Prevention-focused consumers, by contrast, are more sensitive to negative signals and risks in the information processing process. Therefore, they are more likely to be influenced by online review volume.

Zhou et al. (2023) examine the interactive effects between visual elements (colours) and verbal elements (message framing) on the effectiveness of brand activism advertising. When a promotion-framed advertisement is matched with a black-and-white image (as opposed to a colour image), consumers exhibit higher inspiration and greater purchase intention for the advertised products. However, no such interactive effects are observed for prevention-framed advertisements. Black-and-white images, as opposed to colour images, symbolize mental abstraction, which aligns with the promotion-focused orientation induced by a promotion-framed advertisement. Conversely, prevention-framed advertisements undermine such mental abstraction because they emphasise concreteness. Therefore, pairing promotion-framed messages with black-and-white images (versus colour images) can enhance brand attitude and purchase intention. For advertisements using prevention-framed messages, the image colour (black-and-white vs. colour) does not affect brand attitude or purchase intention. The literature shows that encountering brand activism can lead consumers to experience transcendent media interactions related to life, virtue, and meaning (Dale et al., 2017). Thrash and Elliot (2003) suggest that transcendence is one of the three key components of inspiration. Consequently, consumer inspiration is tested and identified as the

underlying process behind the observed effects.

Different from most past literature that centre on the positive impact of product popularity signs (e.g., “best seller” and “top rated”) on consumer decision-making, Ghiassaleh et al. (2020) suggest product popularity signs can also negatively affect those outcomes. By conducting seven studies including field data and actual behaviour, the authors find that providing popularity signs have negative effects on prevention-focused consumers (compared to promotion-focused consumers) by increasing the heterogeneity of their consideration set. This, in turn, leads to greater choice uncertainty and lower commitment to a final decision. The interactive effects of popularity signs on products and consumers’ regulatory focus on outcomes can be because promotion-focused consumers are less vulnerable to social norms and are inclined to make independent decisions (Pham and Higgins, 2005; Lee et al., 2000). However, prevention-focused consumers may view a choice environment with popularity signs as more complex and overwhelming compared to one without them (Pham and Higgins, 2005). This perceived heterogeneity of their consideration set heightens doubt and uncertainty about consumers’ decisions, making them more hesitant to commit to a single option.

In addition to popularity cues, researchers have also found that regulatory focus may affect how consumers view scarcity cues. Recently, through a series of studies, including field studies, lab experiments and online experiments, Gupta et al. (2024) find regulatory focus affects how scarcity cues (supply-led and demand-led) influence consumers’ purchase intention of art-infused and non-art-infused products. First, Gupta et al. (2024) demonstrate that a positive effect of supply-led (vs. demand-led) scarcity cues on consumers’ purchase intention of art-infused products, due to increased perceived prestige of these products. In contrast, with respect to non-art-infused products, demand-led (vs. supply-led) scarcity cues have a positive impact on consumers’ purchase intention, driven by a decrease in perceived risk. Given that two process-based explanations, perceived prestige and perceived risk, appear to be associated with promotion focus (e.g., consumers’ aspirational goals for exclusiveness) and prevention focus (e.g., consumers’ self-protection goals), the authors further examine the role of regulatory focus in these relationships. It is identified that, for art-infused products,

supply-led scarcity cues enhance perceived prestige in promotion-focused consumers, whereas for non-art-infused products, demand-led scarcity cues lower perceived risk in prevention-focused counterparts.

Pandey and Tripathi (2023) use field evidence, online experiments and a quasi-field experiment using Twitter data to examine the impact of consumers' regulatory focus on the post-purchase consumption of service bundles (e.g., theatre season-tickets, vacation packages). By combining two lines of literature, regulatory focus theory (Higgins, 1998) and construal level theory (Lee et al., 2010), Pandey and Tripathi (2023) contend that prevention-focused consumers should prefer a concrete information processing style while promotion-focused counterparts should prefer an abstract information processing style. For prevention-focused consumers, they tend to process information at a more concrete level, and thus will pay greater attention to sunk costs, resulting in lower transaction decoupling and higher consumption of bundle items. Conversely, promotion-focused consumers tend to process information at a more abstract level, which diminishes their ability to resolve ambiguity within the bundle. Consequently, they pay less attention to sunk costs, leading to higher transaction decoupling and lower consumption of bundle items. As predicted, the results reveal that prevention-focused consumers display higher future purchase intention and word-of-mouth intention for the service bundles than promotion-focused counterparts do through consumers' construal level.

Labroo and Lee (2006) state that consumers' purchase intention of an advertised product can be affected by the compatibility or conflict between regulatory focus induced by the target product and the previously advertised related product and the processing fluency (e.g., the ease of processing) during the exposure to the two products will service as the underlying process. The authors point out that consumers will experience a fluent processing if the regulatory focus orientation activated by the target product is compatible with that activated by the target product. This will lead to an enhanced purchase intention of the target product. However, when the regulatory focus orientations activated by two products are conflicting (e.g., one promotion focus and one prevention focus), consumers will show a reduced

purchase intention due to the inhibited processing fluency. This is consistent with literature that suggests that individuals perceive a message as easier to process when its framing aligns with the regulatory focus goal of the appeal, rather than conflicting with it, and this ease of processing or processing fluency subsequently results in more favourable evaluations (Lee and Aaker, 2004). The findings from Labroo and Lee (2006) show that a regulatory focus compatibility (vs. conflict) enhances consumers' purchase intention of the target product due to heightened processing fluency.

Recent research indicates consumers' regulatory focus orientations probably influence their purchase intention of luxury goods (e.g., Wang et al., 2020; Mo et al., 2022). Wang et al. (2020) find that individuals with a promotion focus exhibit higher purchase intention toward counterfeit luxury goods compared to those with a prevention focus. The study reveals that this effect is due to differences in the social functions of attitudes between promotion-focused and prevention-focused individuals. Specifically, a more accessible promotion focus, compared to a prevention focus, leads individuals to generate a higher social-adjustive function of attitudes toward luxury products. Conversely, a more accessible prevention focus, relative to a promotion focus, leads individuals to generate a higher value-expressive function of attitudes toward luxury products. The enhanced social-adjustive function of attitudes, in turn, results in increased perceived similarity between counterfeit luxury products and their genuine counterparts, whereas the enhanced value-expressive function of attitudes leads to reduced perceived similarity. As a consequence, heightened perceived similarity triggers consumers' purchase intention toward counterfeit luxury goods. Mo et al. (2022) reveal a positive causal effect of karmic beliefs on consumers' purchase intention of luxury goods due to consumers' belief in a just world. The authors find that when consumers believe in karma, they are inclined to justify their luxury consumption by attributing it to good karma from past actions. As a result, they are more likely to be drawn to luxury items and tend to purchase them as a reward, believing they deserve a positive outcome. More importantly, Mo et al. (2022) find that consumers' promotion focus serves as a boundary condition of the above relationship. The high-end and premium attributes of luxury goods make them more aligned with individuals' promotion-focused motivations, such as hopes and aspirations. A promotion

focus will shift individuals' perspective from an impersonal, karma-based view, to a personal, self-focused view centred on achieving goals and personal gains. Consequently, a promotion focus reduces the sense of deservingness typically associated with karmic beliefs, thereby decreasing their purchase intention of luxury goods.

Lagomarsino et al. (2020) elaborate on an effective manner to frame pro-environmental messages for individuals with high egoistic values. Such individuals often prioritise personal benefits over collective ones and, as a result, tend to resist engaging in pro-environmental actions. By examining pro-environmental behaviours across three dimensions—willingness to pay for green infrastructure, intention to reduce plastic bag usage, and likelihood of supporting and recommending the cause across three studies—the authors reveal that, compared to promotion-focused framing, prevention-focused framing inhibits pro-environmental behaviour among individuals with high egoistic values. According to Lagomarsino et al. (2020), a promotion-focused pro-environmental message emphasises the benefits of environmentally friendly actions, while a prevention-focused message highlights the costs of inaction. Such prevention-focused messages may be perceived as a threat to an individual's integrity and morality, triggering a “defensive response.” This effect is particularly pronounced among those with high egoistic values, as the message conflicts with their values and their positive self-view (Robins and John, 1997). Consequently, when presented with prevention-focused rather than promotion-focused messages, egoistic individuals are more likely to deny the severity of environmental issues and view pro-environmental efforts as less worthwhile, thereby reducing their intention to engage in pro-environmental behaviours.

Chang et al. (2023) investigate the effects of healthcare product anthropomorphism on consumers' purchase intentions and willingness to pay, as well as the role of consumers' regulatory focus motivations in this relationship. They report that anthropomorphized product packaging or advertising can have a negative impact on downstream outcomes. Specifically, consumers may hold lay beliefs that healthy food or healthcare products should have a neutral appearance and taste unpleasant. Anthropomorphized product designs, which often make

products appear cute, fun, and possibly tasty, can impair perceived product efficacy. This, in turn, reduces consumers' purchase intention and willingness to pay. According to regulatory focus theory (Higgins, 1998), promotion-focused individuals are concerned with the presence and absence of positive outcomes, and they are eager to maximise potential gains and benefits. In contrast, prevention-focused individuals are concerned with the presence and absence of negative outcomes, and they are vigilant in minimising potential losses and costs. Therefore, promotion-focused individuals may perceive the fun and cuteness associated with anthropomorphized product design as a positive outcome. On the other hand, prevention-focused individuals place greater importance on the utilitarian attributes of products, particularly in the case of healthcare products. For these consumers, product anthropomorphism may further diminish perceived product efficacy, leading to an even lower purchase intention.

Kim et al. (2023) find that consumers' regulatory focus and privacy concerns influence their reactions to personalized chatbot advertising. Consumers with a promotion focus exhibit higher behavioural intention toward highly personalized chatbot advertising compared to less personalized versions. In contrast, consumers with a prevention focus display higher behavioural intention toward less personalized chatbot advertising over highly personalized alternatives. The authors attribute these effects to imbalanced risk-benefit perceptions shaped by the consumers' regulatory focus. Promotion-focused consumers, who are oriented toward gains and maximizing benefits, perceive the potential benefits of disclosing personal information as outweighing the risks. This perception leads to more favourable responses to highly personalized chatbot advertising. On the other hand, prevention-focused consumers, who prioritise minimising losses and avoiding risks, perceive the potential risks of disclosing personal information as outweighing the benefits. Consequently, they respond less favourably to highly personalized chatbot advertising. However, these effects do not persist for consumers who hold high privacy concerns. This group of consumers resist highly personalized chatbot advertising, regardless of regulatory focus, as their extreme privacy concerns override their regulatory focus motivations, enabling them to prioritise the protection of their personal information. In the next section, this thesis will discuss financial

decisions as a potential measurement of regulatory focus.

#### **2.2.3.4 Financial decisions as a potential measurement**

It is also important to review the research on how regulatory focus affects consumers' financial decisions, as consumers' financial choice is a well-established measurement to capture consumers' regulatory focus orientations (Jia et al., 2022).

Petersen et al. (2015) investigate how cultural differences and firms' marketing communication types based on regulatory focus influence three critical consumer financial decisions: savings rate, use of credit, and spending pattern. Employing a customer database from a multinational financial services firm, the authors find that consumers from countries with higher long-term orientation tend to have a higher savings rate and respond more favourably to prevention-focused than promotion-focused marketing communications, when it comes to encouraging savings. Those from countries with lower uncertainty avoidance are more likely to use credit and respond favourably to promotion-focused than prevention-focused marketing efforts aimed at encouraging credit usage. Moreover, consumers from high masculinity cultures tend to overextend in their spending patterns and are more responsive to promotion-focused than prevention-focused marketing communications.

Jiang et al. (2009) demonstrate that luck-related concepts can shape consumer decision-making, such as their financial investment intention. In the initial study, they find that presenting Asian consumers with stimuli related good luck can evoke their perceptions of luck and the positive affect, whereas presenting them with bad luck can have opposite effects. In subsequent studies, they suggest that simply exposing Asian consumers to lucky signals than unlucky signals can increase the estimates of their likelihood of winning the lottery and the evaluation of the lottery option, as they feel they are luckier. Notably, regulatory focus is identified as an interesting boundary condition in those effects. For dominant promotion-focused consumers, they demonstrate a higher likelihood to participate in a lottery and tend to deposit a higher amount of money into an online trading account (e.g., E\* Trade)

when primed with lucky signals compared to unlucky signals. For dominant prevention-focused consumers, however, no significant luck-related effects are identified among them. The authors discuss the explanations for the phenomenon and indicate that priming luck can affect consumers' behaviour related to risk-taking. Enhancing the accessibility of luck can encourage consumers to take risks such that they are more likely to take part in risky activities such as lotteries. This effect is more pronounced for promotion-focused consumers, who are risk-takers, compared to prevention-focused consumers, who are risk-averse (Zhou and Pham, 2004). Similarly, in a luck-primed condition, compared to prevention-focused consumers, promotion-focused consumers are more likely to choose an online trading account (e.g., E\* Trade) over an individual retirement account. According to Zhou and Pham (2004), investing in an online trading account is perceived as riskier than in an individual retirement account.

Likewise, recent research on AI-enabled financial robot advisors examines the impacts of anthropomorphism in robot advisors and investors' regulatory focus on their investing behaviours (Baek and Kim, 2023). The findings suggest that anthropomorphic financial robot advisors are more persuasive than their machine-like counterparts among prevention-focused investors. However, this effect does not hold for promotion-focused investors. The perceived certainty of investment advice is identified as a key rationale underlying the interactive effect between anthropomorphism and regulatory focus on investors' financial behaviour. Compared to promotion-focused investors, who tend to take risks, prevention-focused investors are more risk-averse and pay closer attention to investment uncertainty (Zhou and Pham, 2004; Jiang et al., 2009). The literature indicates that human-like robots, AI, or chatbots can reduce psychological distance, enhance trust, and increase perceived warmth (e.g., Baek et al., 2022). Human-like financial robot advisors may better mitigate the adverse effects of uncertainty compared to their machine-like counterparts. As a result, prevention-focused investors are more likely to invest when served by human-like financial robot advisors rather than machine-like ones.

Consistent with previous literature on regulatory focus and self-view (e.g., Aaker and Lee,

2001), Hamilton and Biehal (2005) indicate that priming independent or interdependent self-view in consumers induce either promotion or prevention goals. The differences in the accessibility of their regulatory focus, in turn, affect their financial behaviours. As such, consumers with an independent self-view tend to choose financial assets that are riskier, as their induced promotion goals make them more concerned with gains and more willing to take risks. In contrast, consumers with an interdependent self-view tend to choose financial assets that are less risky, as their induced prevention goals make them more concerned with losses and more willing to avoid risks. However, the above effects occur only in the absence of information about previous choices. When information about previous choices is made accessible, consumers' financial behaviours change due to asymmetric preferences for the status quo between promotion-focused and prevention-focused individuals.

Grant and Xie (2007) explore the impact of regulatory focus on consumers' financial decisions in a setting of hedging. Hedging mitigates the risk of an existing investment by balancing it with a new one. Across three experiments, the authors find that instead of evaluating the hedge as a whole, consumers are prone to focus on either the original or the new stake. This is due to a psychological motivation: the desire for safety and security through minimising losses (a prevention focus) or the desire for growth and advancement through maximizing gains (a promotion focus). In the context of gambling, prevention-focused individuals concentrate on the outcomes of the original stake, while their promotion-focused counterparts focus on the new stake. This pattern also holds true in a stock investment scenario. Additionally, since selective attention to the status quo or change drives this effect, the authors find that prevention-focused individuals are more discerning when choosing between options framed as maintaining the status quo, while promotion-focused individuals show greater discrimination when choosing options framed as initiating change. In the next section, consumers' preferences as a potential measurement of regulatory focus will be discussed.

#### **2.2.3.5 Preferences as a potential measurement**

Literature also shows that regulatory focus can affect consumers' preferences. Extending the

literature on goal compatibility (e.g., specific and global goals), Chernev (2004) investigates self-regulation goals and proposes the notion that consumer choice (or preference) is contingent on the compatibility of consumers' regulatory focus goals and product attributes. The author empirically tests this proposition across three different dimensions of product attributes, including hedonic versus utilitarian attributes, performance versus reliability attributes, and attractive versus unattractive attributes. Based on regulatory focus literature, promotion-focused consumers are inclined to seek pleasure, fun, and enjoyment, which can be linked to the experiential consumption of hedonic products, such as sports cars, perfumes, and luxuries. In contrast, prevention-focused consumers aim to avoid pain and, therefore, tend to pay more attention to instrumental and functional products such as SUVs, helmets and microwaves. These products possess strong utilitarian attributes. Following the same logic, performance-relevant attributes such as the speed and power of a car, and memory size of a computer should align with promotion goals such as achievements and aspirations. Conversely, reliability-relevant attributes such as warranty and maintenance cost should align with prevention goals such as safety and security. In the same vein, promotion-focused individuals are more concerned with positive outcomes while prevention-focused individuals are more concerned with negative outcomes. When the differentiating features of choice alternatives are unattractive, prevention-focused consumers, who tend to emphasise negative attributes, will find it harder to choose and are more likely to opt for no choice. Conversely, when the differentiating features are attractive and negative attributes are common across all options, the choice becomes easier because consumers can overlook the shared negative features and focus on the appealing ones. The results lend support to the proposition that promotion-focused consumers, compared to prevention-focused consumers, prefer products with hedonic over utilitarian attributes, performance over reliability attributes, and attractive over unattractive attributes, while the reverse holds true for prevention-focused consumers.

The regulatory focus literature distinguishes between two distinct types of pride: promotion pride and prevention pride (e.g., Higgins et al., 2001). Promotion pride is associated with promotion goals, which motivates individuals to pursue desirable outcomes, such as gains. In

contrast, prevention pride is linked to prevention goals, which motivate individuals to avoid undesirable outcomes, such as losses (Higgins et al., 2001). Building on this research, Septianto et al. (2020) examine how these two types of pride interact with two types of luxury appeals: authenticity and exclusivity appeals. By priming incidental (task-unrelated) pride, the authors find that consumers with higher promotion pride prefer exclusivity appeals over authenticity appeals compared to consumers in a neutral condition. Conversely, consumers with higher prevention pride prefer authenticity appeals over exclusivity appeals compared to those in the neutral condition. Notably, regulatory focus does not exert a main effect on appeal preferences. Further, the study demonstrates that when authenticity appeals are paired with prevention pride and exclusivity appeals are paired with promotion pride, consumers exhibit heightened purchase intentions for luxury products due to a match-up effect (Septianto et al., 2020). Similar to the characteristics of regulatory focus orientations, promotion pride leads consumers to prioritise superiority and distinctiveness from others. In contrast, prevention pride makes consumers focus more on authenticity, as their priorities emphasise safety and security (Higgins et al., 2001).

Harnessing actual consumer data from two longitudinal studies, Mishra et al. (2010) suggest that consumers' product preferences vary depending on their temporal distance from the receipt of their last salary. The authors propose that regulatory focus plays a pivotal role in accounting for this effect. When consumers have just received their salary ("the near-salary condition"), they show a promotion-focused motivational orientation in their product preferences. Conversely, when a significant amount of time has passed since their last salary ("the far-from-salary condition"), they show a prevention-focused motivational orientation in their product preferences. The authors argue that receiving a salary gives consumers a sense of having the necessary resources to pursue their goals, fostering a promotion-focused motivational orientation. In contrast, as more time has elapsed since their last salary, consumers shift to focus on preserving their resources, leading to a prevention-focused motivational orientation. According to Chernev (2004) and Aaker and Lee (2001), consumers show more favourable attitudes towards products with attributes compatible with their regulatory focus motivations. Consistent with this study, the results of Mishra et al. (2010)

demonstrate that in the near-salary condition, consumers prefer promotion-focused products over prevention-focused products due to a more accessible promotion-focused motivation. Conversely, in the far-from-salary condition, consumers prefer prevention-focused products over promotion-focused products due to a more accessible prevention-focused motivation.

Regulatory focus orientations can influence consumers' preference among products with different prices. The regulatory focus literature reports that promotion-focused individuals are more optimistic and eager than prevention-focused individuals in their goal pursuit process (Hazlett et al., 2011). Consequently, promotion-focused individuals tend to make more optimistic estimates about products compared to prevention-focused individuals (Hazlett et al., 2011). Meanwhile, consumers generally associate expensive products with high quality but low quality variability, as these products are believed to be manufactured under strict and consistent quality control (Kotler and Keller, 2016). In contrast, less expensive products are more likely to be associated with lower quality but higher quality variability (Kotler and Keller, 2016). Integrating these two lines of literature, Choi et al. (2020) propose that the difference in optimism between consumers with distinct regulatory focuses leads to varying price perceptions. Through one field study and two online experiments, Choi et al. (2020) find that promotion-focused consumers are more likely to prefer less expensive products over expensive ones compared to prevention-focused consumers. This effect is explained by the higher quality estimations that promotion-focused consumers have of less expensive products relative to prevention-focused consumers.

Khare and Chowdhury (2015) demonstrate that consumers with a higher categorization flexibility (those who consider diverse food items suitable for consumption in different meal situations) have a stronger preference for hedonic food than those with a lower categorization flexibility. They further indicate that this effect is particularly true for prevention-focused consumers, as they are vigilant in choosing hedonic food, such as indulgent food. However, for promotion-focused consumers, this effect does not hold.

Maeng et al. (2013) find that social crowdedness leads individuals to prefer safety-related

options due to an increase in prevention focus. The authors propose that personal space violations (e.g., socially crowded environments) trigger defensive responses, thereby activating a prevention-focused motivation. This prevention-focused motivation heightens sensitivity to potential losses and prevention-related benefits (e.g., safeguarding health). Consequently, individuals in such environments are more likely to prefer options that offer prevention-focused benefits over neutral ones. For example, Maeng et al. (2013) suggest that participants in the crowdedness condition show a stronger preference for pharmacies over convenience stores and first aid products over cookies, compared to those in the control, uncrowded, or cluttered conditions.

Employing a series of studies, Jie (2020) investigate how drug launch time affects individuals' preferences for drugs. In line with the prior research, the authors find that the majority prefers older drugs (e.g., those launched in the last week) to newer drugs (e.g., those launched in the last year) and the "no difference" option. This is because this group perceives older drugs as safer and more efficacious than newer drugs. Notably, only promotion focus, not prevention focus, is found to be significantly related to individuals' preferences for drugs. Individuals who are more promotion-focused are more likely to choose the newer drugs, as they deem that newer drugs are more efficacious but less safe than older drugs. Prevention focus has no association with drug preferences. Similarly, the authors also find that individuals who are risk-seeking tend to choose newer drugs.

Overall, this section critically reviews the relevant literature and discusses how regulatory focus affects different outcome variables. Although there are a variety of outcome variables that can be used to measure regulatory focus, this thesis decides to select two outcome variables as the measurement of regulatory focus due to the time constraint of completing this thesis and the limited budget. Following Fei et al. (2020) and Jia et al. (2022), in this thesis, ad preferences is selected as an indirect measurement of regulatory focus, as it is a well-established measurement and is closely related to the research context of this thesis. Moreover, following Fei et al. (2020), regulatory focus scale is selected as a direct measurement of regulatory focus, to enhance the generalisability of the results. In addition, in

this thesis, products per se are selected as a priming method for regulatory focus, due to its research significance and novelty (Higgins et al., 2020; Borges and Gomez, 2015; Ghiassaleh et al., 2020). The next section will discuss regulatory focus priming and consumer behaviour.

## **2.3 Regulatory focus priming and consumer behaviour**

### **2.3.1 Introduction of priming**

Before delving into regulatory focus priming, it is important to introduce the concept of priming. Scholars propose several different definitions for priming. Based on Cramer (1968), priming refers to a modification in antecedent conditions specifically intended to enhance the likelihood of a particular response occurring in reaction to a specific stimulus. Tulving (1983) defines priming as a process that uses priming events to stimulate or activate stored knowledge, and it can be used to describe the mechanism of priming effects. However, Higgins (1996) argue that those definitions conflate the concept of priming with that of priming effects. Instead, Higgins (1996) believe that priming should be defined as procedures that stimulate or activate stored knowledge. Knowledge cannot be primed unless it is stored in memory or “available”. Knowledge of information can be stored in memory and remain available, but it may not always be readily retrievable or “accessible” (Higgins, 1996). It is important to distinguish between availability and accessibility when trying to understand priming. Availability is a prerequisite for accessibility. If knowledge is unavailable, its accessibility is nonexistent. However, if knowledge is available, it inherently possesses at least some degree of accessibility (Higgins, 1981).

Priming can be achieved in a spectrum of manners and produce different effects. One of important effects is the enhanced accessibility of stored knowledge. When a priming event activates a stored unit of knowledge, it temporarily increases the accessibility of that unit. This heightened accessibility, in turn, makes it more likely that the same unit of knowledge will be activated by following stimuli (Higgins, 1996). However, priming can produce effects beyond enhanced accessibility. For example, priming might also stimulate an active response set that shapes subsequent judgments independently of accessibility itself (Ferguson and Wells, 1980). Tulving (1983) extends accessibility effects to motivational consistency effects

and argue that priming could involve situations where participants generate a response to remain consistent with a previous response.

There are a number of factors that affect the likelihood of priming, including the previously explained accessibility of stored knowledge before the presentation of a stimulus, and the alignment between the stored knowledge and the presented stimulus (Bruner, 1957). An increased overlap between the stored knowledge and the features of a stimulus enhances the likelihood of priming (Higgins, 1996). Moreover, the delay from priming to the stimulus presentation and the frequency of priming may also influence the likelihood of priming. Srull and Wyer (1979) employ a number of studies to test the priming delay issue and show that the influence of priming on trait-related behavioural judgments diminishes significantly over time. In fact, when the priming effect is at its weakest, it has little to no impact on outcomes after a delay of an hour or more. Findings from other studies support that the priming effects are prone to decrease as the delay increases (e.g., Higgins and Brendl, 1995). However, some exceptions have also been observed, in which the priming effects may persist for longer durations. For example, when a personal concern is primed, an individual might continue to reflect on it for a long time period (Higgins, 1996). Moreover, priming frequency has also been identified as a factor that affects priming effects, as stored knowledge can be primed only once or multiple times before exposure to the stimulus. Employing the “scrambled sentences” technique, Srull and Wyer (1979) suggest that the priming effect intensifies as the priming frequency increases, particularly when the information in the presented stimulus is ambiguous and the delay between priming events and stimulus presentation is minimal. Highly frequent priming, such as 35-40 times, can make a priming effect on behavioural judgments remain even with a one-day delay between priming and stimulus exposure.

### **2.3.2 Regulatory focus priming**

Higgins (1996, 1998) points out that regulatory focus is a procedural knowledge rather than an individual difference variable or an individual trait. Thus, an individual’s regulatory focus can be temporarily induced by exposing to situational stimuli. A promotion focus orientation can be primed in an individual, even though this individual is chronically prevention-focused

(Higgins et al., 2020).

In the early stages of regulatory focus theory, Higgins proposes a list of priming methods for regulatory focus. For example, by asking participants to report on either how their hopes and goals have changed over time or how their sense of duty and obligation has changed over time, Higgins et al. (1994) successfully prime a promotion focus orientation or a prevention focus orientation, respectively. Similar to Higgins et al.'s (1994) method, Freitas and Higgins (2002) ask participants to write down either their hopes and aspiration, or duties and obligations. A key distinction between the two methods is whether their hopes or duties are rooted in the past or the present. These two classic priming methods have been widely replicated in many studies in the marketing field (e.g., Wang, et al., 2020; Chang et al., 2023; Das et al., 2020; Ghiassaleh et al., 2020). For example, in order to test the interplay between regulatory focus and arousal-inducing stimuli in a service failure context, Das et al. (2020) manipulate regulatory focus via Freitas and Higgins's (2002) method. After the manipulation, participants in the promotion condition report that something they want to do is more important, whereas those in the prevention condition report that something they ought to do is more important.

The task framed in a gain-loss manner is also a well-recognised priming method (Higgins, 1998). This method requires participants to complete a task involving the memorization of trigrams, with the same number of initial rewards, and instructions emphasising either gain or loss. Subjects in the promotion condition are told that if they score above the 70th percentile, they will gain a dollar. However, if they do not achieve this goal, they will not gain a dollar. In contrast, participants in the prevention condition are informed that if they score above the 70th percentile, they will not lose a dollar. However, if they fail to meet this goal, they will lose a dollar. This method has inspired many variations in subsequent research (e.g., Lee et al., 2000; Niese et al., 2021; Basu and Ng, 2021). Nevertheless, the methods used in those studies comply with a basic rule, that is, the task instruction will be based on the gain-and-loss principle. For example, in studies by Lee et al., (2000), participants are told to imagine they are playing in a game show and have already claimed \$1,200 in prizes. Then they are then

told that they played the final round and lost, after which they are presented with two options. Subjects in a promotion condition face two options: Option A: keep \$400 or Option B: a  $\frac{2}{3}$  probability of not winning \$1,200 and a  $\frac{1}{3}$  probability of winning the entire \$1,200. Subjects in a prevention condition also face two options: Option A: give up \$800, or Option B: a  $\frac{2}{3}$  probability of losing the entire \$1,200 and a  $\frac{1}{3}$  probability of not losing any of the \$1,200. While the tasks, scenarios and reward amounts are modified from the original priming method by Higgins (1998), Lee et al., (2000) report satisfactory priming outcomes similar to those of Higgins (1998).

### **2.3.3 Old and new classification frameworks**

Over the past two decades, scholars have significantly advanced regulatory focus theory by adapting classic priming methods to specific contexts or developing novel approaches. Consequently, there is a need for a comprehensive review of these priming methods to deepen the understanding of priming techniques for effectively activating temporary regulatory focus in participants. Therefore, this chapter aims to critically and comprehensively review priming methods for regulatory focus published in quality marketing journals, including *Journal of Marketing*, *Journal of Marketing Research*, the *Journal of Consumer Research*, *Marketing Science*, *Journal of Consumer Psychology*, *Journal of the Academy of Marketing Science*, *International Journal of Research in Marketing*, *Journal of Retailing*, and *Journal of Service Research*.

As explored in earlier sections, this chapter intends to propose a novel framework that encompasses all these reviewed priming methods and subsequently categorises them into distinct types. Motyka et al. (2014) indicate that those methods can be classified into two categories based on the source of the priming methods. The first category is referred to as the self-generated or self-primed method, exemplified by asking participants to think about and write down something they ideally would like to do (promotion focus) or to think about and write down something they ought to do (prevention focus) (Freitas and Higgins, 2002). The second category is termed the situation-generated or situation-primed method, exemplified by word completion tasks designed to prime either a promotion focus orientation (e.g., e\_g\_r

[eager]) or prevention focus orientation (e.g., d\_tty [duty]); Lee et al., 2010). However, a point of confusion arises from the notion that, although regulatory focus may stem from external sources or situations, this motivational orientation (or stored knowledge) should originate from (or be activated within) individuals themselves (Higgins, 1996; 1998).

Another classification framework proposed by Borges and Gomez (2015) highlight two categories: situational cues (goal framing and task framing) and marketing objects (products, services, and brands). With regard to situational cues, goal framing reflect how the framed marketing message for a product or a service can help consumers meet their goals. For example, a gain-framed message for a juice product (e.g., “Get Energized”) emphasise that consumers can achieve a positive goal by consuming this product. Conversely, a loss-framed message for the same product (e.g., “Don’t Miss Out on Getting Energized!”) stress that consumers can achieve the same goal by avoiding the missed opportunity to consume it (Lee and Aaker, 2004). Task framing broadly refers to presenting tasks (e.g., anagrams tasks; game tasks) that participants need to complete in different ways (Borges and Gomez, 2015). A promotion-relevant task can emphasise hopes and aspirations; for example, participants might be told that by solving a certain number of anagrams, they will earn the chance to play a fun computer game. Conversely, a prevention-relevant task can stress safety and responsibilities; for instance, participants might be instructed that by making fewer than a specified number of errors, they will qualify to play the game (Higgins, 1998). With regard to the second dimension of Borges and Gomez’s (2015) framework, marketing objects, such as products, may also serve as a source of regulatory focus. Fruit juice or yoghurt may prompt consumers to consider promotion-focused goals, whereas sunscreen and elliptical trainers may lead consumers to consider prevention-focused goals (Borges and Gomez, 2015). However, this framework has certain limitations. It attempts to distinguish between goal framing and task framing, yet largely overlooks the overlaps between the two.

First, regulatory focus theory is closely tied to many aspects of goal pursuit and goal selection. This theory is concerned with different end states that represent individuals’ goals: promotion goals that are associate with ideal end states, such as hopes and achievements, and prevention

goals that are associated with ought end states, such as safety and security (Higgins et al., 2020). In addition, the strategic approaches individuals prefer to utilise in pursuing their goals differ based on whether they have a promotion or prevention focus motivational orientation (Higgins et al., 2020). In light of this, decoupling task framing from goals is problematic. Moreover, while goal framing can sometimes be achieved by presenting a pair of frames only, in some cases, goal framing also requires participants to complete specific tasks. Goal framing and task framing, as outlined in Borges and Gomez's (2015) framework, are conceptually distinct. Goal framing is more theory-driven while task framing is more technique-orientated. As a consequence, categorizing these two conceptually different elements as parallel dimensions seems inappropriate.

Inspired by previous work (e.g., Motyka et al., 2014; Borges and Gomez, 2015; Higgins et al., 2020), this thesis intends to develop a new framework that is capable of categorizing all the reviewed priming methods for regulatory focus, and simultaneously, overcoming the limitations of prior frameworks. To this end, this thesis will adopt a two-level criterion for the classification procedure. The first key element to be considered is the form of regulatory focus priming methods, which is technique-orientated. The second key element is the underlying nature of regulatory focus priming methods, which is theory-driven. After the first level of classification, which focuses on the form, priming methods that are identical in the form yet differ in their regulatory focus-based nature will undergo a second classification based on the second key element.

As developed earlier, regulatory focus priming methods can take various forms. After a comprehensive review of the existing literature, this thesis identifies that those priming methods fall into the following forms (see Table 4 for details): task framing, message framing, value-framing, physical and mental exercises, self-view (independent vs. interdependent), marketing cues (discount, expiration dates, and familiarity), time metaphors (ego-moving metaphor vs. event-moving metaphor), socialisation (giver–recipient relationship, friend vs. family, cats vs. dogs), short-term mating mindsets, products per se, social approval, product newness and its relationship with perceived cost to purchase, temporal distance from the

receipt of last salary, information on a green company or a green product, hedonic food for impulsive consumers, and role models (positive vs. negative). This thesis will elucidate these forms and the priming methods that fall into each specific form.

Task framing refers to a priming method in which participants are asked to complete one or more specific tasks, with task instructions framed differently to trigger either a promotion focus or a prevention focus. For instance, Freitas and Higgins (2002) activate regulatory focus motivations by asking participants to consider and list a hope or an aspiration they currently have (promotion focus priming) or to consider and list a duty or an obligation they currently have (prevention focus priming). In this method, participants in different conditions need to complete a writing task with different framing or instructions. While Freitas and Higgins's (2002) method requires participants to write down a single regulatory focus goal, such as a hope, other similar methods may ask participants to list multiple goals (e.g., Wang, et al., 2020; Chang et al., 2023; Das et al., 2020; Ghiassaleh et al., 2020). Moreover, Freitas and Higgins's (2002) method focuses on the present time point, whereas other similar methods emphasise how participants' hopes and goals have changed over time (Higgins et al., 1994). Despite differences among these methods, they all fall into the task framing category as they ask participants to complete one or more specific tasks.

Exercise as a priming method used in Higgins's early research (e.g., Higgins, 1998). While exercise may be regarded as a type of task, this thesis categorises it separately, as it requires more intense physical activities, going beyond typical task framing methods such as paper-and-pencil tasks. It may also involve mental exercises, such as reading tasks. In adopting this priming method, Higgins (1998) initially conveys misleading information on the research purpose to participants, stating that their physiological responses would be measured by analysing the saliva secreted on a cotton ball held in their mouths during each exercise. For the first physical exercise, participants need to ride a stationary bicycle at a relatively easy pace. In the meanwhile, they also need to hold a cotton ball in their mouths that taste either bitter (a pure tea solution) or sweet (a sugar solution). After completing this exercise, the cotton ball is removed, ostensibly for analysis of the saliva. Next, they move on to the mental

exercise involving a reading task based on a story. Half of the participants undertake this exercise with a cotton ball soaked in the same solution as used in the first physical exercise, while the other half use a cotton ball soaked in a neutral water solution. As such, participants reading the story are placed in one of four experimental conditions designed to induce a specific state of regulatory focus: (1) sweet-sweet (promotion working), (2) sweet-neutral (promotion not working), (3) bitter-bitter (prevention not working), and (4) bitter-neutral (prevention working). Higgins's (1998) approach extends the priming of two regulatory focus orientations (promotion focus and prevention focus) by simultaneously manipulating the valence (positive and negative) of regulatory focus. Specifically, "not working" represents a negative valence while "working" represents a positive valence.

Self-view (independent vs. interdependent) is identified by Aaker and Lee (2001) as a priming method. The authors find that highlighting an individual can help manipulate an independent self-view, thereby inducing a promotion focus orientation. In contrast, emphasising a family or a team helps manipulate an interdependent self-view, thereby inducing a prevention focus orientation. This distinction arises because the independent self is driven by goals such as autonomy and achievement, with an emphasis on excelling in comparison to others. In contrast, the interdependent self prioritises a sense of belonging, emphasising the importance of fulfilling obligations and responsibilities toward others (Aaker and Lee, 2001). Aaker and Lee (2001) suggest individuals' self-view can be manipulated in three manners, such as via pictures, text on the Web page and imaging a scenario.

Message framing in this thesis refers to a priming method in which participants are exposed to a persuasive message that highlights either promotion or prevention benefits of advocated products or behaviours. For example, in Cesario et al. 's (2004) priming method, the promotion-focused message emphasises the accomplishment-related benefits of eating more fruits and vegetables in one's daily diet, whereas the prevention-focused message emphasises the safety-related benefits of doing so.

Ramanathan and Dhar (2010) discover that three marketing cues can induce regulatory focus.

The first marketing cue is the savings message on sales promotions. “Get \$x Off” highlights potential benefits, encouraging consumers to focus on positive outcomes such as how they might spend the money saved. Conversely, “Save \$x” emphasises potential non-losses, prompting consumers to concentrate on avoiding negative outcomes, such as missing out on a valuable deal (Ramanathan and Dhar, 2010). Framing the products as “Save \$x” (vs. “Get \$x Off” ) primes a prevention (vs. promotion) focus motivation. The second marketing cue is the expiration date restriction cue. Consumers anticipating short-term regret are more likely to focus on immediate outcomes and purchase promoted items. However, unrestricted offers are less likely to evoke short-term regret, thereby shifting consumers’ attention from short-term considerations to long-term outcomes. In this case, an immediate expiration date (vs. a future expiration date) primes a prevention (vs. promotion) focus motivation (Lee et al., 2010). The third cue is brand familiarity, such that a well-known brand (vs. a less familiar brand) primes a prevention (vs. promotion) focus motivation. This is because selecting less familiar brands can be risky while well-known brands represent a safer choice for consumers. (Zhou and Pham, 2004).

The time metaphor (ego-moving metaphor or event-moving metaphor) is identified as a priming method. The type of primed regulatory focus is a function of the type of time metaphor and the valence of the event. Specifically, when consumers anticipate a positive event (e.g., a birthday party), the ego-moving metaphor (the human figure as themselves are moving towards the stationary event) is more likely to prime a promotion focus than the event-moving metaphor (where the event is perceived as moving toward a stationary individual). The explanations can be that individuals deem positive events as a desired endpoint and individuals striving towards a desired endpoint is consistent with eagerness and a promotion focus motivation (Higgins et al., 1994). In contrast, when the anticipated event is negative (e.g., an interview), the ego-moving metaphor is more likely to induce a prevention focus than the event-moving metaphor. In this regard, individuals actively moving towards an undesired endpoint is more related to a vigilance strategy, relative to the event-moving metaphor, where they remain passive.

Certain types of socialisation have been found to prime regulatory focus orientations, including gift giver–recipient relationship (Givi and Das, 2023), cats versus dogs (Jia et al., 2022), and friends versus family members (Fei et al., 2020). Givi and Das (2023) show that gift givers are more likely to avoid giving gifts that appear inferior to their own possessions than recipients would prefer. This tendency arises because gift givers aim to avoid offending recipients by violating a perceived social norm, which triggers a prevention focus orientation than recipients. However, the authors also indicate that this norm is less significant to recipients than givers assume as recipients exhibit a promotion focus when they consider the same situation from their own perspective. Similarly, Jia et al. (2022) demonstrate that exposure to pets can change individuals' regulatory focus orientations. Dogs are more open and expressive, while cats are more elusive and cautious. Therefore, dogs' temperaments are more consistent with a promotion-focused system (eagerness) whereas cats' temperaments are more consistent with a prevention-focused system (vigilance). Repeated interactions and socialisation with pets can lead to changes in an individual's motivational system. Thus, exposure to dogs (vs. cats) will remind individuals of the temperaments associated with dogs (vs. cats), which, in turn, induces a promotion focus (vs. prevention focus). In addition, Fei et al. (2020) find that accessibility of friend (vs. family) can prime a promotion focus (vs. prevention focus). Prior to this study, scholars tend to believe that close friends and family members have similar influences on consumer behaviour as both types reflect individuals' communal relationships and strong social ties. However, Fei et al. (2022) contend that these two seemingly similar types of relationships entail distinct socialisation processes. The formation and maintenance of individuals' friendships often involve desirable personalities and experiences that they seek to approach. In contrast, a blood tie in family relationships tends to be linked to responsibilities and obligations.

He and Cunha (2020) reveal that short-term mating (STM) mindsets can prime a promotion focus. Males with STM mindsets often overestimate females' sexual intent towards them. This bias arises because the cost of failed sexual pursuits, such as wasted time and courtship effort, is relatively low compared to the potential gain of immediate sexual access (Haselton and Buss, 2000). Likewise, while females are generally more discerning in avoiding

undesirable traits in potential mates (“deal breakers”) than males, evidence suggests that females become more tolerant of these deal breakers when in an STM mindset compared to a long-term mating mindset (Jonason et al., 2015).

Products per se can serve as a priming method for regulatory focus (Higgins et al., 2020). Certain products with strong promotion-focused features can lead consumers to consider hopes, growth, and aspirations. In contrast, products with strong prevention-focused features can prompt consumers to consider duties, safety, and security. Literature has shown a list of promotion-focused products, including fruit juice, yoghurt, perfume, nail polish, and jewellery, and prevention-focused products, including sunscreen and elliptical trainers, helmets, and safety glasses (Borges and Gomez, 2015; Ghiassaleh et al., 2020).

Food plays a vital role in people’s lives, and food products can spontaneously evoke goals and associated motivational orientations in consumers. Sengupta and Zhou (2007) find that impulsiveness, an individual characteristic, drives consumers to choose hedonically appealing foods (e.g., chocolate cakes). This behaviour can be attributed to the promotion-focused orientation activated by such foods. With a heightened promotion focus, impulsive individuals, compared to non-impulsive ones, are more likely to focus on the positive attributes of hedonically appealing foods, such as their good taste, while neglecting the negative consequences of consuming these products, such as obesity and cardiovascular diseases (Aaker and Lee, 2001). Hence, hedonic food can be a regulatory focus priming method for impulsive consumers (Sengupta and Zhou, 2007).

The literature indicates that companies engaging in green practices or offering green products can activate a prevention-focused orientation. Specifically, when individuals are exposed to information about a green company, such as one using environmentally friendly production methods, compared to a regular company employing new technologies, their prevention-focused motivations are triggered (Bullard and Manchanda, 2013). Furthermore, the authors find that after presenting a green claim, as opposed to a regular claim, consumers believe that a prevention-focused appeal (versus a promotion-focused appeal) is more

effective in driving the product's success in the market.

Luo et al. (2016) find that product newness and its relationship with perceived cost to purchase are two methods for priming regulatory focus motivations. First, INP (an incrementally new product) can prime a promotion focus, whereas RNP (a really new product) tends to prime a prevention focus. For example, if an existing car is used as a reference point, a new model of the car would qualify as an INP, whereas a car-boat (a dual-function vehicle serving as both a car and a boat) would be classified as an RNP. Most product innovations involve adaptations, refinements, or enhancements of existing products, such as INPs, which help consumers achieve their promotion goals. However, consumers may perceive RNP as too new and risky, which triggers a prevention focus. Furthermore, the perceived cost of the product (high vs. low) moderates the relationship between RNPs and the primed regulatory focus. When the perceived cost of an RNP is high, a prevention focus is induced, whereas a low perceived cost primes a promotion focus. However, this moderating effect of perceived cost does not persist for INPs. This is because a promotion (prevention) goal is more pronounced when consumers' perceived risk is reduced (or increased) (Luo et al, 2016).

Zhao and Pechmann (2007) identify that social approval in anti-smoking campaigns can activate a promotion focus, while social disapproval can activate a prevention focus. Using an adolescent sample, their study demonstrates that for promotion-focused participants, a promotion-focused anti-smoking ad with a positive frame yields the highest persuasion. Conversely, for prevention-focused participants, a prevention-focused anti-smoking ad with a negative frame is the most persuasive. This finding aligns with prior literature on regulatory focus (e.g., Higgins, 1998; Aaker and Lee, 2001). Thus, when consumers' regulatory focus is compatible with a persuasive message framed in the same style, the message is most effective.

Mishra et al. (2010) find that temporal distance from the receipt of last salary can prime regulatory focus orientations. When consumers have just received their salary ("the near-salary condition"), they exhibit a promotion-focused motivational orientation in their product preferences. Conversely, when a significant amount of time has passed since their last

salary (“the far-from-salary condition”), they show a prevention-focused motivational orientation in their product preferences. The authors suggest that receiving a salary instils a sense of having sufficient resources to pursue goals, thereby fostering a promotion-focused orientation. Conversely, as the time since their last salary increases, consumers shift their focus toward conserving resources, which triggers a prevention-focused orientation. According to Chernev (2004) and Aaker and Lee (2001), consumers tend to show more favourable attitudes toward products with attributes aligned with their regulatory focus motivations. Supporting this, Mishra et al. (2010) suggest that in the near-salary condition, consumers are more inclined toward promotion-focused products due to the prominence of promotion-oriented motivations. Conversely, in the far-from-salary condition, prevention-focused products are preferred, as prevention-oriented motivations become more salient.

Bosone et al. (2015) suggest that exposure to a role model (positive or negative) who promotes health messages and behavioural change can activate regulatory focus motivations. A positive model refers to a role model who has a healthy diet and is thus always healthy, while a negative model refers to a role model who has an unbalanced diet and is thus always sick. Health outcomes or goals can be achieved through two distinct strategies: a goal attainment strategy, aimed at achieving good health, or a goal maintenance strategy, focused on preserving good health (Bosone et al., 2007). For example, individuals who aim to pursue a healthy diet can eat more healthy food (e.g., fruits) or eat less unhealthy food (e.g., chocolate cakes). Individuals who seek to attain gains and benefits tend to adopt a goal attainment strategy and engage in more beneficial activities. In contrast, those aiming to avoid losses and costs are inclined to adopt a goal maintenance strategy and avoid harmful behaviours. An individual’s self-efficacy can be enhanced by observing the outcomes of a role model and selecting a role model that fits with their goals (Gibson, 2003). Bosone et al. (2015) show that a positive model using a promotion-focused (vs. prevention-focused) frame or a negative model using a prevention-focused (vs. promotion-focused) frame can lead to heightened self-efficacy and behavioural intentions. According to regulatory focus theory, individuals generate more favourable evaluations when the framing fits their regulatory focus

orientations (Higgins, 1998; Aaker and Lee, 2001; Lee and Aaker, 2004). Therefore, a positive role model can prime a promotion focus, while a negative role model can induce a prevention focus.

Value-framing is also identified as a priming method for regulatory focus (Lalot et al., 2022). In this method, participants are encouraged to reflect on pro-environmental values, highlighting the importance of individual efforts in addressing critical environmental challenges such as global warming, excessive energy consumption, and the depletion of natural resources. To prime a promotion focus, participants are asked to indicate the extent to which these values reflect a personal ideal, a moral aspiration, and a goal to achieve. It is clear that this reflection aligns with promotion goals (Higgins, 1998). To prime a prevention focus, participants are asked to indicate the extent to which these values reflect an obligation, a duty, and a requirement to uphold. Observably, this reflection aligns with prevention goals (Higgins, 1998).

When it comes to the second level of classification, this thesis considers the underlying nature or rationale of these methods. In light of this, the priming methods are further categorised into several pairs, consisting of ideal-ought and gain-loss. This thesis considers this second level of classification as an additional and necessary procedure for two reasons. First, beyond examining various forms of regulatory focus priming methods, it is essential to understand the mechanisms underlying those priming methods. Accordingly, the aim of this thesis is to highlight the mechanisms of specific priming methods. Second, several priming methods for regulatory focus that are identical in form may differ in their underlying nature or rationale, as explained by regulatory focus theory (Higgins, 1998). In such cases, employing a second level of classification can help further differentiate these priming methods. However, in other cases, the second level of classification may not be required, as certain priming methods lack a distinct underlying nature, and priming methods of the same form do not exhibit any notable variations.

Priming methods for regulatory focus categorised as task framing can be further distinguished

between ideal-ought and gain-loss. Freitas and Higgins (2002) employ a task framing method to activate regulatory focus orientations by asking participants to write down a hope or an aspiration they currently have (promotion focus priming) or to write down a duty or an obligation they currently have (prevention focus priming). In this method, participants are required to consider either ideal-oriented end states, such as a hope or an aspiration, or ought-oriented end states, such as a duty or an obligation (Higgins, 1998). Therefore, this priming method undergoes the second level of classification and is categorised as ideal-ought. Niese et al. (2021) also adopt a priming method categorised as task framing, in which participants are asked to play the game under either a loss-based or gain-based reward structure. Specifically, to prime a promotion focus, participants are informed that they can earn up to a \$0.20 base donation to the charity and a \$0.05 bonus donation. For every two environmental actions they click in time, they can earn \$0.01. Furthermore, clicking 30 or more actions earns them an additional \$0.05 bonus. To prime a prevention focus, participants are told that they start with a \$0.20 base donation to the charity and a \$0.05 bonus donation. However, for every two environmental actions they fail to click in time, \$0.01 is deducted from the donation. Additionally, missing more than 10 actions leads to the loss of the \$0.05 bonus. According to regulatory focus theory (e.g., Higgins, 1998; Lee and Aaker, 2004), promotion-focused individuals are more concerned with the presence or absence of positive outcomes (gains versus non-gains). In contrast, prevention-focused individuals are more concerned with the absence or presence of negative outcomes (non-losses versus losses) (Higgins, 1998; Higgins et al., 2020). In light of this, the priming method used by Niese et al. (2021) can be categorised as ideal-ought based on the second level of classification.

This thesis undertakes the same classification approach for message framing. It reveals that the priming methods labelled as message framing can further be classified as ideal-ought. For example, in Cesario et al. 's (2004) priming method, participants need to read a persuasive message on the importance of incorporating more fruits and vegetables into their daily diet. The promotion-focused message emphasises the accomplishment benefits of eating more fruits and vegetables, which is related to their ideal-oriented end states. Conversely, the prevention-focused message stresses the safety benefits of eating more fruits and vegetables,

which is associated with their ought-oriented end states (Higgins, 1998).

With regard to value framing (Lalot et al., 2022), this priming method also qualifies for the second level of classification. This method primes regulatory focus by asking participants to consider pro-environmental values and indicate the extent to which these values reflect a personal ideal, a moral aspiration, and a goal to achieve (a promotion focus), or indicate the extent to which these values reflect an obligation, a duty, and a requirement to uphold (a prevention focus). The instruction on how participants evaluate pro-environmental values is connected to either ideal self-guides or ought self-guides (Higgins, 1998). Hence, this priming method can be categorised as ideal-ought based on the second level of classification.

However, for other priming methods for regulatory focus, including physical and mental exercises, self-views (independent vs. interdependent), marketing cues (discount, expiration dates, and familiarity), time metaphors (ego-moving metaphor vs. event-moving metaphor), socialisation (giver–recipient relationship, friend vs. family, cats vs. dogs), short-term mating mindsets, products per se, social approval, product newness and its relationship with perceived cost to purchase, temporal distance from the receipt of last salary, information on a green company or a green product, hedonic food for impulsive consumers, and role models (positive vs. negative), they are not eligible to undergo the second level of classification. The reason for this is because the underlying nature or rationale behind these priming methods, as explained by regulatory focus theory (Higgins, 1998), is implicit and obscure. For example, Freitas and Higgins's (2002) priming method is classified as ideal-ought based on the second level of classification, as the instructions for this method are explicitly linked to either ideal self-guides or ought self-guides (Higgins, 1998). For certain priming methods, such as exposure to cats vs. dogs (Jia et al., 2022), the efficacy of this method stems from a more complex and deep mechanism linked to the differing temperaments and behaviours of cats and dogs. In light of this, it is difficult to associate their differing temperaments and behaviours with specific regulatory systems.

Importantly, this new classification framework provides a better understanding of a variety of

priming methods for regulatory focus and helps identify potential priming methods suitable for the following empirical studies. In this thesis, products per se are selected as a priming method for regulatory focus, due to its research significance and novelty (Higgins et al., 2020; Borges and Gomez, 2015; Ghiassaleh et al., 2020). Moreover, given that organic food serves as the research background, it can be linked to this priming method and is expected to prime regulatory focus.

Table 4 Novel classification framework for priming methods

| Priming types/Authors                                  | Priming methods                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Task framing (ideal-ought) (Freitas and Higgins, 2002) | <p>Promotion: Participants are instructed to think about something they ideally would like to do. In other words, they are asked to think about and list a hope or an aspiration they currently have.</p> <p>Prevention: Participants are asked to think about something they ought to do. In other words, they are asked to think about and list a duty or an obligation they currently have.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Task framing (ideal-ought) (Higgins et al., 1994)      | <p>Promotion: Participants are instructed to report on how their hopes and goals have changed over time.</p> <p>Prevention: Participants are asked to report on how their sense of duty and obligation has changed over time.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| “Physical” and “mental” exercises (Higgins, 1998)      | <p>Participants are instructed that the purpose of the study is to examine physiological reactions to both “physical” and “mental” tasks. They are informed that these reactions will be assessed by analysing saliva collected using a cotton ball held in their mouths during each activity.</p> <p>The first task involves light physical activity—riding a stationary bicycle at a moderate pace. While cycling, participants hold a cotton ball in their mouths that has been flavoured either with a bitter tea solution or a sweet sugar solution. After this task, the cotton ball is removed, under the pretense that it will be used for saliva analysis.</p> <p>The second task is cognitive in nature and involves reading a short narrative. Half of the participants carry out this reading exercise with the same cotton ball solution they had during the cycling task, while the other half use a cotton ball flavoured with neutral water. This setup results in four different experimental groups, each designed to trigger a particular regulatory focus state during the second task: (1)</p> |

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                     | <p>sweet-sweet (promotion working), (2) sweet-neutral (promotion not working), (3) bitter-bitter (prevention not working), and (4) bitter-neutral (prevention working).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Task framing<br/>(gain-loss) (Higgins, 1998)</p> | <p>The task requires participants to memorize trigrams.</p> <p>Promotion: Participants are initially given five dollars. The task is framed around potential gains: those who perform above the 70th percentile — demonstrating strong recall of the letter strings — will earn an additional dollar. If they do not reach this threshold, they simply do not receive the bonus.</p> <p>Prevention: Participants initially given six dollars. Here, the focus is on avoiding loss: those who score above the 70th percentile — indicating minimal forgetting — are allowed to keep the full amount. Failing to reach this level results in a deduction of one dollar from their total.</p>                                                                                                                                                |
| <p>Task framing<br/>(gain-loss) (Higgins, 1998)</p> | <p>Participants are required to complete two separate tasks. The first is an anagram-solving activity. The second task will be either a computer-based simulation of the well-known “Wheel of Fortune” game, which is designed to appear enjoyable, or an alternative task titled “Unvaried repetition”, which is intended to seem boring.</p> <p>Promotion: participants are informed that if they solve 22 or more out of 25 anagrams, they will get to play the “Wheel of Fortune” game. However, if they solve fewer than 22, they will instead complete the “Unvaried repetition” task.</p> <p>Prevention: participants are told that if they make 4 or more errors on the 25 anagrams, they will have to complete the “Unvaried repetition” task. If they make fewer than 4 errors, they will play the “Wheel of Fortune” game.</p> |
| <p>Task framing<br/>(gain-loss) (Higgins, 1998)</p> | <p>Upon arrival, participants are informed that they will first complete a series of preliminary activities, beginning with an anagram task, and will then proceed to a final task. In four of the experimental conditions, participants are told that their performance on the initial tasks will determine which version of the final task they will undertake.</p> <p>While all participants are led to believe that the final task depends on their earlier performance, the way this dependency is communicated varies depending on the condition, reflecting both regulatory focus (promotion vs. prevention) and outcome framing (success vs. failure):</p>                                                                                                                                                                        |

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      | <p>1. Promotion Working: Participants are told that strong performance on the initial tasks will result in being assigned the more desirable final task—typically the one they personally prefer.</p> <p>2. Promotion Not Working: In this framing, participants are informed that failing to perform well will prevent them from receiving the task they would have preferred, and they will instead be assigned the less appealing option.</p> <p>3. Prevention Working: Participants are reassured that as long as their performance is not poor, they will avoid the task they find least enjoyable and will instead receive the alternative.</p> <p>4. Prevention Not Working: Participants are warned that inadequate performance will result in being assigned the task they find least desirable rather than the alternative option.</p> <p>Among them, promotion working (positive valence) and promotion not working (negative valence) are for promotion focus priming. In contrast, prevention working (positive valence) and prevention not working (negative valence) are for prevention focus priming.</p> |
| Self-view (Aaker and Lee, 2001, p.36)                | <p>By manipulating an independent (interdependent) self-view in three means, a promotion (prevention) focus is activated.</p> <p>Promotion: (1) present a picture emphasising an individual, and (2) present the text on the Web page. The Web site highlights, “Give yourself a chance at great taste! ... Grape Juice ... it is been a favourite for more than six generations, and (3) imagine “You are playing in a tennis tournament and have advanced to the finals”.</p> <p>Prevention: (1) present a picture emphasising a family, and (2) present the text on the Web page. The Web site highlights, “Give your family a chance at great taste! ... Grape Juice ... it is been a (family) favourite for more than six generations, and (3) imagine “Your Team are playing in a tennis tournament and have advanced to the finals”.</p>                                                                                                                                                                                                                                                                           |
| Message framing (ideal-ought) (Cesario et al., 2004) | <p>Participants receive a persuasive message highlighting the importance of incorporating more fruits and vegetables into their daily diet.</p> <p>Promotion: The message emphasises the accomplishment benefits of eating more fruits and vegetables.</p> <p>Prevention: The message emphasises the safety benefits of eating more fruits and vegetables.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Task framing (gain-loss) (Lee et al., 2000)     | <p>Participants are asked to imagine the following situation: They are contestants on a game show and have accumulated \$1,200 in prizes so far. After losing in the fourth round, the host offers them a choice between two alternatives.</p> <p>Promotion: In Option A, they retain \$400 worth of the prizes. In Option B, there is a 2/3 probability they keep the entire \$1,200, and a 1/3 probability they lose all of it.</p> <p>Prevention: In Option A, they forfeit \$800 of their prizes. In Option B, there is a 2/3 probability they lose everything, and a 1/3 probability they retain the full \$1,200.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Task framing (ideal-ought) (Lee et al., 2010)   | <p>Participants are presented with a word completion task.</p> <p>Promotion: five promotion-focused word fragments (e.g., e_g_r [eager], h_pe [hope]).</p> <p>Prevention: five prevention-focused word fragments (e.g., d_ty [duty], s_fe [safe]).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Marketing cues (Ramanathan and Dhar, 2010)      | <p>Three different means: the framing of the savings message on sales promotions (“Save \$x” vs. “Get \$x Off”); the expiration date restriction cue (immediate vs. future expiration), and the familiarity of brands (well-known vs. less familiar) can prime a prevention vs. promotion focus motivation, respectively.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Time metaphors (Xu and Chen, 2020, p.1869-1872) | <p>The ego-moving metaphor tends to prime a promotion focus than the event-moving metaphor, particularly when consumers anticipate a positive event (e.g., a birthday party). In contrast, when the anticipated event is negative (e.g., an interview), the ego-moving metaphor tends to induce a prevention focus than the event-moving metaphor.</p> <p>1. The time metaphor is introduced through a visual image depicting a human figure and a cylindrical object. Participants are instructed to imagine the figure as themselves and the cylinder as representing either a birthday party or a job interview.</p> <p>Ego-moving: An arrow illustrates the human figure advancing toward a stationary cylinder. The accompanying caption reads: “thinking of the birthday party (the interview), you feel that you are getting close to the birthday party (the interview)” .</p> <p>Event-moving: The image instead shows a wheeled cylinder moving toward a stationary human figure, with the caption: “thinking of the birthday party (the interview), you feel that the birthday party (the</p> |

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                              | <p>interview) is getting close to you.”</p> <p>2. The time metaphor is induced by a verbal process.</p> <p>Ego-moving: participants read “In three of your daily journal entries, you wrote:</p> <p>Day 1: “As I approach the day of the oral presentation, I hope.....”</p> <p>Day 2: “I will reach the presentation in a few days, I think I should.....”</p> <p>Day 3: “I am getting closer to the final day.....”</p> <p>Event-moving:</p> <p>Day 1: “As the day of the oral presentation approaches, I hope.....”</p> <p>Day 2: “The presentation will reach us in a few days, I think I should.....”</p> <p>Day 3: “The final day is getting closer to us.....”</p>                                                                                                                                                                                                                                                                                                                                                                                             |
| Socialisation: gift giver–recipient relationship (Givi and Das, 2023, p.367) | <p>When considering gifts that are inferior to gift-givers’ product versions, gift-givers become more prevention-focused or less promotion-focused than gift recipients.</p> <p>Promotion (gift-giver’s role): Participants in this condition are asked to read a scenario where they visit a website to purchase headphones as a winter holiday gift for a friend. The website offers two options: Model Y, priced at \$50 with a four-star rating, and Model X, priced at \$75 with a five-star rating—the same headphones the participant personally owns. The scenario explains that the participant has budgeted \$50 for the gift and is considering Model Y but also contemplates Model X since the friend knows about their ownership of this model. After reading the scenario, participants indicate which headphones they would choose to give.</p> <p>Prevention (recipient’s role): Participants in this condition read the same scenario but from their own perspective. Next, they indicate which pair of headphones they would prefer to receive.</p> |
| Short-term mating mindsets (He and Cunha, 2020)                              | <p>Short-term mating (STM) mindsets can prime a promotion focus.</p> <p>Promotion: Participants are instructed to imagine being single for the past three months and preparing for a blind date arranged by a friend. For 30 seconds, they visualize an ideal, highly desirable person to meet on the date. Following this, they are shown images of three attractive models of the opposite sex and asked to select the one that most closely resembles the person they imagined. They then respond to a series of multiple-choice questions about their date</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                              | <p>preferences, including topics like dress code and conversation style.</p> <p>Control group: Participants in the control group complete a similar task but focus on a vacation scenario unrelated to dating or romantic contexts. They are asked to imagine an ideal vacation and select one of three images of vacation destinations that aligns most closely with their vision. Afterward, they answer questions about their preferences related to vacations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Socialisation: friends vs. family members (Fei et al., 2020) | <p>Accessibility of friend vs. family can prime a promotion focus vs. a prevention focus. The accessibility of friend vs. family can be manipulated in three means:</p> <ol style="list-style-type: none"> <li>1. Participants are instructed to list the first five words that come to mind when they think about the word “family” (vs. “friend”).</li> <li>2. Participants are required to finish a “mental simulation” task, where they are asked to select either a core family member (e.g., parent, child, spouse, etc.) or a close friend and visualize that person. They then specify how they typically address the person and describe their relationship. Next, participants draw a picture of the person, use a few words to describe them, and briefly recount an experience they have shared with them.</li> <li>3. Participants are invited to take part in a “daily communication study,” purportedly designed to examine how people interact with others. They are asked to imagine writing a message to a family member (versus a friend) and to specify whom they would send the message to and what the content of the message would be.</li> </ol> |
| Message framing (ideal-ought) (Choi et al., 2020)            | <p>Store signage with different content is used to prime regulatory focus. Participants are asked to take a careful look at the store signage and list their thoughts about the advertisement on it.</p> <p>Promotion: your dream, your aspiration, your love, followed by a brand name.</p> <p>Prevention: your duty, your responsibility, your love, followed by a brand name.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Task framing (gain-loss) (Förster et al., 1998)              | <p>The following different framing methods are used to prime regulatory focus. Promotion working (positive valence) and promotion not working (negative valence) are for promotion focus priming. In contrast, prevention working (positive valence) and prevention not working (negative valence) are for prevention focus priming.</p> <ol style="list-style-type: none"> <li>1. Promotion working: Participants are encouraged to identify at least 90% of all possible words in the anagram task. Achieving this</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                             | <p>threshold will result in earning an additional dollar.</p> <p>2. Promotion not working: Participants are encouraged to reach at least 90% of all possible words. Failure to do so will mean they will not receive the bonus dollar.</p> <p>3. Prevention working: Participants are instructed to avoid missing more than 10% of the possible words. If they succeed, they will avoid losing a dollar.</p> <p>4. Prevention not working: Participants are instructed to avoid missing more than 10% of the possible words. If they fall short and miss too many, a dollar will be deducted.</p>                                                                                                                                 |
| Products per se<br>(Borges and Gomez, 2015)                                 | <p>Products per se can prime regulatory focus motivations:</p> <p>Promotion: presenting the images of fruit juice or yoghurt.</p> <p>Prevention: presenting the images of sunscreen and elliptical trainers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Products per se<br>(Kordrostami et al., 2021)                               | <p>Products per se are utilised to prime regulatory focus motivations:</p> <p>Promotion: teeth whitening</p> <p>Prevention: teeth floss</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Task framing<br>(ideal-ought) (Li et al., 2022; Friedman and Förster, 2001) | <p>A dual task priming method is used to induce regulatory focus. This method consists of two components: a self-recall task and a paper-and-pencil maze game. These maze games are simple and would be solvable by all participants.</p> <p>Promotion: Participants are instructed to imagine and describe three dreams or hopes. Following this, participants complete the maze game. They are asked to guide a mouse through the maze to reach the cheese.</p> <p>Prevention: Participants are asked to recall and describe three obligations or responsibilities from their past or present. Following this, participants complete the maze game. They are asked to guide a mouse through the maze to escape from an owl.</p> |
| Task framing<br>(ideal-ought)<br>(Ghiassaleh et al., 2020)                  | <p>1. Participants are first asked to watch a custom-designed commercial video about meal replacement bars (e.g., cereal bars, protein bars, energy bars) and then write an essay on the topic.</p> <p>Promotion: the video and essay emphasise how meal replacement bars can help consumers achieve positive outcomes, such as boosting energy.</p> <p>Prevention: the video and essay focus on how meal replacement bars</p>                                                                                                                                                                                                                                                                                                    |

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | <p>can help consumers avoid negative outcomes, such as reducing the risk of high blood pressure.</p> <p>2. The second priming method is similar to the first one. The difference is the product category is changed from meal replacement bars to tea.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Products per se<br>(Ghiassaleh et al., 2020)       | <p>Product categories are used to prime regulatory focus motivations.</p> <p>Promotion: perfume, nail polish, and jewellery.</p> <p>Prevention: sunscreen, helmets, and safety glasses.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Task framing<br>(ideal-ought) (Wang et al., 2020)  | <p>Participants are asked to write an essay on different topics depending on which regulatory focus condition they are allocated to:</p> <p>Promotion: Participants are asked to write an essay regarding achievement and advancement, supporting the statement: “Success in life is determined by action, not inaction.”</p> <p>Prevention: Participants are told to write an essay regarding security and caution, supporting the statement: “Prevention is the best form of cure.”</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Task framing<br>(ideal-ought) (Niese et al., 2021) | <p>1. Picking tasks. Participants are asked to select goals from a list, with instructions framed to reflect either a promotion focus (e.g., emphasising hopes and aspirations) or a prevention focus (e.g., emphasising duties and obligations). They are then asked to choose one goal to which they are highly committed and one to which they are only slightly committed.</p> <p>2. Participants review the mission statements of three relatively unknown charities. They are asked to select the charity they support most based on its mission statement, and they should have never previously donated to or volunteered for it.</p> <p>Promotion: Participants are guided to select a charity they were previously unfamiliar with and believe contributes the most positively toward societal improvement, aligning with ideals for a better future.</p> <p>Prevention: Participants are directed to choose a previously unknown charity they believe is most effective in reducing or preventing harm, reflecting a commitment to societal responsibilities and ethical obligations.</p> |
| Task framing<br>(gain-loss) (Niese et              | <p>Participants are guided to play the game under either a loss-based (prevention-focused) or gain-based (promotion-focused) reward</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| al., 2021)                                                | <p>structure.</p> <p>Promotion: Participants are informed they have the opportunity to contribute up to \$0.20 as a base donation to a charity, along with the chance to earn an extra \$0.05 as a bonus. For every two environmental actions they respond to within the time limit, \$0.01 is added to the donation. If they successfully click on 30 or more actions, they receive the additional \$0.05 bonus.</p> <p>Prevention: Participants begin with a \$0.20 base donation and a \$0.05 bonus already allocated to the charity. However, failing to click on two environmental actions within the time frame results in a \$0.01 deduction. If they miss more than 10 actions, the \$0.05 bonus is forfeited.</p>                                                                                                                                                                                                                                  |
| Task framing (ideal-ought) (Tuan Pham and Chang, 2010)    | <p>Writing tasks. Participants are asked to imagine that they are about to graduate from college and have recently secured an excellent job, with its attractive features framed in distinct ways based on regulatory focus theory. To celebrate this job, they plan to take their parents out for a nice dinner.</p> <p>Promotion: The job is described as ideals, accomplishments, growth, and opportunities (e.g., “an ideal job,” “your dream career,” “many opportunities to travel abroad”), and the dinner is framed as an event “to pamper your parents and yourself to celebrate your achievements.”</p> <p>Prevention: The job is characterized by duties, responsibilities, security, and protection (e.g., “the job your parents always thought you should do,” “you will feel secure,” “comprehensive medical insurance”), and the dinner is presented as an event “to thank your parents for their consistent support and encouragement.”</p> |
| Value-framing (ideal-ought) (Lalot et al., 2022)          | <p>Participants are asked to consider pro-environmental values, emphasising that “every individual should do their best to address environmental issues such as global warming, energy overconsumption, and the depletion of natural resources.”</p> <p>Promotion: They then indicate the extent to which these values reflect a personal ideal, a moral aspiration, and a goal to achieve.</p> <p>Prevention: They then indicate the extent to which these values reflect an obligation, a duty, and a requirement to uphold.</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Task framing (gain-loss) (Basu and Ng, 2021; Jain et al., | <p>Participants are invited to participate in a brand name quiz. They are shown ten anagrams, each representing a scrambled version of a popular brand name.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2007)                                                    | <p>Promotion: participants are informed that for every correctly unscrambled brand name, they will gain a certain number of points. Their goal is to gain as many points as possible by maximizing the number of names they get right.</p> <p>Prevention: participants are informed that for every incorrectly unscrambled brand name, they will lose a certain number of points. Their goal is to lose as few points as possible by minimising the number of names they get wrong.</p>                                                                                                                                                                                                                                        |
| Task framing<br>(ideal-ought) (Basu and Ng, 2021)        | <p>Participants are asked to complete the strategy tasks.</p> <p>Promotion: Participants are instructed to write down one goal they strongly wish to achieve. Then, they are asked to write down 4-6 strategies they would employ to ensure they achieve this goal or outcome.</p> <p>Prevention: Participants are instructed to write down one outcome they strongly wish to avoid. Then, they are asked to write down 4-6 strategies they would employ to ensure they avoid this outcome.</p>                                                                                                                                                                                                                                |
| Task framing<br>(ideal-ought) (Yeo and Park, 2006)       | <p>Participants are told to reflect on their life events and describe them on a blank paper.</p> <p>Promotion: they are prompted to consider events they aspire to experience and the strategies they would use to achieve them.</p> <p>Prevention: they are prompted to write about events they wish to avoid and the strategies they would use to prevent them.</p>                                                                                                                                                                                                                                                                                                                                                          |
| Task framing<br>(ideal-ought)<br>(Lockwood et al., 2002) | <p>Participants are asked to complete the word classification tasks. Participants are presented with a list of 36 words and are told to sort them into three categories. They need to create their own categories, as no group labels are shown. Of the 36 words, 24 are related to cooking and children, while the remaining 12 are associated either with promotion or prevention.</p> <p>Promotion: The 12 promotion-focused words include: succeed, strive, gain, thrive, ambition, seek, accomplish, win, pursue, triumph, achieve, aspiration.</p> <p>Prevention: The 12 prevention-focused words include: setback, prevent, avoid, rejection, fail, avert, disappointing, mistake, flounder, fiasco, flunk, defeat.</p> |
| Task framing<br>(ideal-ought) (Zhou                      | Participants are asked to complete the approach-oriented or avoidance-oriented tasks. Participants are tasked with completing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| and Pham, 2004)                                        | <p>two activities framed either in an approach-oriented manner or an avoidance-oriented manner.</p> <p>The first activity requires proofreading a short article.</p> <p>Promotion: participants are asked to “find as many misspellings as possible.”</p> <p>Prevention: participants are asked to “ensure no misspellings are overlooked.”</p> <p>The second activity involves solving anagrams.</p> <p>Promotion: participants are asked to “create as many words as possible” and to “identify more than two-thirds of all potential words.”</p> <p>Prevention: participants are asked to “avoid missing any possible words” and to “ensure no more than one-third of the words are overlooked.”</p>                                             |
| Task framing<br>(ideal-ought) (Grant<br>and Xie, 2007) | <p>Participants are asked to complete the writing tasks.</p> <p>Promotion: participants are told that they purchased the stock to save money for an island cruise after graduation (achievement).</p> <p>Prevention: participants are told that they purchased the stock as the financial officer of a campus club, with the goal of earning a return on the club’s funds that is no worse than the interest offered by the bank (responsibility).</p>                                                                                                                                                                                                                                                                                              |
| Social approval<br>(Zhao and<br>Pechmann, 2007)        | <p>Regulatory focus and valence can be induced by either social approval or disapproval stressed in the video or advertisement.</p> <p>Promotion (positive valence):<br/>College students are hanging out and enjoying each other’s company. A smoker lights a cigarette, causing the group to stop talking. The smoker quickly puts out the cigarette. The group smiles at the smoker and offers approving looks. The smoker feels happy and included.</p> <p>Promotion (negative valence): College students are hanging out, laughing, and exchanging approving glances. A smoker lights a cigarette, and the lively atmosphere changes. The group stops talking and looks at the smoker with disapproval. The smoker feels excluded and sad.</p> |

|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                             | <p>Prevention (positive valence): College students are chatting together. A smoker lights a cigarette, causing the group to stop talking and express annoyance through disapproving looks. The smoker puts out the cigarette, and the group returns to being neutral. The smoker feels relieved to avoid further tension.</p> <p>Prevention (negative valence): College students are enjoying themselves, but the atmosphere shifts when a smoker lights a cigarette. The group stops talking, glares at the smoker, and gives disapproving looks. The smoker feels anxious and out of place.</p>                                                                                                                                                                                                                                                                                                                                                               |
| Product newness and its relationship with perceived cost to purchase (Luo et al., 2016)     | <p>Product newness can prime regulatory focus motivations. Specifically, INP (an incrementally new product) can prime a promotion focus, whereas RNP (a really new product) can prime a prevention focus. Furthermore, consumers' perception of the product's cost (whether perceived as high or low) moderates the association between the RNP and the primed regulatory focus. When the perceived cost of the RNP is high, a prevention focus is induced, whereas a low perceived cost primes a promotion focus. However, this moderating effect of perceived cost does not persist for the INP.</p> <p>Three mock advertisements are created for an existing car (an established product), a new model of the car (INP), and a car-boat (a dual-function vehicle that serves as both a car and a boat, RNP). Each ad features the product name, an image of the product, and a concise product description. Only the image varies across the conditions.</p> |
| Temporal distance from the receipt of last salary (Mishra, 2010)                            | <p>Temporal distance from the receipt of last salary can prime regulatory focus orientations.</p> <p>Participants who recently received their last salary exhibit a promotion focus, whereas those who received their last salary a long time ago exhibit a prevention focus.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Information on a green company or a green product (Bullard and Manchanda, 2013, p. 181-184) | <p>1. Compared to the information on a conventional company, information on a green company can prime a prevention focus. Participants are asked to read a number of statements of the practices of either a green company (prevention focus) or a conventional company (control).</p> <p>Prevention: Statements may highlight features such as the use of environmentally green technologies and a commitment to incorporating recycled materials across all product components.</p> <p>Control: statements may emphasise the use of established</p>                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                | <p>technologies and newly developed materials throughout the product.</p> <p>2. The description of green products (vs. conventional products) can prime a prevention focus.</p> <p>Prevention: the detergent is described as being composed of 98% plant-based, naturally sourced ingredients.</p> <p>Control: the detergent is described as using traditionally manufactured, chemically based ingredients.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Hedonic food for impulsive consumers (Sengupta and Zhou, 2007) | <p>Exposing impulsive consumers to hedonic food (vs. regulatory food) can prime a promotion focus:</p> <ol style="list-style-type: none"> <li>1. A slice of chocolate cake vs. an apple;</li> <li>2. A slice of chocolate cake vs. a vegetable salad;</li> <li>3. Colour pictures of the cake vs. the salad</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Positive or negative role models (Bosone et al., 2015, p.529)  | <p>Exposure to a role model who promotes health messages and behavioural change can induce regulatory focus motivations. A positive model can prime a promotion focus while a negative role model can induce a prevention focus. Participants are exposed to the descriptions of either a positive or a negative role model.</p> <p>Promotion: a role model who “is always very healthy thanks to a balanced diet” and experiences positive outcomes as a result.</p> <p>Prevention: a role model who “is always sick because of an unbalanced diet” and experiences negative outcomes as a result.</p>                                                                                                                                                                                                                                                                              |
| Socialisation: cats vs. dogs (Jia et al., 2022)                | <p>Exposing consumers to dogs can prime a promotion focus. In contrast, exposing consumers to cats can prime a prevention focus. The authors showcase a few means to expose consumers to pets.</p> <ol style="list-style-type: none"> <li>1. Pet ownership (dogs vs. cats);</li> <li>2. Participants are instructed to recall and describe past experiences involving interactions with a dog or a cat.</li> <li>3. Participants are informed that the study focuses on an individual’s general knowledge of pets and their previous experiences with them. They are randomly assigned to one of two conditions (dog or cat). First, participants are required to answer five quiz questions about either dogs or cats. Next, they need to recall and describe a previous experience involving an interaction with a dog or a cat, depending on their assigned condition.</li> </ol> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>4. Participants are asked to view a series of four print advertisements, displayed one per screen, about either dogs or cats as the spokescharacters. After being presented with the ads, they are required to share their thoughts and feelings about them.</p> <p>5. Participants are required to watch a short video about either dogs or cats, both centred on the same theme: pets “shopping” in a store.</p> <p>6. Participants are informed that an online calendar company seek feedback on several dog (or cat) pictures and it plans to include those pictures in a themed calendar. They are presented with a number of dog or cat pictures, displayed one per screen (with the order counterbalanced). Next, all the pictures are displayed together on one screen, and participants are asked to select one pet to imagine interacting with.</p> |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 2.4 Justification of the underpinning theory

In this thesis, regulatory focus theory (Higgins, 1997,1998) serves as the underpinning theory to address research problems and achieve research objectives. Before selecting regulatory focus theory, two other competing theories, protection motivation theory and information framing theory, are also considered. This section thus aims to justify the selection process of the underpinning theory.

The first competing theory is protection motivation theory, explaining how individuals react to a threat stimulus in a self-protective way (Rogers, 1975). Individuals’ decision on whether to engage in protective behaviours is governed by two distinct cognitive processes—threat appraisal and coping appraisal (Maddux and Rogers, 1983). Researchers have utilised this theory to explain food-related consumer behaviour in response to threats. For example, Soon et al. (2022) suggest that women are more inclined to engage in protective behaviours, such as using hand hygiene after food shopping, amid COVID-19. A more relevant study indicates that consumers tend to show positive attitude towards organic food when adequately informed about food safety issues (Pang et al., 2021). While organic food consumption can be driven by negative information such as food safety issues and environmental issues, literature also shows that consumers may also purchase organic food for enjoyment and pleasure (Mai et al., 2021). Transferred to one of the research objectives of this thesis, it highlights the

significance of considering both positive (hedonism) and negative (safety) elements of organic food products. Hence, protection motivation theory is filtered out, as it can only explain the motivations related to negative issues. Regulatory focus theory (Higgins, 1997, 1998) would be a more suitable theory for the research design, as it can cover both positive and negative aspects of consumer motivations.

The second competing theory is information framing theory. Tversky and Kahneman (1981) theorized that the way information is framed (as positive or negative) influences how its value is perceived, specifically by activating different parts of a psychophysical value function (Malodia et al., 2025). Research consistently shows that positive claims are significantly more influential than negative claims in persuading consumers to purchase organic food (Gifford and Bernard, 2006; Cucchiara et al., 2015). While this thesis also aims to measure consumers' preferences for frames in one of the empirical studies, using information framing theory would limit this research to the area of information framing and processing. In contrast, regulatory focus theory (Higgins, 1997, 1998) can account for a wide range of consumer behaviours, extending beyond preferences for frames and information processing.

## **2.5 Conclusion**

In brief, this chapter critically and comprehensively reviews the existing literature on regulatory focus. The first part introduces and interprets the concepts, principles, and empirical evidence of regulatory focus theory. The outcome variables are selected for the subsequent empirical studies. The second part proposes and elucidates a novel framework for classifying priming methods. The reviewed priming methods for regulatory focus are analysed and discussed based on this new classification framework. Products per se are selected as the priming method for the subsequent empirical studies. In addition, the choice of the underpinning theory, regulatory focus theory, is justified by contrasting it with the other two competing theories, protection motivation theory and information framing theory.

In the next chapter, the thesis will discuss the theoretical background and research hypotheses for the empirical studies.



## Chapter 3: Hypothesis Development and Conceptual Framework

### 3.1 Chapter overview

The last chapter conducts a literature review on regulatory focus theory, discussing the impact of regulatory focus on consumer behaviour and a wide range of priming methods for regulatory focus. This discussion paves the foundation for this chapter, which specifically focuses on a particular category of priming method for regulatory focus: products per se. More specifically, this chapter selects organic food as a product type and investigates how organic food may prime regulatory focus in consumers.

This chapter primarily focuses on the development of hypotheses and the conceptual framework. The hypothesis development section begins with a concise reflection on regulatory focus theory and consumer behaviour, followed by an exploration of products as a source of regulatory focus. The next section delves into organic food as a product type, highlighting its regulatory focus-relevant features. Additionally, it contrasts organic food with green products, examining their differences in activating regulatory focus in consumers. The last section of hypothesis development investigates consumer impulsiveness and its moderating role in affecting how organic food products prime regulatory focus orientations in consumers. Then, this chapter proposes and interprets a conceptual framework that includes all the focal variables. Finally, this chapter concludes with a brief summary.

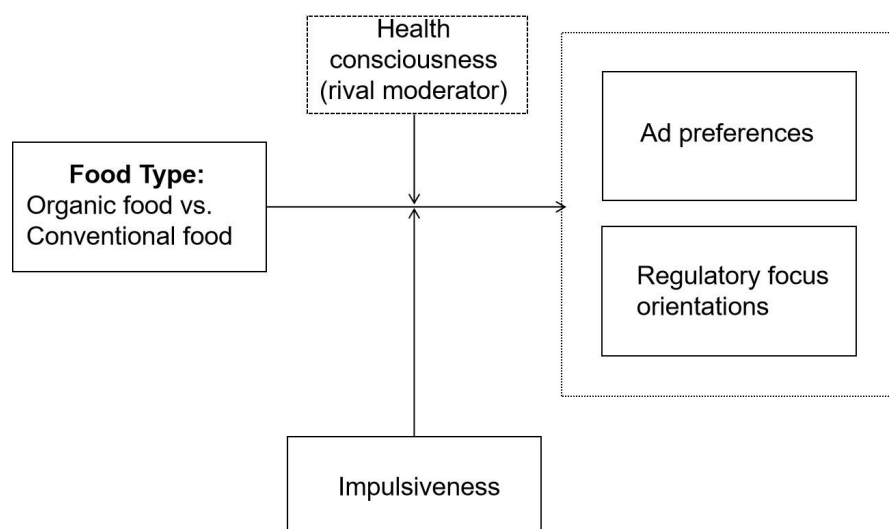


Figure 4 Conceptual framework

### **3.2 Hypothesis development (Organic food as a priming method for regulatory focus and the role of impulsiveness)**

#### **3.2.1 Regulatory focus theory and how it influences consumer behaviour**

Regulatory focus theory suggests two distinct motivational orientations: promotion focus, which is related to accomplishments, hopes and aspirations, and prevention focus, which is associated with responsibilities, duties and obligations (Higgins, 1998). In an attempt to align their actual selves with their ideal-selves, promotion-focused individuals are more motivated to attain accomplishments and aspirations, and are more concerned with the presence or absence of positive outcomes. In contrast, prevention-focused individuals in an attempt to align their actual selves with their ought-selves are more motivated to fulfil responsibilities and obligations, and are more concerned with the absence or presence of negative outcomes (Higgins, 1998). Both regulatory focus orientations “promotion focus” and “prevention focus” are related to the desired end states (including ideal self-guides and ought self-guides), though these end states are distinct from one another (Higgins, 1998; Higgins et al., 2020).

Regulatory focus can be cultivated from caretaker-child interactions during an individual’s childhood (chronic regulatory focus) (Buss, 1996; Higgins, 1998), or influenced by environments (situational regulatory focus) (Higgins, 1996; 1998). Thus, regulatory focus is not inherently an individual difference variable but rather a motivational condition that can vary either chronically or situationally (Higgins et al., 2020).

The literature widely recognises the significant role of regulatory focus in influencing consumer behaviour (e.g., Aaker and Lee, 2001; Zhou and Pham, 2004; Yeo and Park, 2006; Trudel et al., 2012; Das et al., 2020; Pandey and Tripathi, 2023). A large body of literature has suggested that regulatory focus, whether chronic or situational, affects various aspects of marketing and consumer behaviour. These include consumers’ attitudinal responses (e.g., attitude and satisfaction; Basu and Ng, 2021), evaluations (Shine et al., 2007), behavioural intentions (e.g., purchase intention and willingness to pay; Zhao and Pechmann, 2007; Wang et al., 2020), financial decisions (Petersen et al., 2015), and preferences (Mishra et al., 2010).

According to regulatory focus theory (Higgins, 1998), the differing impacts of an individual's promotion focus or prevention focus on consumer behaviour arise from the distinct goal selection and goal pursuit strategies they adopt. As a consequence, these distinctions shape how they respond to marketing stimuli. For instance, prevention-focused consumers tend to evaluate brand extensions that are more similar to the parent brand more favourably than less similar extensions, whereas this effect diminishes or even reverses for promotion-focused consumers (Yeo and Park, 2006). This is because promotion-focused individuals prioritise the perceived hedonic value of brand extensions, while prevention-focused individuals place greater emphasis on the perceived risks associated with the extensions (Yeo and Park, 2006; Aaker and Lee, 2001).

To induce regulatory focus orientations in participants, most studies employ established priming methods for regulatory focus (e.g., Herzenstein et al., 2007; Kordrostami et al., 2021; Wang, et al., 2020; Chang et al., 2023; Baek and Kim, 2023). For example, Chang et al. (2023) manipulate regulatory focus using an adaptation of Cesario et al.'s (2004) priming method, in which two different magazine articles serve as the priming method. The article aimed at activating a promotion focus emphasises how to boost the immune system, while the one aimed at priming a prevention focus stresses how to prevent immune problems. Limited research has developed novel priming methods for regulatory focus and validated those methods. For instance, marketing cues (e.g., familiarity of brands, Ramanathan and Dhar, 2010; product newness, Luo et al., 2016) and socialisation (exposure to dogs versus cats, Jia et al., 2022; social relationships with friends versus family members, Fei, et al., 2020) can serve to temporarily induce distinct regulatory focus orientations. Those studies dramatically enrich the regulatory focus literature and provide additional options for scholars who aim to examine situational regulatory focus.

### **3.2.2 Products per se as a source of regulatory focus**

The product category (a product itself) that plays a vital role in activating regulatory focus has garnered relatively scant scholarly attention (Higgins et al., 2020). One illustrative example of product categories as a source of regulatory focus is that jewellery can evoke a sense of

luxury in consumers (a promotion focus), whereas helmets provide consumers with the means to guard against potential dangers (a prevention focus) (Higgins et al., 2020). Only a few empirical studies have examined the role of products themselves in regulatory focus motivations.

Ghiassaleh et al. (2020) reveal three product categories with dominant promotion-focused features: perfume, nail polish, and jewellery, and three product categories with dominant prevention-focused features: sunscreen, helmets, and safety glasses. Employing the first 5 studies, the authors find that displaying popularity cues negatively impacts prevention-focused consumers, as opposed to promotion-focused consumers, by increasing the heterogeneity of their consideration set. This heightened heterogeneity subsequently results in greater decision uncertainty and reduced commitment to the final choice, making prevention-focused consumers more hesitant than promotion-focused consumers to commit to a single option. Importantly, Ghiassaleh et al. (2020) empirically test those products per se as a source of regulatory focus in the Study 6 and the results show that those three prevention-focused products receive lower ratings in the presence of a popularity sign compared to its absence, while those three promotion-focused products receive higher ratings when a popularity sign is present. Therefore, perfume, nail polish, and jewellery can activate a promotion focus in consumers, whereas sunscreen, helmets, and safety glasses can prime a prevention focus.

Borges and Gomez (2015) demonstrate that fruit juice and yoghurt can inherently induce a promotion focus, whereas sunscreen and elliptical trainers can inherently prime a prevention focus in both in-context and out-of-context situations, as shown through three studies. Their research finds that participants exposed to a fruit juice product are more likely to adopt promotion-focused strategies (e.g., reading beyond the scope of the assignments) to prepare for an upcoming exam. Conversely, participants exposed to a sunscreen product tend to adopt prevention-focused strategies (e.g., avoiding distractions while studying) to prepare for the same exam. Furthermore, the authors show that when fruit juice or yoghurt is paired with a gain frame, or when sunscreen or elliptical trainers are paired with a loss frame, consumers

exhibit heightened evaluations. This aligns with prior literature suggesting that promotion-focused consumers are more concerned with gains, while prevention-focused consumers are more concerned with avoiding losses (Higgins, 1998).

Hedonic food (such as chocolate cakes), whether as a real item or an image, can prime a promotion focus specifically in impulsive consumers (Sengupta and Zhou, 2007). Through a series of experiments, the authors demonstrate that impulsive consumers, compared to prudent consumers, are more likely to choose hedonically appealing snacks (e.g., chocolate cake) over healthier options like apples or salads. This behaviour arises due to an enhanced promotion focus in impulsive individuals. With this heightened promotion focus, impulsive individuals tend to emphasise the positive attributes of hedonically appealing foods, such as their delicious taste, while overlooking the negative consequences, such as obesity and cardiovascular diseases (Aaker and Lee, 2001). This effect extends beyond specific food-related goals or choices (e.g., selecting hedonically appealing snacks). It also influences out-of-context goals and outcomes. The findings indicate that, after mere exposure to cake, impulsive consumers are more likely than prudent consumers to choose sunscreen with promotion-focused appeals and cars emphasising promotion-focused benefits. However, this effect does not occur for individuals exposed to healthy snacks, such as apples or salads. Additionally, exposure to cake leads impulsive consumers to prefer riskier investment options, such as stocks, over safer choices like mutual funds (Zhou and Pham, 2004). However, the tendency of impulsive eaters to choose hedonic food over healthy food can be mitigated by temporarily activating a prevention focus before making a choice. Moreover, the post-choice satisfaction associated with selecting hedonic food can be reduced when a prevention focus is induced.

The literature suggests that green products themselves can prime prevention-focused orientations among consumers (Bullard and Manchanda, 2013; Ku et al., 2012). Bullard and Manchanda (2013) indicate that after presenting a green claim, as opposed to a regular claim, consumers believe that a prevention-focused appeal (versus a promotion-focused appeal) is more effective in driving the product's success in the market. This is because consumers

associate ethicality and sustainability with characteristics such as care, compassion, gentleness, safety, and protectiveness and these characteristics align with prevention-oriented concerns, including security, protection, and responsibility, indicating a link between sustainability and a prevention focus (Bullard and Manchanda, 2013). Likewise, Ku et al. (2012) suggest that framing product claims in green terms rather than non-green terms is more effective for prevention-focused consumers, whereas framing product claims in non-green terms rather than green terms is more effective for promotion-focused consumers.

### **3.2.3 Organic food per se as a source of regulatory focus**

Previous research indicates that green products themselves can prime a prevention-focused orientation among consumers (Bullard and Manchanda, 2013; Ku et al., 2012). Nevertheless, the investigations within these studies are confined to a delimited spectrum of commonplace cleaning commodities such as detergents and shampoos. In this respect, consumers appear to easily associate those green cleaning commodities with safety, hygiene and environmental protection, which is more related to prevention-focused concerns (Higgins, 1998).

Importantly, this thesis argues that organic food products should be examined separately from generic green products. Extant literature on organic food demonstrates that consumers' perceptions of organic food products appear to be more complex than those of green products. First, consumers tend to perceive green products as possessing inferior quality attributes in comparison to regular products (Lin and Chang, 2012; Dixon and Mikolon, 2021; Scott et al., 2020). Lin and Chang (2012) conduct a field study in a cafeteria, monitoring the usage of one green hand sanitizer and one regular hand sanitizer over 20 weekdays. The authors find that the usage of the green hand sanitizer is greater than that of the regular hand sanitizer. In a subsequent study, they further reveal that consumers tend to overuse green products because they perceive them as less effective than regular products. Dixon and Mikolon (2021) suggest that the perceived inferior quality of green products is a lay belief. Consumers are often forced to make trade-offs between green products, which are perceived as being of lower quality but morally advantageous (e.g., more environmentally friendly or less cruel to animals), and regular products. Likewise, Scott et al. (2020) find that consumers hold lay

beliefs that natural medicines are safer yet less potent than their regular counterparts. As a result, consumers tend to choose regular medicines over natural medicines when they aim to cure a problem.

In contrast, consumers are inclined to perceive organic food as a form of luxury commodity owing to the premium pricing associated with it, as well as the connotation of superior quality that it carries (Mann, 2003; Septianto et al., 2019). Kong and Ko (2017) highlight that while consumers are increasingly interested in altering their consumption habits, such as supporting environmental sustainability and contributing to certain communities by purchasing organic products, the high cost associated with organic products raises concerns. This prompts the question of whether organic consumption is an exclusive practice accessible only to the elite, thereby reflecting a form of luxury consumption as a status symbol. Fifita et al. (2020) conceptualize organic food consumption as a modern luxury fashion trend by uncovering three commonalities between organic food consumption and luxury fashion consumption. First, given that organic food is grown and produced without synthetic chemicals, consuming organic food can meet consumers' goals of investing in long-term wellbeing. Second, the premium price of organic food symbolises higher quality, which is connected with modern luxury fashion. Third, consumers use organic food consumption to convey social status and gain a reputation. Purchasing organic food from premium stores provides consumers with a sense of pride and a sense of luxury consumption, thereby signalling a high social status. In line with Fifita et al. (2020), Septianto et al. (2019) suggest that organic food is associated with premium attributes, reflecting an individual's willingness and ability to incur higher costs. This association creates an image of a high construal level (e.g., psychologically distant and abstract). Through a series of empirical studies, their findings demonstrate a match-up effect, whereby pairing organic food products with abstract illustrations can lead to improved marketing outcomes. Regulatory focus theory (Higgins, 1998) suggests that luxury is an attribute more concerned with a promotion focus.

Additionally, recent evidence indicates that consumers who maintain more frequent and larger volumes of organic purchases are primarily motivated by hedonism (e.g., enjoyment and

pleasure) rather than by environmental commitment or benevolence (Mai et al., 2021). Indeed, consumers tend to associate organic food with more favourable sensory attributes, such as taste, colour, and texture, compared to conventional food (Hughner et al., 2007; Lee and Yun, 2015; Nadricka et al., 2020) and consequently, heightened enjoyment and happiness (Baker et al., 2004; Lee and Yun, 2015). Consumers who have a self-indulgent/impulsive purchasing style and those who live in an indulgence (as opposed to restraint) culture are prone to purchase organic food products (Prentice et al., 2019; Leonidou et al., 2022). It has been well established that enjoyment, pleasure, taste, and indulgence fall within the realm of promotion focus (Higgins, 1998; Chitturi et al., 2008; Sengupta and Zhou, 2007).

On the other hand, organic food is also linked to a prevention focus. For example, consumers view organic food as safer and healthier than its conventional counterpart (Mai et al., 2021; Hughner et al., 2007; Baker et al., 2004; Fifita et al., 2020). A recent meta-analysis reveals that health as well as safety consciousness are two important drivers of organic food consumption (Leonidou et al., 2022). The demand for organic products is seen as consistent with the satisfaction of basic safety needs in Maslow's hierarchy of needs (Fifita et al., 2020). Attributes such as safety fall within the domain of prevention focus (Higgins, 1998; Aaker and Lee, 2001). Organic food is also perceived to possess nutritional advantages (Hughner et al., 2007), which is relevant to prevention-focused concerns (Aaker and Lee, 2001). Moreover, consumers are more likely to purchase organic food for their families, particularly when their children reside in the household (Thompson and Kidwell, 1998; Loureiro et al., 2001). Social relationships with close family members can make individuals' prevention focus more accessible, as maintaining family relationships (e.g., parent-duty tasks) often entails shouldering responsibilities and fulfilling obligations (Fei et al., 2020).

Despite those efforts, no research has attempted to differentiate organic food from generic green products. Drawing from literature on organic food and regulatory focus, we posit that organic food may not exclusively elicit a singular type of regulatory focus motivation. The type of regulatory focus organic food products might induce depends on one consumer's individual trait: impulsiveness. This thesis will explore the role of consumers' impulsiveness

in the relationship between exposure to organic food and regulatory focus priming.

### **3.2.4 The moderation role of impulsiveness**

Advertisers invest millions of dollars to curb impulsive behaviours such as drunk driving, smoking, drug abuse, and excessive sunbathing (Puri, 1996). Rook and Fisher (1995) identify impulsiveness as a unidimensional construct that reflects consumers' distinct inclinations to think and act in specific, recognisable manners. They define buying impulsiveness as the propensity of consumers to make purchases spontaneously, without deliberation, and with a sense of immediacy and energy. Rook and Fisher (1995) highlight that impulsive buyers are inclined to act on impulse, responding promptly and affirmatively to their purchasing urges. In extreme cases, their behaviour becomes predominantly stimulus-driven, where the urge to buy leads directly to an immediate and unrestrained physical reaction. Moreover, impulsive consumers tend to experience buying urges with greater frequency and intensity compared to other consumers. Other scholars, such as Puri (1996) and Sengupta and Zhou (2007), provide a similar definition of impulsiveness, yet the negative consequences of impulsiveness are included. For instance, an individual exhibits impulsive behaviour when he or she spontaneously decides to purchase an expensive piece of clothing, which is clearly beyond his or her budget (e.g., Puri 1996). Impulsive consumers are more easily swayed by hedonically appealing temptations (e.g., chocolate cakes), even though these tempting foods are unhealthy and potentially harmful to their well-being (Sengupta and Zhou, 2007). As such, impulsiveness is defined by Puri (1996) and Sengupta and Zhou (2007) as the experience of a sudden, unplanned urge to act in a hedonically satisfying way that offers immediate gratification, followed by acting on that impulse without thoroughly considering potential negative consequences.

Impulsiveness and factors that drive impulsive behaviour have long been examined by consumer behaviour researchers (e.g., Sengupta and Zhou, 2007; Rook and Fisher, 1995; Ramanathan and Menon, 2006; Rathee et al., 2023; Streicher et al., 2021). Ramanathan and Menon (2006) indicate that impulsiveness is driven by consumers' hedonic goals to seek pleasure in a variety of contexts. Such hedonic goals make impulsive consumers override

their self-control goals, which leads them to experience heightened pleasure for related marketing stimuli such as products (Ramanathan and Menon, 2006). Hedonism as a mechanism behind impulsive behaviour has been validated by several studies. For instance, Chung et al. (2017) suggest that impulsiveness positively predicts hedonic values, which, in turn, lead to impulsive buying of restaurant products in social commerce settings. Coelho et al. (2023) demonstrate that personal values (e.g., resultant conservation and resultant self-enhancement) indirectly influence consumers' impulsive buying through their hedonic shopping motivations. Utilising functional Magnetic Resonance Imaging (fMRI) to provide neural data, Casado-Aranda et al. (2022) find that when exposed to hedonic banners, impulsive consumers exhibit activation in brain regions linked to rewards, while regions associated with self-control show reduced activity. In contrast, when exposed to utilitarian banners, prudent consumers show increased activity in brain regions associated with self-control. This aligns with Ramanathan and Menon's (2006) findings that impulsiveness is characterized by a greater sensitivity to rewards and pleasure-seeking.

According to regulatory focus theory, in an attempt to align their actual selves with their ideal-selves, promotion-focused consumers are more concerned with the presence or absence of positive outcomes (gains versus non-gains). In contrast, prevention-focused consumers in an attempt to align their actual selves with their ought-selves are more concerned with the absence or presence of negative outcomes (non-losses versus losses) (Higgins, 1998; Higgins et al., 2020). Literature on impulsive buying suggests that consumers' impulsiveness is driven by either the motivation to achieve desired outcomes or the motivation to avoid undesired outcomes (Jo et al., 2022). Consequently, a specific regulatory focus orientation may amplify consumers' impulsive buying tendencies in compatible circumstances (Jo et al., 2022). Consumers with a promotion focus are inclined to seek pleasure and take risks, which can prompt them to make unplanned and spontaneous purchases (i.e., impulse buying). In contrast, consumers with a prevention focus tend to be more vigilant, deliberate, and analytical, leading them to consider product information in greater detail before making a purchase (Higgins, 1998; Das, 2016). Das (2016) further suggests that consumers with a promotion-focused motivation exhibit higher hedonic shopping values and impulsiveness compared to those with

a prevention-focused motivation, who display higher utilitarian shopping values and longer shopping durations.

Impulsiveness as an individual characteristic can serve as a moderator, affecting the activation of regulatory focus. Sengupta and Zhou (2007) find that mere exposure to hedonically appealing food (e.g., chocolate cakes) to impulsive consumers can spontaneously trigger a promotion focus among them. As a consequence, the evoked promotion focus leads to a choice of hedonic food over non-hedonic food. In addition to the different sensitivity to positive outcomes and negative outcomes across two regulatory focus systems, a promotion motivational system also has a greater emphasize on ideal-related benefits (e.g., luxury, sensory attributes) than on ought-related benefits (e.g., safety, functional attributes) (Higgins, 1998; Aaker and Lee, 2001). For instance, consumers with a promotion focus tend to prefer a car with more prominent ideal-related features (e.g., plush seats, a premium music sound system) over a car with more prominent ought-related features (e.g., antilock brakes, reliable battery backup). The reverse is true for those with a prevention focus (Higgins, 1998). Verplanken and Sato (2011) highlight the associations between regulatory focus and impulsiveness, as shown in Table 4. The strategies that impulsive consumers tend to use, the goals they aim to achieve, or the traits they exhibit can be associated with those of promotion-focused consumers. In contrast, the strategies employed by less impulsive (prudent) consumers, the goals they pursue, or the traits they display align more closely with those of prevention-focused consumers (Verplanken and Sato, 2011).

Table 5 The associations between regulatory focus and perspectives on impulsive behaviour

| <b>Promotion-focused</b>                      | <b>Prevention-focused</b>                   |
|-----------------------------------------------|---------------------------------------------|
| Proximity bias                                | Limited information processing              |
| Seeking pleasure, hedonic values              | Alleviating negative affect and mood repair |
| Fulfilling materialistic values               | Dealing with low self-esteem                |
| Personality traits: extravertedness, autonomy | Personality traits: emotional instability   |
| Purchasing symbols of identity                | Exerting conscious self-control             |

Source: Verplanken and Sato (2011)

Taken together, this thesis posits that consumers' impulsiveness is a dispositional trait that influences how organic food triggers a regulatory focus. Organic food has promotion-focused or ideal-related attributes. Organic food products as a kind of food product have prominent sensory attributes such as great tastes and colour, and can bring pleasure and enjoyment to consumers (Hughner et al., 2007; Lee and Yun, 2015; Nadricka et al., 2020; Baker et al., 2004; Lee and Yun, 2015). In addition, due to the high costs associated with producing organic food, the resulting premium prices of organic food can satisfy consumers' promotion goals (Higgins, 1998). Given the association between regulatory focus and impulsiveness, this thesis contends that consumers' impulsiveness determines whether organic food can prime a promotion focus. Impulsive consumers should pay more attention to the ideal-related benefits of organic food (Higgins, 1998; Aaker and Lee, 2001). However, conventional food as a baseline should not induce any regulatory focus motivations regardless of consumers' impulsiveness. Thus, this thesis hypothesizes:

H1: Organic food (vs. conventional) food can trigger a promotion focus in impulsive consumers.

H1a: Mere exposure to organic food (vs. conventional food) makes impulsive consumers prefer promotion-framed product claims over prevention-framed product claims.

H1b: Mere exposure to organic food (vs. conventional food) induces a promotion focus in impulsive consumers.

According to the literature on organic food, organic food products as an offshoot of green products, possess prevention-focused or ought-related attributes, such as safety, good for environmental protection, nutrition, and disease prevention (Mai et al., 2021; Hughner et al., 2007; Baker et al., 2004; Fifita et al., 2020). Thus, prudent consumers should place great weight on the ought-related benefits of organic food (Higgins, 1998; Aaker and Lee, 2001). Again, conventional food as a baseline should not induce any regulatory focus motivations regardless of consumers' impulsiveness. Thus, this thesis hypothesizes:

H2: Organic (vs. conventional) food can trigger a prevention focus in prudent consumers.

H2a: Mere exposure to organic food (vs. conventional food) makes prudent consumers prefer prevention-framed product claims over promotion-framed product claims.

H2b: Mere exposure to organic food (vs. conventional food) induces a prevention focus in prudent consumers.

### **3.3 Conceptual framework**

Based on the literature review on regulatory focus and priming methods for regulatory focus priming, as well as the hypothesis development, a conceptual framework incorporating focal variables has been developed, as illustrated in Figure 4. This framework identifies food type (organic food vs. conventional food) as the independent variable. Organic food serves as the primary research object of this thesis, while conventional food acts as the baseline for comparison.

Two dependent variables are included to measure consumers' regulatory focus. The first is preferences for regulatory focus claims, which serve as a proxy for assessing regulatory focus orientations (Fei et al., 2020; Jia et al., 2022). The second is regulatory focus orientations, which are measured directly using the regulatory focus scale (Fei et al., 2020).

Additionally, the framework incorporates a moderator, "impulsiveness," to examine how consumers' impulsiveness influences the priming effects of organic food. Specifically, this study investigates the interactive effects of food type and consumers' impulsiveness on regulatory focus. A rival moderator, "health consciousness", is also included in this framework (see Appendix A).

### **3.4 Conclusion**

In conclusion, this chapter has developed the hypotheses of this research and proposed a conceptual framework to test those hypotheses. The hypothesis development section primarily focuses on a specific priming method for regulatory focus, namely, products per se as a source of regulatory focus. Organic food as a type of product has been chosen as the priming method

for regulatory focus. To this end, the distinctions between organic food and generic green products are discussed in detail. In addition, consumer impulsiveness and its moderating role in affecting how organic food products trigger consumers' regulatory focus orientation are highlighted.

Moreover, this chapter proposes a conceptual framework by integrating three streams of literature: literature on organic food and generic green products, literature on regulatory focus and literature on impulsive buying behaviour. This integration provides a comprehensive theoretical foundation and establishes the research framework for this thesis. The next chapter will describe and discuss the methodology employed in this investigation to address the research problems and achieve the research objectives.

## **Chapter 4: Research Methodology**

### **4.1 Chapter overview**

This chapter outlines and explains the research methodology undertaken for this research. Details in relation to research philosophy, methods, analytical approaches, and ethics are discussed in this chapter. At the beginning, a number of research philosophies prevalent in business and management research are introduced, and the choice of this thesis is justified. Then, the three layers of research methodology based on Saunders et al. (2019), including the methodological choice, research strategy, and time horizon, are discussed, and the decisions are made. This thesis adopts an experimental research approach. The experimental design for the two studies is explained in detail, encompassing sampling and data collection, stimulus development, experimental procedures and measurements. Importantly, both studies are pre-registered before the data collection. Thus, the pre-registration details of both studies are presented. Next, the techniques used to tackle common method variance and to deal with data are discussed, followed by ethics considerations. This chapter ends with a brief summary.

### **4.2 Research philosophy**

It is important for management and marketing researchers to take into account research philosophy when making choice of research strategy, as it will significantly affect what will be investigated and how the investigation is understood (Johnson and Clark, 2006). Research philosophy can be defined as a framework of beliefs and assumptions that guide the process of knowledge development (Saunders et al., 2019). At every stage of the research, researchers need to make a range of assumptions, whether they are aware of this (Burrell and Morgan, 2016). These encompass assumptions regarding the nature of realities encountered in research (ontological assumptions), the human knowledge (epistemological assumptions), and the impact of the values of researchers on the research process (axiological assumptions) (Saunders et al., 2019). These assumptions will determine how researchers comprehend their research questions, what research methods they employ and how they explain their results (Crotty 1998). A set of appropriate and carefully considered assumptions forms the foundation of a research philosophy, guiding the choices of research methodology, research strategy, and

data collection and analysis. In light of this, the following section will introduce and explain different types of assumptions that researchers make in order to distinguish research philosophies.

There are three types of assumptions that are most relevant to research philosophies within the field of management and marketing: ontology, epistemology and axiology (see Table 6). Ontology pertains to assumptions concerning the nature of reality (Saunders et al., 2019). Ontological assumptions mainly aim to answer two key questions: What is the nature of reality? And what does the world look like? (Saunders et al., 2019). Ontological assumptions determine how researchers view and study their research objects, such as organisations, management, employees, consumers, and marketing communications. Ontological assumptions can be classified as two opposing extremes: objectivist and subjectivist extremes. Objectivism adopts the assumptions of the natural sciences, with the view that the social reality exists independently of social actors. Subjectivism, in contrast, draws on the assumptions of the arts and humanities, emphasising that social reality is constructed through the perceptions and actions of social actors. Ontologically, objectivism aligns with realism, which views social entities as akin to physical entities in the natural world—existing independently of how we perceive, label, or even recognise them. According to this perspective, the interpretations and experiences of social actors do not affect the existence of the social world (Burrell and Morgan 2016). However, ontologically, subjectivism aligns with nominalism, holding that the order and structures of social phenomena are constructed by researchers and other social actors through language, perceptions, and subsequent actions.

Epistemology involves assumptions about knowledge, including what is considered acceptable, valid, and legitimate knowledge, as well as how knowledge can be communicated to others (Burrell and Morgan, 2016). Epistemological assumptions mainly seek to address four key questions: How can we know what we know? What is considered acceptable knowledge? What defines good-quality data? And what kinds of contributions to knowledge can we make? (Saunders et al., 2019). Epistemology is shaped by ontology and, in turn, influences how knowledge is acquired and comprehended (Collis and Hussey, 2014).

Positivism and interpretivism are two widely adopted epistemological positions in social science research. Positivists contend that the world and the researcher are distinct entities, and an external reality can be uncovered through the testing of hypotheses and experiments using deductive reasoning (Bryman, 2008). In contrast, interpretivists assert that truth and knowledge are rooted in individuals' understanding and experiences, which inevitably shape how data is collected, interpreted, and analysed (Bryman, 2008).

Axiology involves the role of values and ethics (Saunders et al., 2019). Axiological assumptions primarily seek to address two key questions: What is the role of values in research? And how should we deal with the values of research participants? (Saunders et al., 2019). Heron (1996) indicates that values are the driving force behind all human behaviour. While the values of researchers will inevitably influence the research process, it is vital to explicitly acknowledge and reflect on them during the process of conducting and writing up the research. The act of selecting one research topic over another inherently implies that the researcher considers one to be more significant.

Overall, one of the objectives of the current thesis is to examine a number of proposed hypotheses and explore the relationship between organic food products, consumers' impulsiveness trait and regulatory focus priming. To this end, large amounts of empirical data regarding consumers' preferences, consumers' motivations, consumers' traits and consumers' perceptions are objectively measured and analysed via statistical approaches (e.g., Analysis of Variance and regressions). Hence, the ontological position of this thesis is objectivism. In addition, the aim of this thesis is to discover the above relationship by testing the proposed hypotheses based on deductive reasoning. Thus, the epistemological stance of this thesis is positivism. From a perspective of axiology, this thesis values data collected through consumers' responses to anonymous questionnaires rather than individual interaction with participants via face-to-face interviews or ethnography.

Table 6 Research philosophies

| Research | Types | Descriptions |
|----------|-------|--------------|
|----------|-------|--------------|

| philosophies |                |                                                                                                                                                                                                                                                                                                    |
|--------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ontology     | Objectivism    | <ol style="list-style-type: none"> <li>1. Social reality exists independently of social actors.</li> <li>2. The existence of the social world is not shaped by the interpretations and experiences of social actors.</li> </ol>                                                                    |
|              | Subjectivism   | <ol style="list-style-type: none"> <li>1. Social reality is shaped by the perceptions and behaviours of social actors.</li> <li>2. Researchers and other social actors construct the order and structures of social phenomena through language, perceptions, and subsequent behaviours.</li> </ol> |
| Epistemology | Positivism     | The researcher and the world exist as separate entities, and an objective reality can be discovered via hypothesis testing and experimentation based on deductive reasoning.                                                                                                                       |
|              | Interpretivism | Truth and knowledge are shaped by individuals' experiences and understanding, influencing the manners in which data is collected, interpreted, and analysed.                                                                                                                                       |
| Axiology     | /              | Involves the role of values and ethics within the research.                                                                                                                                                                                                                                        |

Source: Saunders et al. (2019)

### 4.3 Research methodology

To ensure the coherence of the research design, it is critical to match the research methodology with the chosen research philosophies. The research methodology in this section is divided into three layers: the methodological choice, research strategy, and time horizon (Saunders et al., 2019). The research methodology is discussed layer by layer before making

decisions.

#### **4.3.1 Methodological choice**

The methodological choice concerns whether a researcher adopts a quantitative, a qualitative or a mixed research method (Saunders et al., 2019), as presented in Table 8. The quantitative method is commonly related to a philosophy of positivism and a deductive approach, where data are gathered and analysed to test hypotheses or verify a theory. Quantitative research explores the associations between variables through numerical measurements and analyses data using various statistical methods. In this method, the researcher is regarded as independent of respondents. The qualitative method is typically associated with an interpretive philosophy and an inductive approach, employing a naturalistic and emerging research design to build or develop new theories. Qualitative research focuses on exploring participants' meanings and the relationships between them by utilising diverse data collection and analytical techniques. These meanings and relationships are derived from words and images rather than numerical measurements. Consequently, individuals who agree to participate in qualitative research are viewed not merely as respondents but as participants to the data collection process. Mixed methods research combines quantitative and qualitative data collection techniques and analytical procedures within the same study, often drawing on two philosophical perspectives: pragmatism and critical realism. It can employ a deductive, inductive, or abductive approach to theory development, integrating the key characteristics of both quantitative and qualitative research.

In this thesis, the chosen methodology is determined by the research objectives. It does not aim to build or explore theory, which is typically linked to qualitative research methods (Saunders et al., 2019). Instead, the empirical part of the aim of this thesis is to examine the causality between the identified variables, including food types, consumer impulsiveness traits, and primed regulatory focus orientations, through an explanatory lens. As discussed earlier, this thesis adopts an ontological stance of objectivism, an epistemological perspective of positivism, and a deductive approach to guide the research project. Therefore, the quantitative method is expected to be an effective and appropriate choice.

### 4.3.2 Research strategy

The research strategy refers to a plan for how a researcher addresses their research question (Saunders et al., 2019). The choice of research strategy is closely connected to their research philosophy and methodology. Given that this thesis adopts a quantitative research method, this section merely focuses on the research strategies in relation to quantitative research, encompassing experiments, surveys, and archival and documentary research. An experiment is a research strategy rooted in the natural sciences, though it features prominently in psychology and social science research (Saunders et al., 2019). Its primary purpose is to examine the likelihood that a change in an independent variable will cause a corresponding change in a dependent variable. Table 7 provides a description of the variable types. Experimental research relies on predictive hypotheses to test the existence of a relationship between variables, rather than exploring open research questions.

Table 7 Types of variables for experimental research

| Variable Type    | Description                                                                                                               |
|------------------|---------------------------------------------------------------------------------------------------------------------------|
| Independent (IV) | The variable that is intentionally manipulated or changed to observe its impact on the dependent variable.                |
| Dependent (DV)   | The variable that reflects the observed outcome or result, potentially influenced by changes in the independent variable. |
| Mediator (MV)    | A variable that acts as a link between the independent and dependent variables, transmitting the effect (IV → MV → DV).   |
| Moderator        | A variable that influences the strength or direction of the relationship between the independent and dependent variables. |
| Control          | Variables that are observed and kept constant to ensure they do not interfere with the                                    |

|             |                                                                                                                                                                                                                           |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | relationship between the independent and dependent variables.                                                                                                                                                             |
| Confounding | Variables that are not directly observed or measured but can impact the relationship between the independent and dependent variables, potentially leading to misleading conclusions if not accounted for in the analysis. |

Source: Saunders et al. (2019)

The survey is a widely used strategy in business and management research, primarily employed to answer questions such as “what,” “who,” “where,” “how much,” and “how many” (Saunders et al., 2019). As a result, it is commonly applied in exploratory and descriptive research. Survey-based research employs questionnaires and collects standardised data from a large number of respondents for easy comparison. The survey strategy enables researchers to collect data that can be analysed quantitatively using descriptive and inferential statistics. It also helps identify possible reasons for relationships between variables and facilitates the development of models to represent these relationships.

The last type of research strategy discussed here is the archival and documentary research strategy. Researchers using an archival and documentary research strategy may access open resources online created by governments and businesses all over the world. These materials encompass a wide variety of types and formats, providing researchers with significant opportunities to design a research project that leverages this extensive range of secondary data sources. However, researchers employing this strategy must be mindful that the documents they utilise were not originally created for research purposes.

Overall, the aim of this thesis is to examine the causal relationship between food types, consumer impulsiveness traits, and primed regulatory focus orientations. Specifically, it aims

to employ primary data (questionnaires) to examine how organic food versus conventional food (independent variable) influences consumers' regulatory focus motivations (dependent variable) under the condition of high impulsiveness versus low impulsiveness (moderator). A number of control variables are also considered within the study. Thus, an experimental research strategy is the appropriate choice for this thesis, rather than a survey or archival and documentary research strategy.

Table 8 Methodological choices and research strategies

| Methodological choices                                                                       | Research approaches | Research strategies                                           |
|----------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------|
| Quantitative method: gathers and analyses data to test hypotheses or verify a theory.        | Deduction           | Experiments, surveys, archival and documentary, etc.          |
| Qualitative method: uses a naturalistic and emerging research design to build or develop new | Induction           | Interviews, focus groups, etc.                                |
| Mixed method: integrates the key features of both quantitative and qualitative research.     | Abduction           | A mix of both quantitative- and qualitative-based strategies. |

Source: Saunders et al. (2019)

### 4.3.3 Time horizon

Generally, there are two types of time horizons for research: cross-sectional studies and longitudinal studies. Cross-sectional studies can also be called “snapshot” studies, which focus on a particular point in time, whereas longitudinal studies are more comparable to a diary or a series of snapshots, representing events over a period of time. The longitudinal approach as a time horizon for research may help investigate changes and developments over time (Saunders et al., 2019). However, this thesis is aimed at investigating how mere exposure

to organic food products can affect consumers' regulatory focus at a particular time. The potential changes in primed regulatory focus over time, such as shifts in orientation or strength, are not the primary focus of this thesis. In light of this, this thesis adopts a cross-sectional time horizon.

#### **4.4 Experimental design**

As clarified in previous sections, this thesis adopts an experimental research strategy. This section aims to uncover detailed experimental techniques, tools, and procedures utilised in this thesis, providing a clear understanding of how the experiments are conducted.

##### **4.4.1 Experimental approach**

Generally, there are two experimental approaches: between-subjects design and within-subjects design. In a between-subjects design, participants are randomly assigned to two separate groups (the control group and the experimental group), where different interventions or manipulations are applied. The randomization helps isolate the effect of manipulating the independent variable on the dependent variable. In contrast, a within-subjects design involves a single group in which every participant experiences the same manipulations or interventions, also referred to as repeated measures. This approach typically includes a baseline measurement for the dependent variable, followed by the interventions or manipulations. While a within-subjects design can be more practical than a between-subjects approach due to requiring fewer participants, it has the potential drawback of carryover effects, such as task familiarity or participant fatigue, which may undermine the validity of the results (Saunders et al., 2019).

The current thesis implements a two-cell (food type: organic food vs. conventional food) between-subjects experimental design across two studies. This thesis also measures consumer impulsiveness as a continuous variable and the moderator. The conventional food group serves as the control group while the organic food serves as the experimental group. This choice is made under the consideration of the objectives of this research, which is to examine how organic food products themselves might prime regulatory focus among consumers.

Moreover, this approach has advantages in terms of the validity of the results compared to within-subjects designs (Saunders et al., 2019).

#### **4.4.2 Sampling and data collection**

In probability sampling, the likelihood of each participant being selected from the target population is known and usually equal. In contrast, in non-probability sampling, this probability is unknown. It is critical for researchers to select the most appropriate sampling technique based on the research questions and objectives while balancing the costs and benefits of their choice. This thesis adopts a non-probability sampling approach for the following reasons.

First, one of the objectives of this thesis is to empirically examine how organic food products may prime regulatory focus among general consumers. This study does not aim to target a specific consumer group, as the characteristics of a particular group are not the primary focus. The generalisability of the sample obtained through non-probability sampling is acceptable (Saunders et al., 2019).

Second, while probability sampling has advantages in reducing selection bias and increasing the generalisability of findings, this technique can be time-consuming and costly. Considering the time constraint of completing this thesis and the limited budget, non-probability sampling, which is faster and more cost-effective, would be a more suitable choice.

Third, probability sampling requires a complete list of the population (Saunders et al., 2019). In this thesis, this is not available as this thesis targets general consumers rather than a small group of consumers. Non-probability sampling, such as convenience sampling in this thesis, is the most feasible option.

In this thesis, participants are recruited on Credamo. Credamo is an online data-collection platform similar to the Qualtrics panel, and its data quality has been highly recognised (Dai et al., 2024). This online platform predominantly uses convenience sampling, ensuring the rapid

collection speed and wide reach to large populations. Moreover, this thesis recruits participants from China, with a research focus on organic food consumption. China is a significant and emerging market for organic food products (Yu et al., 2021). Studying organic food consumption in China can provide valuable insights for marketers and companies.

In this thesis, two main studies are conducted using an experimental research strategy. The sample size of each experiment is determined through a power analysis conducted through G\*Power ( $\alpha = .05$ , power = .80) (Cohen, 1988). This thesis expects an effect size of  $f = .25$  ( $0.1 = \text{small}$ ,  $0.25 = \text{medium}$ ,  $0.4 = \text{large}$ ) for each experiment, as this effect size is the most commonly used (Cohen, 1988). The settings used to calculate the sample size for each study should be the same, as both studies use the same experimental design—a one-factor, two-cell, between-subjects design. The power analysis reveals a minimum required sample of 128 for each experiment.

#### **4.4.3 Stimulus development**

As described in previous sections, in this thesis, two online experiments are conducted with the same two-cell (food type: organic food vs. conventional food) between-subjects design through a scenario-based approach. This thesis develops specific stimuli for each experiment. Five conversational interviews are conducted to inform the following stimulus development and manipulation. An interview guide is developed, comprising broad, open-ended questions on participants' shopping experience (e.g., shopping scenes) with and their opinions of organic food products. This overall approach allows for achieving the research objectives of this thesis while allowing possible new insights to emerge (Gerrath et al., 2024). Convenience snowball sampling is used to recruit the participants who have purchased at least one organic food product (Gerrath et al., 2024). After obtaining informed consent, five participants are interviewed, aged between 29 and 56 years of age (60 % female). To maintain anonymity, all respondents are assigned pseudonyms. The data is then coded and analysed to guide the stimulus development and manipulation, using a similar approach of Lou et al. (2023). The findings indicate that consumers tend to buy organic food from a specific area for organic food within large supermarkets. They will check organic certificates to determine if the food

products are organic (see Appendix C for more detail). The findings inform the stimulus to include a picture of fresh organic fruits are on sale within a supermarket, accompanied by an organic certification (in organic food condition). The more detailed manipulation is provided in the following sections.

As discussed in the hypothesis development and conceptual framework chapter, the aim of this thesis is to examine the priming effect of mere exposure to organic food products while conventional food products serve as a baseline. Organic food or conventional food products are presented in the form of pictures, with no verbal descriptions of the exact definitions of organic food or conventional food. This aims to minimise the confounding effects as the information about organic food, such as its definitions, might manipulate participants. The familiarity of organic food products is measured in pretests and main studies to test whether this factor influences the results.

#### **4.4.3.1 Study 1**

In Study 1, this thesis develops one stimulus for the organic food condition and the other for the conventional food condition. In the organic food condition, participants are presented with a picture in which there is a fruit stall where a range of common fruits are on sale, and the signage along with the organic label indicates that these are newly arrived organic fruits (see Figure 5). The organic label shown in the picture is an official organic certificate issued by the Chinese government. In the conventional food condition, participants are presented with a picture almost identical to Figure 5, except that the organic label is removed and the food type shown on the signage is changed to “selected fruits” (see Figure 6). The term “selected fruits” is used instead of “selected conventional fruits” in this conventional food condition because it sounds more natural. The term “conventional food” is typically used in contrast to organic food. Using “selected conventional fruits” may unintentionally lead participants in the conventional food condition to infer the study’s purpose, which could affect their responses.

The objective of including various fruit types is to avoid the case in which participants dislike a particular type of fruit, leading to biased results. The realism of scenarios is tested in the

pretest and the main study. The original stimuli use Mandarin on the signage, as the participants are Chinese. The stimuli presented here use translated English instead of the original Mandarin for the convenience of readers.



Figure 5 Organic food condition in Study 1



Figure 6 Conventional food condition in Study 1

#### 4.4.3.2 Study 2

In Study 2, this thesis develops one stimulus for the organic food condition and the other for the conventional food condition. In the organic food condition, participants are presented with a picture in which there are several apples with an obvious organic label, indicating that these are organic apples (see Figure 7). The organic label shown in the picture is an official organic certificate issued by the Chinese government. In the conventional food condition, participants are presented with a picture almost identical to Figure 7, except that the organic label is

removed (see Figure 8).

Unlike the pictures used in Study 1, Study 2 develops a new set of stimuli featuring only apples instead of multiple fruit types. The purpose of creating new stimuli is to enhance external validity and the generalisability of the findings. The apple variety shown in the stimuli is the most common type in China. The realism of the scenarios is tested in both the pretest and the main study.



Figure 7 Organic food condition in Study 2



Figure 8 Conventional food condition in Study 2

#### 4.4.4 Measurements

This section illustrates the measurements used in this thesis, which are drawn from existing literature. Given that the original measurements are written in English yet participants speak

Mandarin, a rigorous back translation procedure is undertaken to ensure that the translated text is accurate and conveys the original meaning (Douglas and Craig, 2007). A number of measurements are slightly adapted to fit the context. Those measurements are used for attention checks, the dependent variable, the moderator, the control variables, and the rival variable.

#### **4.4.4.1 Measurements for Study 1**

The attention check question is measured by asking participants a dichotomous question: “What category do the fruits you see belong to?” They are required to select either the “organic fruits” option or the “conventional fruits” option. Following the literature on regulatory focus and mere exposure (Jia et al., 2022; Sengupta and Zhou, 2007), the manipulation check question for mere exposure is not required, as objective of this study is to test how mere exposure to organic food (vs. conventional food) influence consumers’ regulatory focus, and regulatory focus is measured as an outcome variable.

Consumers’ regulatory focus orientations are measured via their preferences for two advertisements for a down jacket brand framed based on regulatory focus theory: “Provides warmth and increases energy in a world of ice and snow” (promotion-focused frame) versus “Protects against the cold and prevents colds in a world of ice and snow” (prevention-focused frame) (1 = definitely A, 7 = definitely B; A represents the promotion-focused advertisement and B represents the prevention-focused advertisement). This measurement is adapted from Lee and Aaker (2004), which is one of the widely used approaches to measure regulatory focus (e.g., Fei et al., 2020; Jia et al., 2022). According to regulatory focus theory (Higgins, 1998), individuals with a promotion-focused orientation tend to prefer promotion-focused frames to prevention-focused frames. In contrast, individuals with a prevention-focused orientation tend to prefer prevention-focused frames to promotion-focused frames. This effect can carry over into out-of-context domains (Borges and Gomez, 2015). Thus, although the stimuli presented to participants are organic food, which is not relevant to those advertisements for a down jacket brand, it is expected to observe a regulatory focus effect.

This thesis measures consumer impulsiveness by using one of the highly cited measurements, the 12-item consumer impulsiveness scale, drawn from Puri (1996). This scale consists of two subscales: the prudence and the hedonic subscales (Ramanathan and Menon, 2006). For the prudence subscale, participants need to indicate how seven attributes (self-controlled, farsighted, responsible, restrained, rational, methodical and a planner) describe them on a seven-point scale from 1 (usually would describe me) to 4 (sometimes would describe me) to 7 (seldom would describe me). When it comes to the hedonic subscales, participants need to indicate how five attributes (impulsive, extravagant, easily tempted, enjoy spending, and careless) describe them on a seven-point scale from 1 (usually would describe me) to 4 (sometimes would describe me) to 7 (seldom would describe me). Their responses on this subscale are reverse scored. An overall index is created by averaging the score of each scale item (Ramanathan and Menon, 2006).

Health consciousness as a rival moderator is measured via a 5-item scale adapted from Nagaraj (2021). Please are asked to indicate to what extent they agree with the following statements about their health consciousness: “I’m usually aware of my health”; “I’m very conscious about my health”; “I’m aware of the state of my health as I go through the day”; “I’m alert to changes in my health” and “I take responsibility for the state of my health”(1= strongly disagree, 7 = strongly agree). This thesis treats health consciousness as a rival moderator. Thus, this thesis does not propose hypotheses on this factor. Instead, this thesis discusses the definition of health consciousness and its association with regulatory focus in Appendix A.

Liking as a control variable is measured by asking participants how much they like organic food (1 = not at all, and 7 = very much so; Sengupta and Zhou, 2007). Knowledge or familiarity (Kim and Park, 2019) by asking participants how familiar they are with organic food (1 = not at all, and 7 = very much so).

A separate attention check question is used to screen out participants who fail the attention check. This question is measured using a single-item scale: “This question tests whether you

are answering carefully; please select ‘Very dissatisfied’ (1 = Very dissatisfied; 5 = Very satisfied).”

Realism is measured via a single-item scale: “The scenario is realistic” (1= strongly disagree, 7 = strongly agree).

#### **4.4.4.2 Measurements for Study 2**

The attention check question is measured by asking participants a dichotomous question: “What category do the fruits you see belong to?” They are required to select either the “organic fruits” option or the “conventional fruits” option. Following the literature on regulatory focus and mere exposure (Jia et al., 2022; Sengupta and Zhou, 2007), the manipulation check question for mere exposure is not required, as objective of this study is to test how mere exposure to organic food (vs. conventional food) influence consumers’ regulatory focus, and regulatory focus is measured as an outcome variable.

Distinct from Study 1, consumers’ regulatory focus orientations are measured directly via a 3-item regulatory focus scale adapted from Fei et al. (2020). Participants are informed that there are several common goals in people’s daily lives and are asked to indicate which goal in each pair is more important to them at this moment. (The presentation order of the four pairs of goals is randomised.) Each pair consists of a prevention-focused goal and a promotion-focused goal (-4 = responsibility/safety/my duties/my obligations is [are] more important to me now, 0 = equally important to me now, 4 = accomplishment/achievement/my hopes/my aspirations is [are] more important to me now).

Consumer impulsiveness, realism, and knowledge or familiarity are measured using the same measurements as Study 1. One attention question is measured using a single-item scale: “This question tests whether you are answering carefully; please select ‘Very dissatisfied’ (1 = Very dissatisfied; 5 = Very satisfied).” The other attention question is measured by asking participants to recall the type of fruit in the picture and choose one from apple, pear, plum, persimmon, and peach.

Participants' hunger level as a control variable is measured by asking them how hungry they are at that moment (1 = not at all; 7 = very much). Liking as a control variable is measured via two questions: "How much do you like organic food?" (1 = not at all, and 7 = very much so; Sengupta and Zhou, 2007) and "How much do you like apples?" (1 = not at all, and 7 = very much so; Sengupta and Zhou, 2007). This is because Study 2 uses apples as a single fruit variety in stimuli.

Table 9 Measurements for key variables

| Variables              | Items                                                                                                                                                                                                                                                                                                                                                                              | References                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Ad preferences         | <p>A down jacket brand is testing advertisements for its new products and wants to know your opinions. Please indicate your preferences for two advertisements:</p> <p>"Provides warmth and increases energy in a world of ice and snow" (promotion-focused frame) versus "Protects against the cold and prevents colds in a world of ice and snow" (prevention-focused frame)</p> | Adapted from Lee and Aaker (2004) |
| Regulatory focus scale | <p>Indicate which goal in each pair is more important to them at this moment:</p> <p>-4 = responsibility/safety/my duties/my obligations is [are] more important to me now, 0 = equally important to me now, 4 =</p>                                                                                                                                                               | Adapted from Fei et al. (2020)    |

|                              |                                                                                                                                                                                                                                                                                                                                                                |                             |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|                              | accomplishment/achievement/my hopes/my aspirations is [are] more important to me now.                                                                                                                                                                                                                                                                          |                             |
| Consumer impulsiveness scale | <p>Indicate how the following 12 attributes describe you:</p> <p>self-controlled, farsighted, responsible, restrained, rational*, methodical, a planner, impulsive*, extravagant*, easily tempted*, enjoy spending*, and careless*.</p> <p>Note, “*” indicates that the score is reverse coded.</p>                                                            | Adapted from Puri (1996)    |
| Health consciousness         | <p>Indicate to what extent you agree with the following statements:</p> <p>(1) “I’m usually aware of my health”;</p> <p>(2) “I’m very conscious about my health”;</p> <p>(3) “I’m aware of the state of my health as I go through the day”;</p> <p>(4) “I’m alert to changes in my health”;</p> <p>(5) “I take responsibility for the state of my health”.</p> | Adapted from Nagaraj (2021) |

#### 4.4.5 Experimental procedures

##### 4.4.5.1 Experimental procedures for Study 1

This study implemented a one-factor two-cell (food type: organic food vs. conventional food) between-subjects design. This study recruited 507 Chinese participants on Credamo (final

number after data cleaning), and they participated in exchange for standard payment. Participants were told that a food company was testing advertisements for their products and would like to receive some advice and feedback from them. Participants were then randomly assigned to the organic food condition or the conventional food condition. In the organic food condition, they saw a picture in which there was a fruit stall where a range of common fruits on sale, and the signage along with the organic label indicated that these were newly arrived organic fruits (see Figure 5). In the conventional food condition, participants were presented with a picture almost identical to Figure 5, except that the organic label was removed and the food type shown on the signage was changed to “selected fruits” (see Figure 6). In each condition, participants read “Please imagine that you are shopping in a fruit store, and you are looking at rows of fresh fruits. At this moment, you are thinking about whether to pick some to take home and enjoy. Please write down 3-5 thoughts in your mind at this moment”. After they wrote down their thoughts, they answered the manipulation/attention check question by indicating whether they saw organic fruits or regular fruits. Participants also reported their opinions about whether the description of the scene is realistic.

Next, participants were informed that a down jacket brand launched an ad test for its new products and needed their opinions on two ads that were created. Participants reported their ad preferences. They then reported their health consciousness, impulsiveness, knowledge or familiarity, an attention check question, and liking. Finally, they reported demographic information including age, gender, education, and household income.

#### **4.4.5.2 Experimental procedures for Study 2**

This study implemented a one-factor two-cell (food type: organic food vs. conventional food) between-subjects design. This study recruited 203 Chinese participants (final number after data cleaning) on Credamo, and they participated in exchange for standard payment. Participants were informed that the researcher would like to receive some advice and feedback from them about food. Participants were then randomly assigned to the organic food condition or the conventional food condition. In the organic food condition, participants were presented with a picture in which there were several apples with an obvious organic label,

indicating that these were organic apples (see Figure 7). In the conventional food condition, participants were presented with a picture almost identical to Figure 7, except that the organic label was removed (see Figure 8). In each condition, participants read “Please imagine that you are shopping in a fruit store and you see the following fruits in front of you. Please write down 3-5 thoughts that come to your mind at this moment”. After they wrote down their thoughts, they answered the manipulation/attention check question by indicating whether they saw organic fruits or regular fruits. Participants also reported their opinions about whether the description of the scene is realistic.

Next, participants responded to the regulatory focus scale. They then reported their impulsiveness, knowledge or familiarity, attention check questions, and liking. Finally, they reported demographic information including age, gender, education, and household income.

#### **4.4 Pre-registration**

In recent years, an increasing number of journals and scholars within the discipline of psychology and business and management encourage the use of pre-registration and open science. Pre-registration can help address issues such as false positives caused by p-hacking, where researchers conduct multiple studies using different data-cleaning approaches and select the most desirable results to report (Simmons et al., 2021). Although pre-registration does not solve all potential issues, such as hidden confounds or fraud, without it, one can safely bet that many more findings will be false (Simmons et al., 2021). To respond to the call for pre-registration and open science, this thesis has completed pre-registration procedures for both studies using As-Predicted (Simmons et al., 2021). For each pre-registration, the author(s) of the research and the pre-registration time are recorded. Eight core questions are answered, and the responses, along with the records, cannot be changed. The questions and answers are presented in Table 10 for Study 1 and Table 11 for Study 2. The pre-registration for Study 1 was completed on August 15, 2024, before data collection. The pre-registration for Study 2 was completed on August 21, 2024, before data collection.

Table 10 Pre-registration table for Study 1

| Questions                                                                                                                                                                | Responses                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Have any data been collected for this study already?                                                                                                                     | No, no data have been collected for this study yet.                                                                                                                                           |
| What's the main question being asked or hypothesis being tested in this study?                                                                                           | Organic (vs. conventional) food can make impulsive people more promotion-focused, while organic (vs. conventional) food can make prudent people more prevention-focused.                      |
| Describe the key dependent variable(s) specifying how they will be measured.                                                                                             | Preference for two advertisements (promotion-focused vs. prevention-focused).                                                                                                                 |
| How many and which conditions will participants be assigned to?                                                                                                          | Participants will be randomly assigned to one of two conditions: organic food vs. conventional food. Each participant will see two advertisements (promotion-focused and prevention-focused). |
| Specify exactly which analyses you will conduct to examine the main question/hypothesis.                                                                                 | Process Model 1 will be used to test the main research question.                                                                                                                              |
| Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.                                                          | Participants who do not pass the attention check will not be included in the final analysis. Additionally, anyone who finishes the survey in under one minute will be excluded.               |
| How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined. | The goal of the study is to obtain responses from a minimum of 160 individuals.                                                                                                               |
| Anything else you would like to pre-register?                                                                                                                            | Impulsiveness will be measured.                                                                                                                                                               |

Table 11 Pre-registration table for Study 2

| Questions                                                                                | Responses                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Have any data been collected for this study already?                                     | No, no data have been collected for this study yet.                                                                                                                                                                                                                                                                                                                                                                           |
| What's the main question being asked or hypothesis being tested in this study?           | Organic (vs. conventional) food can make impulsive people more promotion-focused, while organic (vs. conventional) food can make prudent people more prevention-focused.                                                                                                                                                                                                                                                      |
| Describe the key dependent variable(s) specifying how they will be measured.             | Four pairs of common goals will be measured as the DV. Participants need to rate the relative importance of each pair of goals. Each pair features a prevention-focused goal and a promotion-focused goal ( -4 = responsibility/safety/my duties/my obligations is [are] more important to me now, 0 = equally important to me now, 4 = accomplishment/achievement/my hopes/my aspirations is [are] more important to me now. |
| How many and which conditions will participants be assigned to?                          | Participants will be randomly assigned to one of two conditions: organic food vs. conventional food.                                                                                                                                                                                                                                                                                                                          |
| Specify exactly which analyses you will conduct to examine the main question/hypothesis. | Process Model 1 will be used to test the main research question. Impulsiveness will be tested as a continuous variable.                                                                                                                                                                                                                                                                                                       |
| Describe exactly how outliers will be defined and handled, and your precise rule(s) for  | Participants who do not pass the attention check will not be included in the final                                                                                                                                                                                                                                                                                                                                            |

|                                                                                                                                                                          |                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| excluding observations.                                                                                                                                                  | analysis. Additionally, anyone who finishes the survey in under one minute will be excluded. |
| How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined. | The goal of the study is to obtain responses from a minimum of 200 individuals.              |
| Anything else you would like to pre-register?                                                                                                                            | The familiarity with and liking of organic food will be measured.                            |

#### 4.5 Common method variance

Many researchers acknowledge that common method variance is a potential issue in behavioural research when data collection relies on self-report questionnaires. Common method variance refers to variance attributable to the measurement method rather than the constructs the measures are intended to represent (Podsakoff et al., 2003). This section discusses the potential sources of common method variance and the techniques used to tackle common method variance.

First, all measurements and scales employed in this thesis have undergone careful reviews by the supervisory team and rigorous back-to-back translation to ensure accuracy, readability and understandability. Second, a number of items are reverse-coded to ensure participants' engagement in cognitive processing (Podsakoff et al., 2003). In addition, attention check questions are applied to identify those who fail to pay enough attention. Third, methodological separation of the measurements in the questionnaire is implemented to alleviate the impact of common method variance (Podsakoff et al., 2003). Specifically, each measurement is placed on a different page and preceded by a brief description to ensure clarity and reduce potential bias. Fourth, this research uses different response formats across the questionnaires, ranging from "strongly disagree" and "not at all" to "seldom would describe me." This remedy can help mitigate response bias, thereby improving data quality.

## **4.6 Data analysis procedure**

### **4.6.1 Data cleaning and checking**

The data are analysed using SPSS version 27.0 software. Before hypothesis testing, a step-by-step data cleaning and checking process is conducted to ensure data accuracy and prepare the data for further analysis (Tabachnick and Fidell, 2019). The first step is to ensure data validity by screening out participants who fail any attention check. Additionally, through several pre-tests using the same questionnaire as the main study, it is determined that one minute should be the minimum duration required to complete the questionnaire. Therefore, participants who take less than one minute to complete the questionnaire are screened out. This data cleaning process has been pre-registered, as described in the previous section. The second step is to code and edit the raw data in SPSS software. The researcher carefully reviews the datasets to minimise unintentional errors, such as missing responses (Hair et al., 2006). To this end, this thesis employs error detection techniques, including basic descriptive statistics (Hair et al., 2006). At this stage, no data errors or mistakes are identified. Third, the normality of data is tested by using objective statistical techniques such as Kolmogorov–Smirnov and Shapiro–Wilk tests and the values of skewness and kurtosis (Hair et al., 2019). Fourth, this thesis also utilises statistical techniques to address common method variance, such as Harman’s one-factor test (Podsakoff et al., 2003).

### **4.6.2 Data preliminary analyses**

Furthermore, after the data cleaning and checking process, this thesis proceeds to conduct a set of preliminary analyses, including descriptive statistics, unidimensionality check, scale reliability, the convergent and discriminant validity of scales, and realism check of scenarios. Descriptive statistics of samples are used for a better understanding of the characteristics of participants. As the most widely used approach, Cronbach’s alpha is used to examine the reliability of the scales. Reliability refers to the degree of consistency in measurement values when assessed under the same conditions (Hair et al., 2019). Validity refers to the degree to which a measure or set of measures accurately captures the concept it is intended to assess (Hair et al., 2019). Convergent validity and discriminant validity are the two most commonly

used approaches to measure validity in social science. Finally, one sample t-test is conducted to examine the realism of scenarios.

#### **4.6.3 Hypothesis testing**

After the data cleaning and checking process and preliminary data analyses, the final part of the analysis focuses on the hypothesis testing. This thesis posits that organic food does not activate a single regulatory focus orientation. Rather, the primed regulatory focus orientation (either a promotion focus or a prevention focus) is contingent on consumer impulsiveness (either impulsive or prudent). In light of this, this thesis initially conducts the analysis of variance (ANOVA) test to examine the mean differences across conditions (organic food condition vs. conventional food condition) on consumers' regulatory focus orientations (measured by ad preferences in Study 1 and by the regulatory focus scale in Study 2). ANOVA is recognised as a more suitable technique than the t-test in experimental research, as the t-test can be biased when assessing differences between two levels of independent variables (Field and Hole, 2003). Furthermore, PROCESS Model 1 is utilised to examine the interactive effects of food type (organic food vs. conventional food) and consumer impulsiveness (impulsive vs. prudent) on consumers' regulatory focus orientations (measured by ad preferences in Study 1 and by the regulatory focus scale in Study 2). Hair et al. (2019) indicate that the PROCESS macro is a suitable and effective tool for examining observed variables in a model and estimating various effects, such as mediation, moderation, and their combination.

#### **4.7 Ethical considerations**

Ethical concerns arise at various stages of research, from designing and planning the research to collecting, analysing, storing, and reporting data. Research ethics can be defined as the behavioural standards that guide researchers' conduct concerning the rights of those who participate in or are affected by the research (Saunders et al., 2019). Appropriate ethics considerations in research can help researchers achieve their research objectives. The conduct of this thesis is guided by the University of Sheffield's code of ethics. At the early stage of this research (research designing and planning), a research ethics application (including an

application form, a participation information sheet, and a consent form) was submitted to the ethics committee based at the University of Sheffield. After the review and revision procedures, approval was granted under application number 048164.

The ethics approval of this research has mainly addressed a range of general ethical issues. First, informed consent is required for participants. As clarified in the previous sections, this thesis collects data via online experiments using questionnaires. The consent form and information sheet are shown at the beginning of the survey. Each participant needs to provide their consent before participating in the survey. The researcher makes it clear in the online survey that each participant is allowed to withdraw at any time during the experiment without providing any reasons.

Second, the nature of participation and scope to withdraw are made aware at the beginning of the survey. Participants are informed that they are eligible to participate if they are over 18. In addition, they must be located in mainland China and read and write in Mandarin. Individuals who belong to a vulnerable group (e.g., minors, children, elderly individuals, pregnant women, etc.) are not eligible to participate in this research.

Third, the consent form and information sheet make it clear that the survey will not cause any potential harm to participants. The stimuli to be used are regular images/appeals on foods or common products in the real world. The methods (e.g., measurements) of online experiments are well-established and safe.

Fourth, this research guarantees data confidentiality and participant anonymity. Participants are informed that their information is kept confidential by using identification numbers instead of their names. They will not be able to be identified in any reports or publications unless they have given explicit consent. The anonymised data may be read by other researchers within the process evaluation team for analysis, but their names will not be included.

Sixth, data is managed securely by the research team. The confidentiality of all information is ensured by using a digital label that does not reveal the characteristics of the participants. Anonymised data is stored on a password-protected computer database and shared via TUoS Google Drive. Their personal details (name, contact info, etc) will not be collected. Only researchers involved in this project can have access to the data. Anonymised data is kept in a password-protected computer database for at least one year after the project ends. The project leader will be responsible for data confidentiality and storage.

#### 4.8 Conclusion

The methodology chapter offers a detailed overview and thorough discussion of the methods and techniques used in this research. This thesis adopts an ontological objectivism position and an epistemological positivism stance in terms of research philosophy. Regarding research methodology, it follows a quantitative approach, an experimental strategy, and a cross-sectional time frame. Justifications for each decision are provided.

To enhance research transparency, pre-registration is conducted across two studies and explained in detail. Furthermore, the statistical techniques utilised in the data analysis process—including data cleaning and checking, preliminary analyses, and hypothesis testing—are outlined. Finally, ethical considerations are examined from six perspectives: informed consent, nature of participation and the right to withdraw, potential harm to participants, data confidentiality and anonymity, and data management.

The next chapter concentrates on data analysis and hypothesis testing, presenting findings and results in depth.

Table 12 The summary of research methodology and techniques

| Type                | Choice                                                  |
|---------------------|---------------------------------------------------------|
| Research philosophy | Ontological objectivism and epistemological positivism. |
| Research approach   | A deductive approach.                                   |

|                          |                                                                   |
|--------------------------|-------------------------------------------------------------------|
| Methodological choice    | A quantitative approach.                                          |
| Research strategy        | An experimental strategy.                                         |
| Time horizon             | A cross-sectional time frame.                                     |
| Data collection approach | An online data-collection platform (Credamo).                     |
| Sampling                 | Non-probability.                                                  |
| Data analysis            | The analysis of variance (ANOVA), PROCESS macro model 1, t-tests. |

## **Chapter 5: Data Analysis and Results**

### **5.1 Chapter overview**

This chapter elaborates on the results of the data analysis following the procedures clarified in the last chapter. This thesis involves two studies. Study 1 aims to investigate how mere exposure to organic food may affect consumers' preferences for out-of-context product claims framed by regulatory focus theory, as well as the role of consumer impulsiveness. Study 2 aims to examine how mere exposure to organic food may directly influence consumers' regulatory focus orientations, as well as the role of consumer impulsiveness. Thus, the chapter is divided into two sections by study, with each study presented in a similar layout. Both studies consist of four subsections, starting from a pretest, followed by data preparation and preliminary analysis, and finally hypothesis testing. The techniques used for data analysis are justified, the results of data analysis are uncovered, and the rationales behind the results are interpreted.

### **5.2 Study 1-Indirect measurement of regulatory focus**

#### **5.2.1 Pretest**

Before Study 1 (the main study), this thesis conducted a pretest to test the realism of the stimuli for Study 1. A total of 98 participants were recruited from Credamo for an online experiment. Credamo is an online data-collection platform similar to the Qualtrics panel, and its data quality has been highly recognised (Dai et al., 2024). 98 participants were randomly assigned to either an organic food condition or a conventional food condition. The stimuli are shown in Section 4.4.3.1. After exposure to the stimulus, participants responded to the scale for realism check and reported their demographics.

Stimuli test: One one-sample t-test and one one-way Analysis of Variance (ANOVA) were run to test the realism of the stimuli. The results of the one-sample t-test indicated that participants perceived the scenario as realistic, as the ratings of realism were greater than and significantly different from the midpoint of the 1 to 7 rating scale ( $M_{\text{realistic}} = 6.06$ ,  $SD = 0.78$ ,  $t(97) = 32.89$ ,  $p < 0.001$ ). The one-way ANOVA analysis on realism revealed that no

significant difference in stimulus realism was found across the two conditions ( $F(1, 96) = 0.07, p = 0.795, \eta_p^2 = 0.001$ ).

### **5.2.2 Data preparation**

Before proceeding with data analysis, a six-step data preparation process was conducted to ensure the dataset was clean, accurate, and ready. This process included data validation, data editing and coding, error detection, outlier identification, normality assessment, and common method bias check.

#### **5.2.2.1 Data validation (screening question and attention check)**

This study included two attention check questions and a time limit to improve the quality of the data and to make sure that the participants had paid enough attention to the survey. Participants who failed any attention check question or submitted the survey in less than 1 minute were filtered out. This screening approach was pre-registered, as shown in the last chapter.

In total, 567 participants consented to participate in the online experiment. The first attention check question was measured after participants were exposed to the stimuli by asking a dichotomous question: “What category do the fruits you see belong to?” They were required to select either the “organic fruits” option or the “conventional fruits” option. The second attention check question was measured by using a single-item scale: “This question tests whether you are answering carefully; please select ‘Very dissatisfied’ (1 = Very dissatisfied; 5 = Very satisfied).” 60 participants were screened out, as they failed to answer at least one attention check question correctly. Nevertheless, participants who fail this question should be screened out, as failing to identify the correct food category will significantly affect the results. No participants completed the survey in less than 1 minute. Therefore, the responses of 507 participants were retained for further analysis.

#### **5.2.2.2 Data editing and coding**

After the data validation process, the data were coded for further analysis. There were no

issues with editing and coding for errors. The coding was conducted using SPSS software, and the five scale items for consumer impulsiveness (including impulsive, extravagant, easily tempted, enjoy spending, and careless) were reverse-coded. The index for different scales was calculated using SPSS functions.

#### **5.2.2.3 Error detection**

This thesis followed Pallant's (2020) guidelines for checking data errors. The SPSS basic descriptive statistics function "Frequencies" (including Mean, Median, Maximum, and Minimum) was used to detect impossible values that fell outside the expected range. In this study, the values of measurements for key variables ranged from 1 to 7. Demographic variables, which had specific ranges, were detected as well. In addition, reverse-coded items were also checked. No errors were identified, as all values fell within the expected range. Moreover, the other SPSS basic descriptive statistics function "Explore" was utilised to detect if there were any missing values. The analysis confirmed that there were no issues with missing data.

#### **5.2.2.4 Outlier identification**

In social science research, whether and how to deal with outliers is an important issue for researchers to consider in data preparation. In line with the pre-registration, this study did not intend to remove any outliers from the dataset for further analysis. Nevertheless, this study attempted to take steps to spot potential outliers in the dataset. To this end, this study utilised Z-Score as a statistical tool to identify potential outliers, following Tabachnick and Fidell (2019) and Hair et al. (2019). Z-Score is also referred to as a standardised score, a statistical measurement used to describe how far a value is from the mean of a group of values in terms of standard deviations. Z-Score is calculated via the following formula:  $z = (x - \mu) / \sigma$ , where  $z$  = Z-score;  $x$  = the value being evaluated;  $\mu$  = the mean of a group of values; and  $\sigma$  = the standard deviation from the mean (Tabachnick and Fidell, 2019).

Using SPSS basic descriptive statistics functions, the mean value, the standard deviation and the Z-Score of a number of key constructs (including ad preferences, consumer impulsiveness,

and health consciousness) were calculated, as shown in Table 13.

Table 13 Standard deviation, Mean and Z-Score of key variables

| Variables              | Number | Mean | Standard deviation | Z-Score (Maximum) | Z-Score (Minimum) |
|------------------------|--------|------|--------------------|-------------------|-------------------|
| Ad preferences         | 507    | 3.23 | 2.17               | 1.74              | -1.03             |
| Consumer impulsiveness | 507    | 3.46 | 1.20               | 2.82              | -1.92             |
| Health consciousness   | 507    | 5.62 | 0.76               | 1.81              | -4.49             |

According to Tabachnick and Fidell (2019) and Hair et al. (2019), any z-scores above +3.29 or below -3.29 can be considered as potential outliers. Thus, no outliers were found for ad preferences and consumer impulsiveness. However, the minimum Z-Score of health consciousness was -4.49, lower than -3.29, indicating that at least one outlier existed in the dataset. The further detection was conducted and in total 3 outliers were identified for health consciousness, valued at 2.2, 3, and 3, respectively. As explained in Section 4.4, these 3 outliers were retained in the dataset to align with the pre-registration.

#### 5.2.2.5 Normality assessment

Normal refers to a symmetrical, bell-shaped curve with the highest frequencies at the centre and gradually decreasing frequencies toward the extremes (Pallant, 2020). Although assessing normality is not always required for data analysis, the solution is often better if the data are normally distributed (Tabachnick and Fidell, 2019). There are a number of techniques to assess normality to some extent. As discussed in the last chapter, this study used an objective statistical approach combining Kolmogorov–Smirnov and Shapiro–Wilk tests and skewness and kurtosis values to assess whether the data were normally distributed for three key variables: ad preferences, consumer impulsiveness, and health consciousness.

The first step was to check normality by using Kolmogorov–Smirnov and Shapiro–Wilk tests via SPSS basic descriptive statistics functions. The results are shown in Table 14. The tests of normality for those three variables were significant ( $p < 0.05$ ), indicating that the distribution violated the normality (Pallant, 2020). Nevertheless, given the large sample used in this study ( $N = 507$ ), a non-significant result from Kolmogorov–Smirnov and Shapiro–Wilk tests is quite common (Pallant, 2020).

In light of this, the second step, using the skewness value (which measures the symmetry of the distribution) and the kurtosis value (which measures how peaked or flat the distribution is) for normality check, was taken by this study. The information on skewness and kurtosis values was generated through SPSS basic descriptive statistics functions. As Table 15 shows, the skewness values for those three variables ranged from -0.96 to 0.54, while the kurtosis value ranged from -1.30 to 1.18. Based on Hair et al. (2019), the acceptable range for the skewness value should be within  $\pm 1.0$ , while that for the kurtosis value should be  $\pm 2.0$ . Therefore, it suggested that the data for those variables were normally distributed, as the results were within the acceptable range for normality. Overall, it can be concluded that the data were normally distributed.

Table 14 The Kolmogorov–Smirnov and Shapiro–Wilk tests

| Variables              | Kolmogorov–Smirnov |     |      | Shapiro–Wilk |     |      |
|------------------------|--------------------|-----|------|--------------|-----|------|
|                        | Statistic          | df  | Sig. | Statistic    | df  | Sig. |
| Ad preferences         | .258               | 507 | .000 | .829         | 507 | .000 |
| Consumer impulsiveness | .073               | 507 | .000 | .976         | 507 | .000 |
| Health consciousness   | .127               | 507 | .000 | .941         | 507 | .000 |

Table 15 Skewness and kurtosis values

| Variable | N | Minim | Maximu | Mean | Std. | Skewness | kurtosis |
|----------|---|-------|--------|------|------|----------|----------|
|----------|---|-------|--------|------|------|----------|----------|

| s                                 |               | um            | m         |               | Deviat<br>ion |               |               |               |                   |
|-----------------------------------|---------------|---------------|-----------|---------------|---------------|---------------|---------------|---------------|-------------------|
|                                   | Statisti<br>c | Statisti<br>c | Statistic | Statisti<br>c | Statisti<br>c | Statist<br>ic | Std.<br>Error | Statis<br>tic | Std.<br>Erro<br>r |
| Ad<br>preferen<br>ces             | 507           | 1.00          | 7.00      | 3.23          | 2.17          | 0.54          | 0.11          | -1.30         | 0.22              |
| Consum<br>er<br>impulsiv<br>eness | 507           | 1.17          | 6.83      | 3.46          | 1.20          | 0.36          | 0.11          | -.65          | 0.22              |
| Health<br>consciou<br>sness       | 507           | 2.20          | 7.00      | 5.62          | 0.76          | -0.96         | 0.11          | 1.18          | 0.22              |

#### 5.2.2.6 Common method bias check

In addition to those techniques applied in the survey design discussed in the last chapter, this study also employed a statistical technique, Harman's one-factor test, to detect potential common method biases (Podsakoff et al., 2003). The technique provides researchers a convenient and reliable way to check common method biases by using the SPSS function "Factor". To conduct this test, all scale items of three key variables (ad preferences, consumer impulsiveness, and health consciousness) were included in the analysis. The results of the test are provided in Table 16. According to Podsakoff et al. (2003) and Fuller et al. (2016), if a single factor explains more than 50 % of the total variance, the common method bias is problematic. As shown in this table. No issues with common method biases were identified, as the variance explained by each factor was below the recommended threshold.

Table 16 Harman's one-factor test

| Initial Eigenvalues |       |               |              | Extraction Sums of Squared Loadings |               |              |
|---------------------|-------|---------------|--------------|-------------------------------------|---------------|--------------|
| Factor              | Total | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1                   | 6.581 | 36.560        | 36.560       | 6.125                               | 34.030        | 34.030       |
| 2                   | 2.742 | 15.234        | 51.794       |                                     |               |              |
| 3                   | 1.661 | 9.227         | 61.021       |                                     |               |              |
| 4                   | 1.042 | 5.787         | 66.808       |                                     |               |              |
| 5                   | 0.745 | 4.138         | 70.946       |                                     |               |              |
| 6                   | 0.728 | 4.044         | 74.990       |                                     |               |              |
| 7                   | 0.692 | 3.846         | 78.837       |                                     |               |              |
| 8                   | 0.549 | 3.048         | 81.884       |                                     |               |              |
| 9                   | 0.473 | 2.626         | 84.511       |                                     |               |              |
| 10                  | 0.470 | 2.609         | 87.120       |                                     |               |              |
| 11                  | 0.400 | 2.221         | 89.341       |                                     |               |              |
| 12                  | 0.354 | 1.967         | 91.308       |                                     |               |              |
| 13                  | 0.331 | 1.840         | 93.148       |                                     |               |              |
| 14                  | 0.313 | 1.739         | 94.887       |                                     |               |              |
| 15                  | 0.305 | 1.692         | 96.579       |                                     |               |              |
| 16                  | 0.259 | 1.437         | 98.016       |                                     |               |              |
| 17                  | 0.202 | 1.122         | 99.138       |                                     |               |              |
| 18                  | 0.155 | 0.862         | 100          |                                     |               |              |

Note. Extraction Method: Principle Axis Factoring.

Overall, this section delved into a total of 6 steps taken to prepare the data for further analysis, including data validation, data editing and coding, error detection, outlier identification, normality assessment, and common method bias check. Through this procedure, 507 cases in total were retained in the dataset. The data were normally distributed and no concerns about common method bias were identified. The next section discusses the results of the preliminary

analysis.

5.2.3 Preliminary analysis

Following the data preparation procedure, the data were cleaned, coded, and checked for further examination. A total of 507 cases were retained in the dataset. This section discusses the preliminary analysis in detail, including demographic information, unidimensionality check, convergent and discriminant validity examination, reliability assessment, and realism check.

5.2.3.1 Demographic information

The data for Study 1 were collected in August 2024, with a final sample of 507. The demographic information of all 507 participants is provided in Table 17, including age, gender, education, and household income after tax. The age of participants ranged from 18 to 65 years old, with a mean of 28.35 years old. The majority of participants (61.7%) were within the scope between 21-30 years, with the second largest proportion (22.9%) between 31-40 years. Female participants constituted 68.4% in this sample, while male participants comprised 31.6%. It is common for female participants to represent a larger proportion than males in online surveys. With regard to the highest degree that participants had received, the majority of them (76.1%) had a bachelor’s degree, followed by a master’s degree or above (18.5%), a high school degree (4.5%), and a degree below high school (0.8%). When it comes to household income after tax, as measured by the Chinese Yuan, most of the participants (46.2%) had a household income of 100,001 to 200,000. The second largest group (20.9%) had a household income between 200,001 and 300,000, followed by 100,000 or below (19.3%), 300,001-400,000 (9.3%), and 400,001 or above (4.3%).

Table 17 Participants’ demographic information

|       | N   | %    |        | N   | %    |
|-------|-----|------|--------|-----|------|
| Age   |     |      | Gender |     |      |
| 18-20 | 39  | 7.7  | Male   | 160 | 31.6 |
| 21-30 | 313 | 61.7 | Female | 347 | 68.4 |

|                          |     |      |                                                  |     |      |
|--------------------------|-----|------|--------------------------------------------------|-----|------|
| 31-40                    | 116 | 22.9 | Other                                            | 0   | 0    |
| 41-50                    | 24  | 4.7  |                                                  |     |      |
| 51-60                    | 14  | 2.8  |                                                  |     |      |
| 61-70                    | 1   | 0.2  |                                                  |     |      |
|                          |     |      |                                                  |     |      |
| <b>Education</b>         |     |      | <b>Household income after tax (Chinese Yuan)</b> |     |      |
| Below high school        | 4   | 0.8  | 100,000 or below                                 | 98  | 19.3 |
| High school              | 23  | 4.5  | 100,001-200,000                                  | 234 | 46.2 |
| Bachelor's degree        | 386 | 76.1 | 200,001-300,000                                  | 106 | 20.9 |
| Master's degree or above | 94  | 18.5 | 300,001-400,000                                  | 47  | 9.3  |
|                          |     |      | 400,001 or above                                 | 22  | 4.3  |

### 5.2.3.2 Unidimensionality check

Exploratory factor analysis (EFA) was conducted using the SPSS function “factor” to check unidimensionality. The purpose of unidimensionality was to ensure that a set of scale items measures a single construct. Two key variables (constructs) were assessed separately, including consumer impulsiveness and health consciousness. The consumer impulsiveness scale consists of two subscales: the prudence and the hedonic subscales, which are theoretically distinct (Ramanathan and Menon, 2006). Thus, these two subscales were checked separately as two distinct constructs.

To ensure the data were suitable and accurate for factor analysis, the Kaiser–Meyer–Olkin (KMO) test (which measures sampling adequacy) and Bartlett’s test of sphericity (which measures correlation matrix) were conducted before EFA using the same SPSS function “Factor”. The results are shown in Table 18. Hair et al. (2019) indicate that a KMO test value of 0.5 or above is appropriate for factor analysis. Additionally, a significant outcome ( $p < 0.05$ ) of Bartlett’s test of sphericity further confirms the appropriateness. The results of the KMO test showed that all values of the three (sub)scales exceeded 0.7. Furthermore, the results of Bartlett’s test of sphericity were all significant ( $p = 0.000$ ). Thus, it can be concluded that the data were suitable and accurate for factor analysis.

The results of factor loading for all three (sub)scales are shown in Table 19. According to Tabachnick and Fidell (2019), factor loadings exceeding 0.5 provide strong evidence of unidimensionality. All items of the prudence subscale loaded strongly onto a single factor (factor loadings  $\geq 0.7$ ), indicating that the scale was unidimensional. With regard to the hedonic subscale, the factor loadings of all items were above 0.7, except for the last item, “Careless,” which had a factor loading of 0.433. Tabachnick and Fidell (2019) suggest that factor loadings of 0.32 are the minimum acceptable, while a loading of at least 0.5 indicates strong unidimensionality. Hair et al. (2010) also indicate that factor loadings of 0.40 or higher can be acceptable if the sample size is between 150 and 200. Given that this study had a large sample size of 507, the factor loadings of the hedonic subscale were considered acceptable. For the health consciousness scale, all items had factor loadings above 0.6, suggesting strong unidimensionality.

According to Hair et al. (2019), how much percent of variance can be accounted for by the scale was also measured for the unidimensionality check. At least 50% of the total variance explained supports unidimensionality. The results of the total variance explained for three (sub)scales are shown in Tables 5.8, 5.9, and 5.10. The total variance explained varied from 52.885 to 71.099, further suggesting the evidence of unidimensionality of all three (sub)scales.

Table 18 KMO test and Bartlett's test of sphericity

| Methods                                     | Prudence subscale | Hedonic subscale | Health consciousness |
|---------------------------------------------|-------------------|------------------|----------------------|
| KMO test outcome                            | 0.918             | 0.763            | 0.769                |
| Bartlett's test of sphericity: significance | 0.000             | 0.000            | 0.000                |

Extraction Method: Principal Component Analysis.

Table 19 Factor loading

| Scales            | Scale items                                           | Factor loading |       |   |
|-------------------|-------------------------------------------------------|----------------|-------|---|
|                   |                                                       | 1              | 2     | 3 |
| Prudence subscale | Indicate how the following 7 attributes describe you: | 0.804          |       |   |
|                   | 1. self-controlled                                    |                |       |   |
|                   | 2. farsighted                                         | 0.788          |       |   |
|                   | 3. responsible                                        | 0.879          |       |   |
|                   | 4. restrained                                         | 0.805          |       |   |
|                   | 5. rational                                           | 0.852          |       |   |
|                   | 6. methodical                                         | 0.887          |       |   |
|                   | 7. a planner                                          | 0.880          |       |   |
| Hedonic subscale  | Indicate how the following 5 attributes describe you: |                | 0.790 |   |
|                   | 1. impulsive                                          |                |       |   |
|                   | 2. extravagant                                        |                | 0.782 |   |
|                   | 3. easily tempted                                     |                | 0.760 |   |
|                   | 4. enjoy spending                                     |                | 0.802 |   |
|                   | 5. careless                                           |                | 0.433 |   |
| Health            |                                                       |                |       |   |

|               |                                                                  |  |  |       |
|---------------|------------------------------------------------------------------|--|--|-------|
| consciousness |                                                                  |  |  |       |
|               | Indicate to what extent you agree with the following statements: |  |  | 0.805 |
|               | 1. I'm usually aware of my health                                |  |  |       |
|               | 2. I'm very conscious about my health                            |  |  | 0.772 |
|               | 3. I'm aware of the state of my health as I go through the day   |  |  | 0.767 |
|               | 4. I'm alert to changes in my health                             |  |  | 0.784 |
|               | 5. I take responsibility for the state of my health              |  |  | 0.643 |

Extraction Method: Principal Component Analysis.

Table 20 Total Variance Explained (Prudence subscale)

| Initial Eigenvalues |       |               |              | Extraction Sums of Squared Loadings |               |              |
|---------------------|-------|---------------|--------------|-------------------------------------|---------------|--------------|
| Factor              | Total | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1                   | 4.977 | 71.099        | 71.099       | 4.977                               | 71.099        | 71.099       |
| 2                   | 0.499 | 7.131         | 78.23        |                                     |               |              |
| 3                   | 0.496 | 7.086         | 85.316       |                                     |               |              |
| 4                   | 0.333 | 4.761         | 90.077       |                                     |               |              |
| 5                   | 0.294 | 4.196         | 94.274       |                                     |               |              |
| 6                   | 0.236 | 3.373         | 97.646       |                                     |               |              |
| 7                   | 0.165 | 2.354         | 100          |                                     |               |              |

Extraction Method: Principal Component Analysis.

Table 21 Total Variance Explained (Hedonic subscale)

| Initial Eigenvalues |       |               |              | Extraction Sums of Squared Loadings |               |              |
|---------------------|-------|---------------|--------------|-------------------------------------|---------------|--------------|
| Factor              | Total | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1                   | 2.644 | 52.885        | 52.885       | 2.644                               | 52.885        | 52.885       |

|   |       |        |        |  |  |  |
|---|-------|--------|--------|--|--|--|
| 2 | 0.943 | 18.869 | 71.754 |  |  |  |
| 3 | 0.59  | 11.793 | 83.547 |  |  |  |
| 4 | 0.45  | 8.998  | 92.545 |  |  |  |
| 5 | 0.373 | 7.455  | 100    |  |  |  |

Extraction Method: Principal Component Analysis.

Table 22 Total Variance Explained (Health consciousness)

| Initial Eigenvalues |       |               |              | Extraction Sums of Squared Loadings |               |              |
|---------------------|-------|---------------|--------------|-------------------------------------|---------------|--------------|
| Factor              | Total | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1                   | 2.862 | 57.237        | 57.237       | 2.862                               | 57.237        | 57.237       |
| 2                   | 0.731 | 14.61         | 71.847       |                                     |               |              |
| 3                   | 0.701 | 14.014        | 85.861       |                                     |               |              |
| 4                   | 0.39  | 7.798         | 93.659       |                                     |               |              |
| 5                   | 0.317 | 6.341         | 100          |                                     |               |              |

Extraction Method: Principal Component Analysis.

### 5.2.3.3 Convergent and discriminant validity examination

As the results of Kaiser–Meyer–Olkin (KMO) test and Bartlett’s test of sphericity indicated that the data were ready for factor analysis, in this section, exploratory factor analysis (EFA) was conducted to assess the convergent and discriminant validity of those measures (scales). This study chose to measure convergent validity and discriminant validity because they are the two most widely accepted forms of validity in social science. Among them, convergent validity examines the extent to which two measures of the same concept are correlated (Hair et al., 2019). Discriminant validity, however, tests the extent to which two similar conceptual concepts are distinct (Hair et al., 2019).

This study examined convergent validity through three ways: factor loadings, the average variance extracted (AVE), and construct reliability (CR). The factor loadings of all items are shown in Table 23. The AVE was calculated using the following formula (Hair et al., 2019):

$$AVE = \frac{\sum_{i=1}^n Li^2}{n}$$

where  $Li$  represents the standardised factor loading, and  $i$  indicates the number of items.

The CR was calculated using the following formula (Hair et al., 2019):

$$CR = \frac{(\sum_{i=1}^n Li)^2}{(\sum_{i=1}^n Li)^2 + (\sum_{i=1}^n ei)}$$

where  $Li$  represents the standardised factor loading, and  $i$  indicates the number of items.  $ei$  represents the error variance terms for a variable ( $i$ ).

Table 22 suggested that the factor loadings of all items were greater than the recommended threshold of 0.5, except for the item “careless”, which was 0.316. While Tabachnick and Fidell (2019) argued that factor loadings of 0.32 were the minimum acceptable; the value of 0.316 was still considered low. The AVE of the prudence subscale was 0.663, exceeding the recommended threshold of 0.5. However, the AVE for the hedonic subscale and health consciousness were slightly below 0.5. This study assessed convergent validity using three criteria, as Malhotra and Dash (2011, p. 702) stated: “AVE is a more conservative measure than CR. On the basis of CR alone, the researcher may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error.” The CR values for all three scales were well above 0.7, exceeding the recommended threshold of 0.6. Combining the results based on three different criteria, it can be concluded that the convergent validity of the prudence subscale was strong, while that of the hedonic subscale and health consciousness was acceptable.

Table 23 Convergent validity results

| Scales   | Scale items                | Factor loading |   |   | AVE   | CR    |
|----------|----------------------------|----------------|---|---|-------|-------|
|          |                            | 1              | 2 | 3 |       |       |
| Prudence | Indicate how the following | 0.743          |   |   | 0.663 | 0.925 |

|                      |                                                                  |       |       |       |       |       |
|----------------------|------------------------------------------------------------------|-------|-------|-------|-------|-------|
| subscale             | 7 attributes describe you:                                       |       |       |       |       |       |
|                      | 1. self-controlled                                               |       |       |       |       |       |
|                      | 2. farsighted                                                    | 0.737 |       |       |       |       |
|                      | 3. responsible                                                   | 0.865 |       |       |       |       |
|                      | 4. restrained                                                    | 0.754 |       |       |       |       |
|                      | 5. rational                                                      | 0.822 |       |       |       |       |
|                      | 6. methodical                                                    | 0.886 |       |       |       |       |
|                      | 7. a planner                                                     | 0.876 |       |       |       |       |
| Hedonic subscale     | Indicate how the following 5 attributes describe you:            |       | 0.736 |       |       |       |
|                      | 1. impulsive                                                     |       |       |       |       |       |
|                      | 2. extravagant                                                   |       | 0.720 |       | 0.425 | 0.777 |
|                      | 3. easily tempted                                                |       | 0.683 |       |       |       |
|                      | 4. enjoy spending                                                |       | 0.707 |       |       |       |
|                      | 5. careless                                                      |       | 0.316 |       |       |       |
| Health consciousness |                                                                  |       |       |       |       |       |
|                      | Indicate to what extent you agree with the following statements: |       |       | 0.771 |       |       |
|                      | 1. I'm usually aware of my health                                |       |       |       |       |       |
|                      | 2. I'm very conscious about my health                            |       |       | 0.722 | 0.469 | 0.837 |
|                      | 3. I'm aware of the state of my health as I go through the day   |       |       | 0.686 |       |       |
|                      | 4. I'm alert to changes in                                       |       |       | 0.694 |       |       |

|  |                                                     |  |  |       |  |  |
|--|-----------------------------------------------------|--|--|-------|--|--|
|  | my health                                           |  |  |       |  |  |
|  | 5. I take responsibility for the state of my health |  |  | 0.529 |  |  |

Extraction Method: Maximum Likelihood.

This study examined the discriminant validity of all three measures (scales) using a well-established method: the Fornell–Larcker criterion (Fornell and Larcker, 1981). This method is based on comparing the square root of the AVE for each construct with its correlations with other constructs. If the square root of the AVE for each construct (in boldface) surpasses the correlations between the constructs, it indicates that the scale of this construct has sufficient discriminant validity. The correlations were produced using the SPSS function “Bivariate”. The results of correlations and the square root of the AVE for each construct are shown in Table 24. The results suggested that the square root of the AVE for each of the three constructs exceeded the correlations between the constructs, indicating sufficient discriminant validity.

Table 24 Correlations and squared AVE

| Scales               | Health consciousness | Prudence subscale | Hedonic subscale |
|----------------------|----------------------|-------------------|------------------|
| Health consciousness | <b>0.814</b>         |                   |                  |
| Prudence subscale    | -0.172**             | <b>0.652</b>      |                  |
| Hedonic subscale     | 0.179**              | -0.563**          | <b>0.685</b>     |

Note. Off-diagonal values are correlation coefficients and on-diagonal values are the square root of AVE. Correlation is significant at the 0.01 level (2-tailed).

Overall, by combining the results of factor loadings, the average variance extracted (AVE), and construct reliability (CR), it can be concluded that the convergent validity of the prudence

subscale was strong, and that of the hedonic subscale and the health consciousness scale was acceptable. The test based on the Fornell–Larcker criterion demonstrated sufficient discriminant validity for all three scales.

#### 5.2.3.4 Reliability assessment

After establishing the validity, this study assesses the reliability of those (sub)scales by utilising Cronbach’s alpha ( $\alpha$ ). Cronbach’s alpha ( $\alpha$ ) is a widely used method to measure the internal consistency of a set of scale items. This study used the SPSS function “Scale” to analyse the scale reliability. In the previous section, the consumer impulsiveness scale was split into two subscales: the hedonic subscale and the prudence subscale, to check the convergent validity and the discriminant validity. This section assessed the reliability of the consumer impulsiveness scale as a whole as well as two subscales, and the health consciousness scale.

According to Hair et al. (2019), the minimum threshold for Cronbach’s alpha is 0.7. However, a value of 0.95 or higher indicates redundancy among items rather than true reliability. The results of this study showed that Cronbach’s alpha values ranged from 0.767 to 0.908, demonstrating good internal reliability without concerns of redundancy.

Table 25 Cronbach’s alpha ( $\alpha$ ) results

| Scales                       | Cronbach’s alpha ( $\alpha$ ) |
|------------------------------|-------------------------------|
| Consumer impulsiveness scale | 0.908                         |
| Hedonic subscale             | 0.931                         |
| Prudence subscale            | 0.767                         |
| Health consciousness         | 0.800                         |

#### 5.2.3.5 Realism check

This study tested the realism of the stimuli using a method similar to the pretest. 507 participants were randomly assigned to either an organic food condition or a conventional food condition. The stimuli are shown in Section 4.4.3.1. After exposure to the stimulus,

participants responded to the question for realism check: “The description of the scene is realistic” (1= strongly disagree, 7 = strongly agree).

A one-sample t-test and one one-way Analysis of Variance (ANOVA) were run via SPSS to test the realism of the stimuli. The results of the one-sample t-test indicated that participants perceived the scenario as realistic, as the ratings of realism were greater than and significantly different from the midpoint of the 1 to 7 rating scale ( $M_{\text{realistic}} = 6.07$ ,  $SD = 0.70$ ,  $t(506) = 82.53$ ,  $p < 0.001$ ). The one-way ANOVA analysis on realism further revealed that no significant difference in stimulus realism was found across the two conditions ( $F(1, 505) = 2.9$ ,  $p = 0.088$ ,  $\eta_p^2 = 0.006$ ).

#### **5.2.4 Hypothesis testing**

After the data preparation and preliminary data analysis procedures, the data were suitable and ready for hypothesis testing. A total of 507 responses were analysed in this section. Figure 9 presents the conceptual framework of this thesis, including Study 1 and Study 2. This conceptual framework consists of the food type (organic food vs. conventional food) as the independent variable across two studies, consumer impulsiveness as the moderator across two studies, and ad preferences (or preferences for regulatory focus claims) as the dependent variable in Study 1. In this study, consumers’ regulatory focus was captured from their ad preferences, whereas their regulatory focus was directly measured via the regulatory focus scale in Study 2. Table 26 displays the hypotheses, research objectives, and analysis techniques used in Study 1. As illustrated in this table, this study aimed to test H1a and H2a and to address the research objectives of this thesis by empirically examining how organic food products themselves might prime regulatory focus among consumers and conceptually differentiating organic food products from generic green products. To this end, Hayes Process Macro Model 1 was performed using SPSS to examine the interaction between the food type, consumer impulsiveness, and ad preferences.

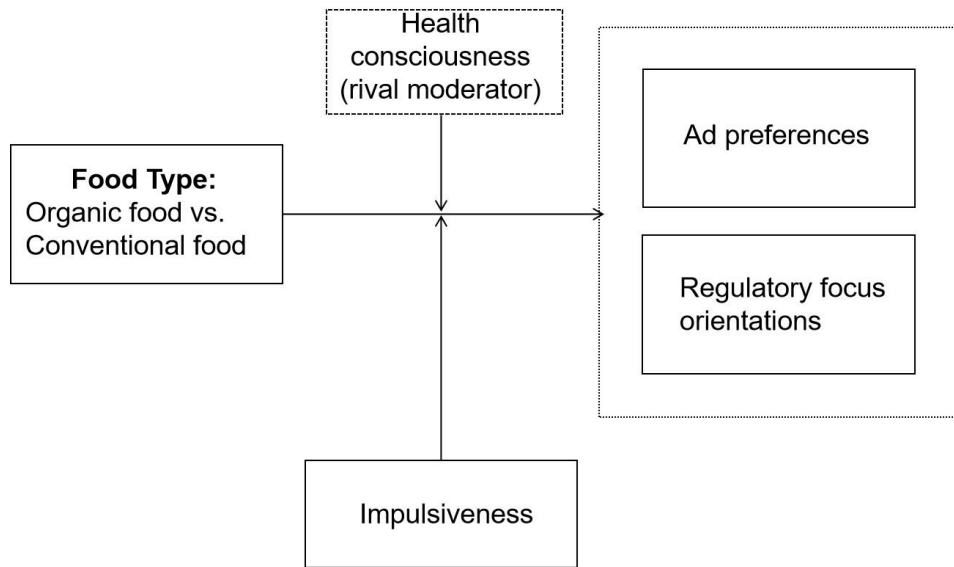


Figure 9 Conceptual framework

Table 26 Hypotheses, research objectives, and analysis techniques

| Hypothesis                                                                                                                                                                                                                                                                      | Research objectives                                                                                                                                                                                                                                | Analysis techniques                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p>H1: Organic food (vs. conventional) food can trigger a promotion focus in impulsive consumers:</p> <p>H1a: Mere exposure to organic food (vs. conventional food) makes impulsive consumers prefer promotion-framed product claims over prevention-framed product claims.</p> | <p>1. Empirically examine whether and how organic food products themselves might prime regulatory focus among consumers.</p> <p>2. Conceptually differentiate organic food products from generic green products through two empirical studies.</p> | <p>Hayes Process Macro Model 1 – Moderation</p> |
| <p>H2: Organic (vs. conventional) food can trigger a prevention focus in prudent consumers:</p> <p>H2a: Mere exposure to organic food (vs. conventional food) makes prudent</p>                                                                                                 | <p>1. Empirically examine whether and how organic food products themselves might prime regulatory focus among consumers.</p> <p>2. Conceptually</p>                                                                                                | <p>Hayes Process Macro Model 1 – Moderation</p> |

|                                                                                         |                                                                                                |  |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--|
| consumers prefer prevention-framed product claims over promotion-framed product claims. | differentiate organic food products from generic green products through two empirical studies. |  |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--|

#### 5.2.4.1 The one-way ANOVA and ANCOVA analyses

As clarified earlier, this study aimed to use Hayes Process Macro Model 1 to test hypotheses. However, this study also assumes that organic food does not activate a single regulatory focus orientation among consumers. Instead, the activated regulatory focus orientation depends on an individual trait: consumer impulsiveness. Thus, this study performed a one-way Analysis of Variance (ANOVA) on consumers' ad preferences to compare the means of two groups (organic food condition vs. conventional food condition). It was expected that there was no statistically significant difference between these two groups. The results suggested that no significant difference in ad preferences was observed across the two conditions ( $F(1, 505) = 0.022, p = 0.882, \eta_p^2 = 0.000$ ). An  $\eta_p^2$  (partial eta squared) of 0.000 indicated that the independent variable "food type" had no detectable effect on the dependent variable "ad preferences", as 0% of the variance in the dependent variable was accounted for by the independent variable (Cohen, 1988).

To rule out possible alternative explanations that participants' familiarity with organic food, participants' liking of organic food, and participants' demographic information, including age, gender, education, and household income after tax accounted for the findings, a one-way Analysis of Covariance (ANCOVA) test was conducted, with these variables being included in the model. Table 27 presents the results of the ANCOVA test. The results persisted ( $F(1, 499) = 0.056, p = 0.814, \eta_p^2 = 0.000$ ) even after controlling for these covariates: participants' familiarity with organic food ( $F(1, 499) = 3.858, p = 0.050, \eta_p^2 = 0.008$ ), participants' liking of organic food ( $F(1, 499) = 0.052, p = 0.914, \eta_p^2 = 0.000$ ), age ( $F(1, 499) = 31.712, p = 0.009, \eta_p^2 = 0.014$ ), gender ( $F(1, 499) = 6.925, p = 0.218, \eta_p^2 = 0.003$ ), education ( $F(1, 499) =$

4.005,  $p = 0.348$ ,  $\eta_p^2 = 0.002$ ), and household income after tax ( $F(1, 499) = 39.208$ ,  $p = 0.003$ ,  $\eta_p^2 = 0.017$ ). Therefore, the ANOVA and ANCOVA results were consistent with our assumptions, as we did not anticipate the independent variable to directly influence the dependent variable.

Table 27 One-way ANCOVA test

| Source                        | Type III<br>Sum of<br>Squares | df | Mean<br>Square | F     | Sig.  | Partial Eta<br>Squared |
|-------------------------------|-------------------------------|----|----------------|-------|-------|------------------------|
| Ad preferences                | 0.253                         | 1  | 0.253          | 0.056 | 0.814 | 0.000                  |
| Familiarity with organic food | 17.533                        | 1  | 17.533         | 3.858 | 0.050 | 0.008                  |
| Liking of organic food        | 0.052                         | 1  | 0.052          | 0.012 | 0.914 | 0.000                  |
| Age                           | 31.712                        | 1  | 31.712         | 6.978 | 0.009 | 0.014                  |
| Gender                        | 6.925                         | 1  | 6.925          | 1.524 | 0.218 | 0.003                  |
| Education                     | 4.005                         | 1  | 4.005          | 0.881 | 0.348 | 0.002                  |
| Household income after tax    | 39.208                        | 1  | 39.208         | 8.627 | 0.003 | 0.017                  |

#### 5.2.4.2 Hayes PROCESS macro analysis

This thesis proposes that mere exposure to organic food (vs. conventional food) makes impulsive consumers prefer promotion-framed product claims over prevention-framed product claims (H1a) and that mere exposure to organic food (vs. conventional food) makes prudent consumers prefer prevention-framed product claims over promotion-framed product

claims (H2a). This study applied Hayes PROCESS macro Model 1 (Hayes, 2022) to examine the moderation effect of consumer impulsiveness on the relationship between the food type and consumers' ad preferences. Hayes PROCESS macro Model 1 enables testing whether the effect of the independent variable on the dependent variable varies depending on the moderator variable.

This study used the SPSS plugin "PROCESS v4.2 by Andrew F. Hayes" to test H1a and H2a, as were clarified above. Specifically, this study ran a moderation analysis (Hayes PROCESS macro Model 1), with 5,000 resamples (Hayes, 2022). In this model, the food type served as the independent variable, with the conventional food condition coded as "1" and the organic food condition coded as "2". Ad preferences, measured as a continuous variable, served as the dependent variable. Consumer impulsiveness, also a continuous variable, served as the moderator. The summary of the moderation test results is shown in Table 28.

The results revealed a significant moderated effect, as the interaction term did not include zero ( $b = -0.4825$ ,  $SE = 0.1609$ , 95% CI  $[-0.7987, -0.1664]$ ). The results of conditional effects revealed a significant and positive moderation effect at the low level of the moderator  $[-1$  S.D. ( $b = 0.5581$ ,  $SE = 0.2717$ , 95% CI  $[0.0243, 1.0919]$ ), with the Johnson–Neyman significance region below the point 2.3598 of consumer impulsiveness. In addition, the results revealed a significant and negative moderation effect at the high level of the moderator  $[+1$  S.D. ( $b = -0.5958$ ,  $SE = 0.2708$ , 95% CI  $[-1.1279, -0.0637]$ ), with the Johnson–Neyman significance region above the point 4.4233 of consumer impulsiveness. The analysis showed the moderation effect of the food type on ad preferences at the mean level of the moderator was non-significant [Mean ( $b = -0.0189$ ,  $SE = 0.1912$ , 95% CI  $[-0.3945, 0.3568]$ )]. As such, being exposed to organic food, compared to conventional food, leads impulsive consumers to prefer promotion-framed product claims over prevention-framed product claims. In contrast, being exposed to organic food, compared to conventional food, prompts prudent consumers to prefer prevention-framed product claims over promotion-framed product claims. Therefore, the results support H1a and H2a.

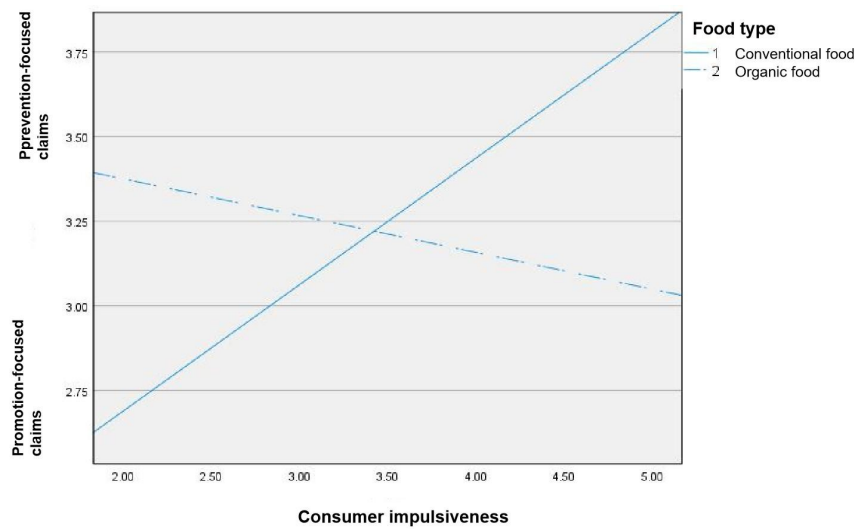


Figure 10 The moderation effect for Study 1

Table 28 The summary of the moderation test results

| Predictor              | Coefficient | SE     | t       | p      | LLCI    | ULCI   |
|------------------------|-------------|--------|---------|--------|---------|--------|
| Constant               | 0.289       | 0.9627 | 0.3001  | 0.7642 | -1.6025 | 2.1804 |
| Food type              | 1.6521      | 0.5897 | 2.8014  | 0.0053 | .4934   | 2.8107 |
| Consumer impulsiveness | 0.8563      | 0.2621 | 3.2670  | 0.0012 | .3413   | 1.3713 |
| Interaction            | -0.4825     | 0.1609 | -2.9985 | 0.0028 | -.7987  | -.1664 |

To rule out possible alternative explanations that participants' familiarity with organic food, participants' liking of organic food, and participants' demographic information, including age, gender, education, and household income after tax accounted for the findings, a moderation analysis (Hayes PROCESS macro Model 1, Hayes, 2022) with 5,000 resamples was performed. These covariates were controlled for simultaneously by including them in the model. Table 29 presents the results of the moderation test. The results remained significant (interaction term:  $b = -0.5356$ ,  $SE = 0.1591$ , 95% CI [-0.42, -0.05]) even after controlling for these covariates: participants' familiarity with organic food ( $b = 0.02$ , 95% CI [-0.8482, -0.2230]), participants' liking of organic food ( $b = -0.0138$ , 95% CI [0.1002, 0.1830]), age ( $b = -0.0332$ , 95% CI [-0.0580, -0.0084]), gender ( $b = 0.3384$ , 95% CI [-0.0651, 0.7419]), education ( $b = -0.1874$ , 95% CI [-0.5747, 0.1998]), and household income after tax ( $b =$

-0.2941, 95% CI [-0.4881, -0.1001]).

Table 29 The summary of the moderation test results (covariates included)

| Predictor                     | Coefficient | SE     | t       | p      | LLCI    | ULCI    |
|-------------------------------|-------------|--------|---------|--------|---------|---------|
| Constant                      | 0.8207      | 1.3542 | 0.6060  | 0.5448 | -1.8401 | 3.4814  |
| Food type                     | 1.8162      | 0.5842 | 3.1091  | 0.0020 | 0.6685  | 2.9640  |
| Consumer impulsiveness        | 0.9266      | 0.2591 | 3.5759  | 0.0004 | 0.4175  | 1.4357  |
| Interaction                   | -0.5356     | 0.1591 | -3.3666 | 0.0008 | -0.8482 | -0.2230 |
| Familiarity with organic food | 0.2105      | 0.0955 | 2.2028  | 0.0281 | 0.0227  | 0.3982  |
| Liking of organic food        | -0.0138     | 0.1002 | -0.1380 | 0.8903 | -0.2107 | 0.1830  |
| Age                           | -0.0332     | 0.0126 | -2.6296 | 0.0088 | -0.0580 | -0.0084 |
| Gender                        | 0.3384      | 0.2054 | 1.6479  | 0.1000 | -0.0651 | 0.7419  |
| Education                     | -0.1874     | 0.1971 | -0.9509 | 0.3421 | -0.5747 | 0.1998  |
| Household income after tax    | -0.2941     | 0.0987 | -2.9784 | 0.0030 | -0.4881 | -0.1001 |

As discussed in previous sections, this study also examined a rival moderator “health consciousness.” For this purpose, a moderation analysis (Hayes PROCESS macro Model 1, Hayes, 2022) with 5,000 resamples was performed. The results revealed a non-significant moderated effect, as the interaction term included zero ( $b = 0.9074$ ,  $SE = 0.2566$ , 95% CI [-0.4743, 0.5340]). Thus, this rival moderator was ruled out.

Table 30 The summary of the moderation test results for health consciousness

| Predictor | Coefficient | SE     | t      | p      | LLCI    | ULCI   |
|-----------|-------------|--------|--------|--------|---------|--------|
| Constant  | 2.5811      | 2.2002 | 1.1731 | 0.2413 | -1.7416 | 6.9039 |

|                      |         |        |        |        |         |        |
|----------------------|---------|--------|--------|--------|---------|--------|
| Food type            | -0.2259 | 1.4576 | -0.155 | 0.8769 | -3.0896 | 2.6378 |
| Health consciousness | 0.1316  | 0.3908 | 0.3368 | 0.7364 | -0.6361 | 0.8994 |
| Interaction          | 0.0299  | 0.2566 | 0.1163 | 0.9074 | -0.4743 | 0.5340 |

### 5.3 Study 2-Direct measurement of regulatory focus

#### 5.3.1 Pretest

Before Study 2 (the main study), this thesis conducted a pretest to test the realism of the stimuli for Study 2. A total of 70 participants were recruited from Credamo for an online experiment. 70 participants were randomly assigned to either an organic food condition or a conventional food condition. The stimuli are shown in Section 4.4.3.2. After exposure to the stimulus, participants responded to the scale for realism check and reported their demographics.

Stimuli test: One one-sample t-test and one one-way Analysis of Variance (ANOVA) were run to test the realism of the stimuli. The results of the one-sample t-test indicated that participants perceived the scenario as realistic, as the ratings of realism were greater than and significantly different from the midpoint of the 1 to 7 rating scale ( $M_{\text{realistic}} = 6.01$ ,  $SD = 0.71$ ,  $t(69) = 29.54$ ,  $p < 0.001$ ). The one-way ANOVA analysis on realism revealed that no significant difference in stimulus realism was found across the two conditions ( $F(1, 68) = 0.70$ ,  $p = 0.405$ ,  $\eta_p^2 = 0.01$ ).

#### 5.3.2 Data preparation

Before moving on to data analysis, a six-step data preparation process was undertaken to ensure the dataset was clean, accurate, and ready. This process included data validation, data editing and coding, error detection, outlier identification, normality assessment, and common method bias check.

##### 5.3.2.1 Data validation (screening question and attention check)

This study incorporated two attention check questions and a time limit to enhance data quality and ensure participants remained attentive. Those who failed either the attention check or completed the survey in less than 1 minute were excluded. This screening approach was pre-registered, as detailed in the previous chapter.

In total, 237 participants consented to participate in the online experiment. The first attention check question was measured after participants were exposed to the stimuli by asking a dichotomous question: “What category do the fruits you see belong to?” They were required to select either the “organic fruits” option or the “conventional fruits” option. The second attention check question was measured by using a single-item scale: “This question tests whether you are answering carefully; please select ‘Very dissatisfied’ (1 = Very dissatisfied; 5 = Very satisfied).” 34 participants were screened out, as they failed to answer at least one attention check question correctly. Nevertheless, participants who fail this question should be screened out, as failing to identify the correct food category will significantly affect the results. No participants completed the survey in less than 1 minute. Therefore, the responses of 203 participants were retained for further analysis.

#### **5.3.2.2 Data editing and coding**

After data validation, the data were coded for further analysis. There were no issues with errors in editing and coding. Coding was conducted using SPSS, where the five consumer impulsiveness scale items (impulsive, extravagant, easily tempted, enjoy spending, and careless) were reverse-coded. The index for different scales was then computed using SPSS functions.

#### **5.3.2.3 Error detection**

Similar to Study 1, this study followed Pallant’s (2020) guidelines for checking data errors. This study employed the SPSS basic descriptive statistics function “Frequencies” (including Mean, Median, Maximum, and Minimum) to detect impossible values that fell outside the expected range. In this study, the values of measurements for key variables ranged either from 1 to 7 or from -4 to 4, after reverse coding. Demographic variables, which had specific ranges,

were detected as well. It was found that all values fell within the expected range. Moreover, the other SPSS basic descriptive statistics function, “Explore,” was utilised to detect missing values, but no missing values were spotted. Overall, the error detection analysis confirmed that there were no issues with data errors or missing data.

#### 5.3.2.4 Outlier identification

Similar to Study 1 and in accordance with the pre-registration, this study did not intend to remove any outliers from the dataset for further analysis. However, steps were taken to identify potential outliers. To this end, z-scores were used as a statistical tool, following the guidelines of Tabachnick and Fidell (2019) and Hair et al. (2019). Using SPSS descriptive statistics functions, the mean, the standard deviation, and the Z-Scores for key constructs—including consumer regulatory focus and consumer impulsiveness—were calculated, as shown in Table 31.

Table 31 Standard deviation, Mean and Z-Score of key variables

| Variables                 | Number | Mean | Standard deviation | Z-Score (Maximum) | Z-Score (Minimum) |
|---------------------------|--------|------|--------------------|-------------------|-------------------|
| Consumer regulatory focus | 203    | 0.04 | 1.68               | 2.06              | -2.40             |
| Consumer impulsiveness    | 203    | 3.23 | 1.13               | 2.46              | -1.61             |

According to Tabachnick and Fidell (2019) and Hair et al. (2019), any z-scores above +3.29 or below -3.29 can be considered as potential outliers. Thus, no outliers were found for consumer regulatory focus and consumer impulsiveness in this dataset.

#### 5.3.2.5 Normality assessment

Similar to Study 1, this study used an objective statistical approach combining Kolmogorov–Smirnov and Shapiro–Wilk tests and skewness and kurtosis values to assess

whether the data were normally distributed for two key variables: consumer regulatory focus and consumer impulsiveness.

The first step was to assess normality using the Kolmogorov–Smirnov and Shapiro–Wilk tests via SPSS basic descriptive statistics functions. The results are presented in Table 32. The normality tests for the two variables were significant ( $p < 0.05$ ), indicating a violation of the normality assumption (Pallant, 2020). However, given the large sample size in this study ( $N = 203 > 200$ ), obtaining a significant result from the Kolmogorov–Smirnov and Shapiro–Wilk tests is quite common (Pallant, 2020).

In light of this, the second step, using the skewness value and the kurtosis value for normality check, was taken by this study. The information on skewness and kurtosis values was generated through SPSS basic descriptive statistics functions. As Table 33 shows, the skewness values for those two variables ranged from 0.17 to 0.43, while the kurtosis value ranged from -0.60 to -0.76. According to Hair et al. (2019), an acceptable range for skewness is  $\pm 1.0$ , and for kurtosis,  $\pm 2.0$ . Since the results fell within these thresholds, the data for these variables can be considered normally distributed. Overall, it can be concluded that the data meet the normality assumption.

Table 32 The Kolmogorov–Smirnov and Shapiro–Wilk tests

| Variables                 | Kolmogorov–Smirnov |     |       | Shapiro–Wilk |     |       |
|---------------------------|--------------------|-----|-------|--------------|-----|-------|
|                           | Statistic          | df  | Sig.  | Statistic    | df  | Sig.  |
| Consumer regulatory focus | 0.080              | 203 | 0.001 | 0.958        | 203 | 0.000 |
| Consumer impulsiveness    | 0.073              | 203 | 0.003 | 0.981        | 203 | 0.009 |

Table 33 Skewness and kurtosis values

| Variable | N | Minim | Maximu | Mean | Std. | Skewness | kurtosis |
|----------|---|-------|--------|------|------|----------|----------|
|----------|---|-------|--------|------|------|----------|----------|

| s                                    |               | um            | m         |               | Deviat<br>ion |               |               |               |                   |
|--------------------------------------|---------------|---------------|-----------|---------------|---------------|---------------|---------------|---------------|-------------------|
|                                      | Statisti<br>c | Statisti<br>c | Statistic | Statisti<br>c | Statisti<br>c | Statist<br>ic | Std.<br>Error | Statis<br>tic | Std.<br>Erro<br>r |
| Consum<br>er<br>regulator<br>y focus | 203           | -4.00         | 3.50      | 0.04          | 1.68          | 0.17          | 0.17          | -0.60         | 0.34              |
| Consum<br>er<br>impulsiv<br>eness    | 203           | 1.42          | 6.00      | 3.23          | 1.13          | 0.43          | 0.17          | -0.76         | 0.34              |

### 5.3.2.6 Common method bias check

Similar to Study 1, this study also employed Harman's one-factor test to detect potential common method biases (Podsakoff et al., 2003) by using the SPSS function "Factor". To conduct this test, all scale items of two key variables (consumer regulatory focus, consumer impulsiveness, and health consciousness) were included in the analysis. The results of the test are provided in Table 34. Based on Podsakoff et al. (2003) and Fuller et al. (2016), if a single factor explains more than 50 % of the total variance, the common method bias is a concern. As shown in this table. No issues with common method biases were identified, as the variance explained by each factor was below the recommended threshold.

Table 34 Harman's one-factor test

| Initial Eigenvalues |       |                  |              | Extraction Sums of Squared Loadings |                  |              |
|---------------------|-------|------------------|--------------|-------------------------------------|------------------|--------------|
| Factor              | Total | % of<br>Variance | Cumulative % | Total                               | % of<br>Variance | Cumulative % |

|    |       |        |        |       |        |        |
|----|-------|--------|--------|-------|--------|--------|
| 1  | 5.813 | 36.332 | 36.332 | 5.311 | 33.191 | 33.191 |
| 2  | 2.442 | 15.263 | 51.595 |       |        |        |
| 3  | 1.550 | 9.685  | 61.280 |       |        |        |
| 4  | 0.906 | 5.665  | 66.945 |       |        |        |
| 5  | 0.735 | 4.592  | 71.536 |       |        |        |
| 6  | 0.637 | 3.983  | 75.519 |       |        |        |
| 7  | 0.592 | 3.697  | 79.216 |       |        |        |
| 8  | 0.548 | 3.424  | 82.640 |       |        |        |
| 9  | 0.508 | 3.176  | 85.816 |       |        |        |
| 10 | 0.470 | 2.936  | 88.752 |       |        |        |
| 11 | 0.422 | 2.639  | 91.390 |       |        |        |
| 12 | 0.357 | 2.229  | 93.620 |       |        |        |
| 13 | 0.317 | 1.983  | 95.602 |       |        |        |
| 14 | 0.288 | 1.802  | 97.404 |       |        |        |
| 15 | 0.282 | 1.760  | 99.164 |       |        |        |
| 16 | 0.134 | 0.836  | 100    |       |        |        |

Note. Extraction Method: Principle Axis Factoring.

Overall, this section delved into a total of 6 steps taken to prepare the data for further analysis, including data validation, data editing and coding, error detection, outlier identification, normality assessment, and common method bias check. Following this process, a total of 203 cases were retained in the dataset. The data met the normality assumption, and no concerns regarding common method bias were identified. The next section discusses the results of the preliminary analysis.

### 5.3.3 Preliminary analysis

After the data preparation process, the dataset was cleaned, coded, and verified for further analysis. A total of 203 cases were retained in the dataset. This section discusses the preliminary analysis in detail, including demographic information, unidimensionality check,

convergent and discriminant validity examination, reliability assessment, and realism check.

5.3.3.1 Demographic information

The data for Study 2 were collected in August 2024, with a final sample of 203. The demographic information of all 203 participants is provided in Table 35, including age, gender, education, and household income after tax. The demographic profiles of this study were similar to those of Study 1. The age of participants ranged from 19 to 56 years, with a mean age of 29.28 years. The majority of participants (53.2%) fell within the 21-30 age bracket, while the second largest group (29.6%) was aged 31-40. Female participants made up 67.5% of the sample, whereas male participants accounted for 32.5%. It is common for female participants to represent a larger proportion than males in online surveys. Concerning the highest degree that participants had received, the majority of them (72.9%) had a bachelor's degree, followed by a master's degree or above (25.6%), and a high school degree (1.5%). No participants had a degree below high school. When it comes to household income after tax, as measured by the Chinese Yuan, most of the participants (45.3%) had a household income of 100,001 to 200,000. The second largest group (25.6%) had a household income between 200,001 and 300,000, followed by 100,000 or below (14.3%), 300,001-400,000 (10.8%), and 400,001 or above (3.9%).

Table 35 Participants' demographic information

|                  | N   | %    |                  | N   | %    |
|------------------|-----|------|------------------|-----|------|
| <b>Age</b>       |     |      | <b>Gender</b>    |     |      |
| 18-20            | 17  | 8.4  | Male             | 66  | 32.5 |
| 21-30            | 108 | 53.2 | Female           | 137 | 67.5 |
| 31-40            | 60  | 29.6 | Other            | 0   | 0    |
| 41-50            | 11  | 5.4  |                  |     |      |
| 51-60            | 7   | 3.4  |                  |     |      |
|                  |     |      |                  |     |      |
| <b>Education</b> |     |      | <b>Household</b> |     |      |

|                                |     |      | income after<br>tax (Chinese<br>Yuan) |    |      |
|--------------------------------|-----|------|---------------------------------------|----|------|
| Below high<br>school           | 0   | 0    | Below 100,000                         | 29 | 14.3 |
| High school                    | 3   | 1.5  | 100,000-199,999                       | 92 | 45.3 |
| Bachelor's<br>degree           | 148 | 72.9 | 200,000-299,999                       | 52 | 25.6 |
| Master's<br>degree or<br>above | 52  | 25.6 | 300,000-399,999                       | 22 | 10.8 |
|                                |     |      | 400,000 or<br>above                   | 8  | 3.9  |

### 5.3.3.2 Unidimensionality check

Exploratory factor analysis (EFA) was conducted using the SPSS function “Factor” to check unidimensionality. The purpose of unidimensionality was to ensure that a set of scale items measures a single construct. Two key variables (constructs) were assessed separately, including consumer impulsiveness and the regulatory focus scale. The consumer impulsiveness scale consists of two subscales: the prudence and the hedonic subscales, which are theoretically distinct (Ramanathan and Menon, 2006). Thus, these two subscales were checked separately as two distinct constructs, similar to Study 1.

To ensure the data were suitable and accurate for factor analysis, the Kaiser–Meyer–Olkin (KMO) test (which measures sampling adequacy) and Bartlett’s test of sphericity (which measures correlation matrix) were conducted before EFA using the same SPSS function “Factor”. The results are shown in Table 36. Hair et al. (2019) indicate that a KMO test value of 0.5 or higher is suitable for factor analysis. Additionally, a significant outcome ( $p < 0.05$ ) of Bartlett’s test of sphericity further confirms its suitability. The results of the KMO test

showed that all values of the three (sub)scales exceeded 0.7. Furthermore, the results of Bartlett's test of sphericity were all significant ( $p = 0.000$ ). Thus, it can be concluded that the data were suitable and accurate for factor analysis.

The factor loadings for all three (sub)scales are presented in Table 37. According to Tabachnick and Fidell (2019), factor loadings greater than 0.5 provide strong evidence of unidimensionality. All items in the prudence subscale loaded strongly onto a single factor ( $\geq 0.6$ ), confirming the scale's unidimensionality. Similarly, all items in the hedonic subscale had factor loadings above 0.6. For the health consciousness scale, all items exhibited factor loadings exceeding 0.7, further supporting strong unidimensionality.

According to Hair et al. (2019), the percentage of variance accounted for by the scale was also measured for unidimensionality check. A total variance explained of at least 50% supports unidimensionality. The results for the three (sub)scales are presented in Tables 5.26, 5.27, and 5.28. The total variance explained ranged from 54.272% to 64.292%, providing further evidence of the unidimensionality of all three (sub)scales.

Table 36 KMO test and Bartlett's test of sphericity

| Methods                                     | Prudence subscale | Hedonic subscale | Regulatory focus scale |
|---------------------------------------------|-------------------|------------------|------------------------|
| KMO test outcome                            | 0.884             | 0.820            | 0.735                  |
| Bartlett's test of sphericity: significance | 0.000             | 0.000            | 0.000                  |

Extraction Method: Principal Component Analysis.

Table 37 Factor loading

| Scales | Scale items | Factor loading |   |   |
|--------|-------------|----------------|---|---|
|        |             | 1              | 2 | 3 |

|                        |                                                                                                                   |       |       |       |
|------------------------|-------------------------------------------------------------------------------------------------------------------|-------|-------|-------|
| Prudence subscale      | Indicate how the following 7 attributes describe you:<br>1. self-controlled                                       | 0.812 |       |       |
|                        | 2. farsighted                                                                                                     | 0.654 |       |       |
|                        | 3. responsible                                                                                                    | 0.832 |       |       |
|                        | 4. restrained                                                                                                     | 0.775 |       |       |
|                        | 5. rational                                                                                                       | 0.785 |       |       |
|                        | 6. methodical                                                                                                     | 0.859 |       |       |
|                        | 7. a planner                                                                                                      | 0.875 |       |       |
| Hedonic subscale       | Indicate how the following 5 attributes describe you:<br>1. impulsive                                             |       | 0.756 |       |
|                        | 2. extravagant                                                                                                    |       | 0.747 |       |
|                        | 3. easily tempted                                                                                                 |       | 0.724 |       |
|                        | 4. enjoy spending                                                                                                 |       | 0.804 |       |
|                        | 5. careless                                                                                                       |       | 0.642 |       |
| Regulatory focus scale |                                                                                                                   |       |       |       |
|                        | Indicate which goal in each pair is more important to them at this moment:<br>1. Responsibility or accomplishment |       |       | 0.747 |
|                        | 2. Safety or achievement                                                                                          |       |       | 0.728 |
|                        | 3. My duties or my hopes                                                                                          |       |       | 0.728 |
|                        | 4. My obligations or my aspirations                                                                               |       |       | 0.853 |

Extraction Method: Principal Component Analysis.

Table 38 Total Variance Explained (Prudence subscale)

| Initial Eigenvalues |       |      |              | Extraction Sums of Squared Loadings |      |              |
|---------------------|-------|------|--------------|-------------------------------------|------|--------------|
| Factor              | Total | % of | Cumulative % | Total                               | % of | Cumulative % |

|   |       | Variance |        |     | Variance |        |
|---|-------|----------|--------|-----|----------|--------|
| 1 | 4.5   | 64.292   | 64.292 | 4.5 | 64.292   | 64.292 |
| 2 | 0.698 | 9.972    | 74.264 |     |          |        |
| 3 | 0.556 | 7.943    | 82.207 |     |          |        |
| 4 | 0.451 | 6.443    | 88.65  |     |          |        |
| 5 | 0.351 | 5.019    | 93.669 |     |          |        |
| 6 | 0.299 | 4.269    | 97.938 |     |          |        |
| 7 | 0.144 | 2.062    | 100    |     |          |        |

Extraction Method: Principal Component Analysis.

Table 39 Total Variance Explained (Hedonic subscale)

| Initial Eigenvalues |       |               |              | Extraction Sums of Squared Loadings |               |              |
|---------------------|-------|---------------|--------------|-------------------------------------|---------------|--------------|
| Factor              | Total | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1                   | 2.714 | 54.272        | 54.272       | 2.714                               | 54.272        | 54.272       |
| 2                   | 0.732 | 14.639        | 68.911       |                                     |               |              |
| 3                   | 0.609 | 12.182        | 81.093       |                                     |               |              |
| 4                   | 0.494 | 9.872         | 90.966       |                                     |               |              |
| 5                   | 0.452 | 9.034         | 100          |                                     |               |              |

Extraction Method: Principal Component Analysis.

Table 40 Total Variance Explained (Regulatory focus scale)

| Initial Eigenvalues |       |               |              | Extraction Sums of Squared Loadings |               |              |
|---------------------|-------|---------------|--------------|-------------------------------------|---------------|--------------|
| Factor              | Total | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1                   | 2.344 | 58.611        | 58.611       | 2.344                               | 58.611        | 58.611       |
| 2                   | 0.717 | 17.915        | 76.526       |                                     |               |              |
| 3                   | 0.561 | 14.020        | 90.546       |                                     |               |              |
| 4                   | 2.344 | 58.611        | 58.611       | 2.344                               | 58.611        | 58.611       |

Extraction Method: Principal Component Analysis.

### 5.3.3.3 Convergent and discriminant validity examination

As the results of the Kaiser–Meyer–Olkin (KMO) test and Bartlett’s test of sphericity indicated that the data were suitable for factor analysis, this section presents an exploratory factor analysis (EFA) conducted to assess the convergent and discriminant validity of the measures (scales). Similar to Study 1, this study focuses on convergent and discriminant validity, as they are the two most widely accepted forms of validity in social science research. This study examined convergent validity through three ways: factor loadings, the average variance extracted (AVE), and construct reliability (CR). The factor loadings of all items are shown in Table 41. The AVE and CR were calculated using the same formula as in Study 1.

Table 41 suggested that the factor loadings of all items were greater than the recommended threshold of 0.5, ranging from 0.528 (“careless”) to 0.894 (“a planner”). The AVE of the prudence subscale was 0.653, surpassing the recommended threshold of 0.5. However, the AVE values for the hedonic subscale and health consciousness were slightly below 0.5. This study assessed convergent validity using three criteria, as stated by Malhotra and Dash (2011, p. 702): “AVE is a more conservative measure than CR. On the basis of CR alone, the researcher may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error.” The CR values for all three scales were well above 0.8, exceeding the recommended threshold of 0.6. Taken together, it can be concluded that the convergent validity of the prudence subscale was strong, while that of the hedonic subscale and health consciousness was acceptable.

Table 41 Convergent validity results

| Scales            | Scale items                                           | Factor loading |   |   | AVE   | CR    |
|-------------------|-------------------------------------------------------|----------------|---|---|-------|-------|
|                   |                                                       | 1              | 2 | 3 |       |       |
| Prudence subscale | Indicate how the following 7 attributes describe you: |                |   |   | 0.653 | 0.922 |
|                   | 1. self-controlled                                    | 0.735          |   |   |       |       |
|                   | 2. farsighted                                         | 0.560          |   |   |       |       |

|                        |                                                                            |       |       |       |       |       |
|------------------------|----------------------------------------------------------------------------|-------|-------|-------|-------|-------|
|                        | 3. responsible                                                             | 0.807 |       |       |       |       |
|                        | 4. restrained                                                              | 0.688 |       |       |       |       |
|                        | 5. rational                                                                | 0.717 |       |       |       |       |
|                        | 6. methodical                                                              | 0.884 |       |       |       |       |
|                        | 7. a planner                                                               | 0.894 |       |       |       |       |
| Hedonic subscale       | Indicate how the following 5 attributes describe you:                      |       | 0.681 |       |       |       |
|                        | 1. impulsive                                                               |       |       |       |       |       |
|                        | 2. extravagant                                                             |       | 0.673 |       | 0.433 | 0.834 |
|                        | 3. easily tempted                                                          |       | 0.627 |       |       |       |
|                        | 4. enjoy spending                                                          |       | 0.759 |       |       |       |
|                        | 5. careless                                                                |       | 0.528 |       |       |       |
| Regulatory focus scale |                                                                            |       |       |       |       |       |
|                        | Indicate which goal in each pair is more important to them at this moment: |       |       | 0.600 |       |       |
|                        | 1. Responsibility or accomplishment                                        |       |       |       | 0.461 | 0.818 |
|                        | 2. Safety or achievement                                                   |       |       | 0.581 |       |       |
|                        | 3. My duties or my hopes                                                   |       |       | 0.634 |       |       |
|                        | 4. My obligations or my aspirations                                        |       |       | 0.862 |       |       |

Extraction Method: Maximum Likelihood.

This study examined the discriminant validity of all three measures (scales) using a well-established method: the Fornell–Larcker criterion (Fornell and Larcker, 1981). This method is based on comparing the square root of the AVE for each construct with its

correlations with other constructs. If the square root of the AVE for each construct (in boldface) surpasses the correlations between the constructs, it indicates that the scale of this construct has sufficient discriminant validity. The correlations were produced using the SPSS function “Bivariate”. The results of correlations and the square root of the AVE for each construct are shown in Table 42. The results suggested that the square root of the AVE for each of the three constructs exceeded the correlations between the constructs, indicating sufficient discriminant validity.

Table 42 Correlations and squared AVE

| Scales                    | Regulatory<br>focus scale | Prudence<br>subscale | Hedonic<br>subscale |
|---------------------------|---------------------------|----------------------|---------------------|
| Regulatory<br>focus scale | <b>0.808</b>              |                      |                     |
| Prudence<br>subscale      | -0.075                    | <b>0.658</b>         |                     |
| Hedonic<br>subscale       | -0.042                    | -0.557**             | <b>0.679</b>        |

Note. Off-diagonal values are correlation coefficients and on-diagonal values are the square root of AVE. Correlation is significant at the 0.01 level (2-tailed).

Overall, by combining the results of factor loadings, the average variance extracted (AVE), and construct reliability (CR), it can be concluded that the convergent validity of the prudence subscale was strong, and that of the hedonic subscale and regulatory focus scale was acceptable. The test based on the Fornell–Larcker criterion demonstrated sufficient discriminant validity for all three scales.

#### 5.3.3.4 Reliability assessment

After establishing the validity, this study assesses the reliability of those (sub)scales by utilising Cronbach’s alpha ( $\alpha$ ). Cronbach’s alpha ( $\alpha$ ) is a widely used method to measure the internal consistency of a set of scale items. This study used the SPSS function “Scale” to

analyse the scale reliability. In the previous section, the consumer impulsiveness scale was split into two subscales: the hedonic subscale and the prudence subscale, to check the convergent validity and the discriminant validity. This section assessed the reliability of the consumer impulsiveness scale as a whole as well as two subscales, and the health consciousness scale.

Hair et al. (2019) suggest that a Cronbach's alpha value of 0.7 is the minimum threshold for acceptable reliability, while values of 0.95 or higher may indicate item redundancy rather than true reliability. In this study, Cronbach's alpha ranged from 0.760 to 0.906, indicating good internal reliability without redundancy concerns (see Table 43).

Table 43 Cronbach's alpha ( $\alpha$ ) results

| Scales                       | Cronbach's alpha ( $\alpha$ ) |
|------------------------------|-------------------------------|
| Consumer impulsiveness scale | 0.897                         |
| Hedonic subscale             | 0.906                         |
| Prudence subscale            | 0.788                         |
| Regulatory focus scale       | 0.760                         |

#### 5.3.3.5 Realism check

This study tested the realism of the stimuli using a method similar to the pretest. 203 participants were randomly allocated to either an organic food condition or a conventional food condition. The stimuli are shown in Section 4.4.3.1. After exposure to the stimulus, participants answered the question for realism check: "The description of the scene is realistic" (1 = strongly disagree, 7 = strongly agree).

A one-sample t-test and one one-way Analysis of Variance (ANOVA) were performed via SPSS to test the realism of the stimuli. The results of the one-sample t-test indicated that participants perceived the scenario as realistic, as the ratings of realism were greater than and significantly different from the midpoint of the 1 to 7 rating scale ( $M_{\text{realistic}} = 5.86$ ,  $SD = 0.94$ ,  $t(202) = 35.69$ ,  $p < 0.001$ ). The one-way ANOVA analysis on realism further revealed that no

significant difference in stimulus realism was found across the two conditions ( $F(1, 201) = 0.007, p = 0.932, \eta_p^2 = 0.000$ ).

### 5.3.4 Hypothesis testing

Following data preparation and preliminary analysis, the dataset was deemed suitable and ready for hypothesis testing. This study analyses a total of 203 responses. Figure 9 illustrates the conceptual framework of this thesis, encompassing both Study 1 and Study 2. This conceptual framework consists of the food type (organic food vs. conventional food) as the independent variable across two studies, consumer impulsiveness as the moderator across two studies, and regulatory focus orientations as the dependent variable in Study 2. Distinct from Study 1, which captured consumers' regulatory focus from their ad preferences, this study directly measured it via the regulatory focus scale. Table 44 displays the hypotheses, research objectives, and analysis techniques used in Study 2. As shown in this table, this study aimed to test H1b and H2b and to address the research objectives of this thesis by empirically examining how organic food products themselves might prime regulatory focus among consumers and conceptually differentiating organic food products from generic green products. To this end, Hayes Process Macro Model 1 was performed using SPSS to examine the interaction between the food type, consumer impulsiveness, and regulatory focus orientations.

Table 44 Hypotheses, research objectives, and analysis techniques

| Hypothesis                                                                                                                                                                                                         | Research objectives                                                                                                                                                     | Analysis techniques                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| H1: Organic food (vs. conventional) food can trigger a promotion focus in impulsive consumers:<br><br>H1b: Mere exposure to organic food (vs. conventional food) induces a promotion focus in impulsive consumers. | 1. Empirically examine whether and how organic food products themselves might prime regulatory focus among consumers.<br><br>2. Conceptually differentiate organic food | Hayes Process Macro Model 1 – Moderation |

|                                                                                                                                                                                                             |                                                                                                                                                                                                                                             |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
|                                                                                                                                                                                                             | products from generic green products through two empirical studies.                                                                                                                                                                         |                                          |
| H2: Organic (vs. conventional) food can trigger a prevention focus in prudent consumers:<br><br>H2b: Mere exposure to organic food (vs. conventional food) induces a prevention focus in prudent consumers. | 1. Empirically examine whether and how organic food products themselves might prime regulatory focus among consumers.<br><br>2. Conceptually differentiate organic food products from generic green products through two empirical studies. | Hayes Process Macro Model 1 – Moderation |

#### 5.3.4.1 The one-way ANOVA and ANCOVA analyses

As clarified earlier, this study aimed to use Hayes Process Macro Model 1 to test hypotheses. However, this study also assumes that organic food does not prime a single regulatory focus orientation among consumers. Instead, the primed regulatory focus orientation depends on an individual trait: consumer impulsiveness. Thus, similar to Study 1, this study performed a one-way Analysis of Variance (ANOVA) on consumers' regulatory focus orientations to compare the means of two groups (organic food condition vs. conventional food condition). It was assumed that there was no statistically significant difference between these two groups. The results confirmed this assumption, suggesting that no significant difference in regulatory focus orientations was found across the two conditions ( $F(1, 201) = 1.292, p = 0.257, \eta_p^2 = 0.006$ ). The value of partial eta squared ( $\eta_p^2$ ) indicated that the effect size was small (Cohen, 1988).

To rule out possible alternative explanations that participants' hunger level, participants' familiarity with organic food, participants' liking of organic food, participants' liking of apples, and participants' demographic information, including age, gender, education, and household income after tax accounted for the findings, a one-way Analysis of Covariance (ANCOVA) test was conducted, with these variables being included in the model. Table 45 presents the results of the ANCOVA test. The results persisted ( $F(1, 193) = 1.737, p = 0.189, \eta_p^2 = 0.009$ ) even after controlling for these covariates: participants' hunger level ( $F(1, 193) = 2.990, p = 0.085, \eta_p^2 = 0.015$ ), participants' familiarity with organic food ( $F(1, 193) = 0.175, p = 0.676, \eta_p^2 = 0.001$ ), participants' liking of organic food ( $F(1, 193) = 3.868, p = 0.051, \eta_p^2 = 0.020$ ), participants' liking of apples ( $F(1, 193) = 2.492, p = 0.116, \eta_p^2 = 0.013$ ), age ( $F(1, 193) = 4.672, p = 0.032, \eta_p^2 = 0.024$ ), gender ( $F(1, 193) = 2.299, p = 0.131, \eta_p^2 = 0.012$ ), education ( $F(1, 193) = 4.438, p = 0.036, \eta_p^2 = 0.022$ ), and household income after tax ( $F(1, 193) = 2.123, p = 0.147, \eta_p^2 = 0.011$ ). Therefore, the ANOVA and ANCOVA results were consistent with our assumptions, as we did not anticipate the independent variable to directly influence the dependent variable.

Table 45 One-way ANCOVA test

| Source                        | Type III Sum of Squares | df | Mean Square | F     | Sig.  | Partial Eta Squared |
|-------------------------------|-------------------------|----|-------------|-------|-------|---------------------|
| Regulatory focus orientations | 4.62                    | 1  | 4.620       | 1.737 | 0.189 | 0.009               |
| Hunger level                  | 7.953                   | 1  | 7.953       | 2.990 | 0.085 | 0.015               |
| Familiarity with organic food | 0.465                   | 1  | 0.465       | 0.175 | 0.676 | 0.001               |
| Liking of                     | 10.288                  | 1  | 10.288      | 3.868 | 0.051 | 0.020               |

|                            |        |   |        |       |       |       |
|----------------------------|--------|---|--------|-------|-------|-------|
| organic food               |        |   |        |       |       |       |
| Liking of apples           | 6.630  | 1 | 6.630  | 2.492 | 0.116 | 0.013 |
| Age                        | 12.427 | 1 | 12.427 | 4.672 | 0.032 | 0.024 |
| Gender                     | 6.114  | 1 | 6.114  | 2.299 | 0.131 | 0.012 |
| Education                  | 11.806 | 1 | 11.806 | 4.438 | 0.036 | 0.022 |
| Household income after tax | 5.646  | 1 | 5.646  | 2.123 | 0.147 | 0.011 |

#### 5.3.4.2 Hayes PROCESS macro analysis

This thesis proposes that mere exposure to organic food (vs. conventional food) induces a promotion focus in impulsive consumers (H1b) and mere exposure to organic food (vs. conventional food) induces a prevention focus in prudent consumers (H2b). This study applied Hayes PROCESS macro Model 1 (Hayes, 2022) to examine the moderation effect of consumer impulsiveness on the relationship between the food type and consumers' regulatory focus orientations. Hayes PROCESS macro Model 1 enables testing whether the effect of the independent variable on the dependent variable varies depending on the moderator variable.

Similar to Study 1, this study employed the SPSS plugin "PROCESS v4.2 by Andrew F. Hayes" to test H1a and H2a, as was clarified above. Specifically, this study conducted a moderation analysis (Hayes PROCESS macro Model 1), with 5,000 resamples (Hayes, 2022). In this model, the food type served as the independent variable, with the conventional food condition coded as "1" and the organic food condition coded as "2". Consumers' regulatory focus orientations, measured as a continuous variable, served as the dependent variable. Consumer impulsiveness, also a continuous variable, acted as the moderator. The summary of the moderation test results is provided in Table 46.

The results revealed a significant moderated effect, as the interaction term did not include zero ( $b = 0.4572$ ,  $SE = 0.2088$ , 95% CI  $[-0.0455, -0.8690]$ ). The results of conditional effects revealed a significant and negative moderation effect at the low level of the moderator  $[-1$  S.D. ( $b = -0.7856$ ,  $SE = 0.3318$ , 95% CI  $[-1.4400, -0.1313]$ ), with the Johnson–Neyman significance region below the point 2.1045 of consumer impulsiveness. However, the results revealed a non-significant and positive moderation effect both at the high level of the moderator  $[+1$  S.D. ( $b = 0.2432$ ,  $SE = 0.3316$ , 95% CI  $[-0.4107, 0.8970]$ ), and at the mean level of the moderator [Mean ( $b = -0.2712$ ,  $SE = 0.2342$ , 95% CI  $[-0.7330, 0.1906]$ )]. As such, being exposed to organic food, compared to conventional food, induces a prevention focus in prudent consumers. In contrast, being exposed to organic food, compared to conventional food, does not affect the regulatory focus orientations in impulsive consumers. Thus, the results support H2b yet reject H1b.

Table 46 The summary of the moderation test results

| Predictor              | Coefficient | SE     | t       | p      | LLCI    | ULCI    |
|------------------------|-------------|--------|---------|--------|---------|---------|
| Constant               | 2.8497      | 1.1444 | 2.4900  | 0.0136 | 0.5929  | 5.1065  |
| Food type              | -1.7478     | 0.7140 | -2.4479 | 0.0152 | -3.1558 | -0.3398 |
| Consumer impulsiveness | -0.7428     | 0.3336 | -2.2268 | 0.0271 | -1.4007 | -0.0850 |
| Interaction            | 0.4572      | 0.2088 | 2.1897  | 0.0297 | 0.0455  | 0.8690  |

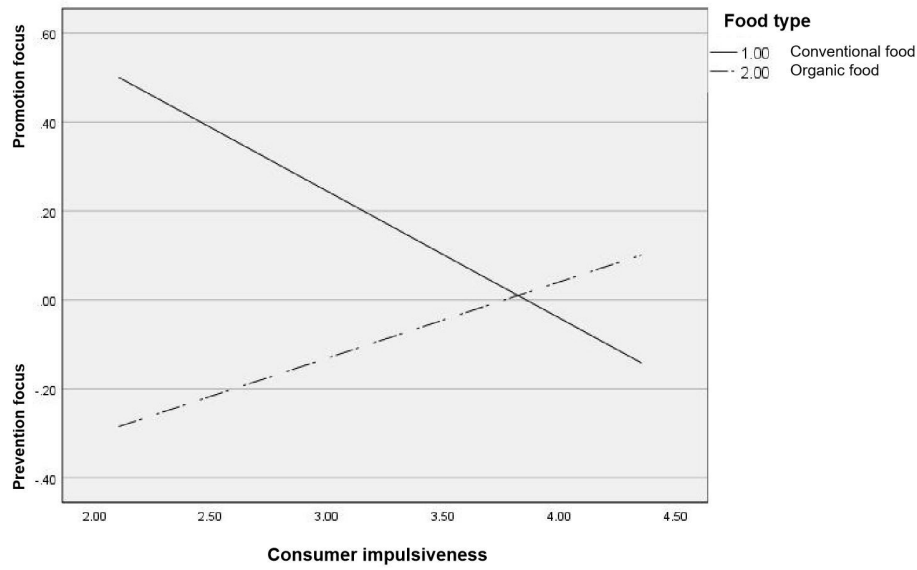


Figure 11 The moderation effect for Study 2

This study also aimed to rule out possible alternative explanations that accounted for the findings. As clarified in the previous chapters, Study 2 was pre-registered. Two covariates were determined in the pre-registration stage, encompassing participants' familiarity with organic food and participants' liking of organic food. For this purpose, a moderation analysis (Hayes PROCESS macro Model 1, Hayes, 2022) with 5,000 resamples was performed. These two covariates were controlled for simultaneously by including them in the model. Table 47 presents the results of the moderation test. The moderation effect remained significant (interaction term:  $b = 0.4296$ ,  $SE = 0.2091$ , 95% CI [0.0172, 0.8419]) even after controlling for these two covariates: participants' familiarity with organic food ( $b = -0.0484$ , 95% CI [-0.2768, 0.1800]) and participants' liking of organic food ( $b = 0.2262$ , 95% CI [-0.0624, 0.5148]).

Table 47 The summary of the moderation test results (covariates included)

| Predictor              | Coefficient | SE     | t       | p      | LLCI    | ULCI    |
|------------------------|-------------|--------|---------|--------|---------|---------|
| Constant               | 1.7877      | 1.3249 | 1.3493  | 0.1788 | -0.8251 | 4.4004  |
| Food type              | -1.7338     | 0.7134 | -2.4301 | 0.0160 | -3.1407 | -0.3268 |
| Consumer impulsiveness | -0.6768     | 0.3354 | -2.0180 | 0.0449 | -1.3381 | -0.0154 |

|                                     |         |        |         |        |         |        |
|-------------------------------------|---------|--------|---------|--------|---------|--------|
| Interaction                         | 0.4296  | 0.2091 | 2.0545  | 0.0413 | 0.0172  | 0.8419 |
| Familiarity<br>with organic<br>food | -0.0484 | 0.1158 | -0.4180 | 0.6764 | -0.2768 | 0.1800 |
| Liking of<br>organic food           | 0.2262  | 0.1463 | 1.5458  | 0.1237 | -0.0624 | 0.5148 |

## 5.5 Conclusion

In conclusion, this chapter presents the analytical techniques employed in this thesis and the results of the data analysis. Both studies follow a similar format. First, for each study, the results of a pretest are presented, primarily to assess the realism of the stimuli. Second, the data preparation procedure is discussed in detail. During this process, the raw data collected from the main study were cleaned and checked for accuracy and validity. Next, in the preliminary analysis stage, the data were edited and coded, and the measures were examined to ensure reliability and validity. Finally, the hypotheses were tested using a set of analytical techniques, and the results were described.

In the next chapter, an in-depth discussion of the results is provided, highlighting the theoretical and practical contributions of this thesis. Additionally, the limitations of this thesis and directions for future studies are discussed.

## **Chapter 6: Discussion and Conclusion**

### **6.1 Chapter overview**

This chapter concludes this thesis by initially revisiting the research objectives and demonstrating how they have been addressed through a discussion of the findings of the literature review on priming methods for regulatory focus and the results of the two main studies. As clarified in the Introduction chapter, this thesis has four primary research objectives. The first research objective of this thesis is to conduct a comprehensive review of the existing research on regulatory focus priming, published in quality marketing journals. At the same time, the aim of this thesis is to create a novel framework to classify those priming methods for regulatory focus. The second research objective of this thesis is to empirically examine how organic food products themselves, as a type of regulatory focus prime, may activate regulatory focus among consumers. The third objective of this thesis is to conceptually differentiate organic food products from generic green products through two empirical studies. The fourth objective of this thesis is to provide valuable practical implications for companies and policy-makers who aim to promote organic food products. The discussion of the results revolves around the research objectives.

Next, this chapter elaborates on the theoretical contributions of this thesis and its practical implications. Finally, the limitations of this research are discussed, and suggestions for future research are provided.

### **6.2 Discussion of results**

#### **6.2.1 Discussion of literature review on regulatory focus priming**

To address the first research objective, in this thesis, a comprehensive literature review of the literature regarding priming methods for regulatory focus, published in quality marketing journals (see the Literature Review chapter for details), is conducted. Through this literature review, this thesis develops a novel framework for classifying those priming methods. Using a two-level criterion for the classification, this thesis classifies priming methods for regulatory focus into different categories. Priming methods for regulatory focus can take various forms,

such as a task, a persuasive message, and a marketing element, and those forms can be easily distinguished. Therefore, the first level of the criterion assesses the form of regulatory focus primes. Through a careful and thorough literature review, this thesis identifies the following categories: task framing, message framing, value-framing, physical and mental exercises, self-view (independent vs. interdependent), marketing cues (discount, expiration dates, and familiarity), time metaphors (ego-moving metaphor vs. event-moving metaphor), socialisation (giver-recipient relationship, friend vs. family, cats vs. dogs), short-term mating mindsets, products per se, social approval, product newness and its relationship with perceived cost to purchase, temporal distance from the receipt of last salary, information on a green company or a green product, hedonic food for impulsive consumers, and role models (positive vs. negative). The definition of each identified form is explained in the Literature Review chapter.

After the first round of classification of priming methods for regulatory focus based on their forms, a second round of classification follows, considering the underlying nature or rationale behind these priming methods. Distinct from the observable forms (e.g., a task, a persuasive message, and a marketing element, etc.), the nature or rationale considered in the second round of classification is more implicit and obscure. However, given that those priming methods are grounded in regulatory focus theory (Higgins, 1998) and are designed to prime regulatory focus orientations, it makes sense to further classify the priming methods based on their underlying nature. Further, this allows for a more granular secondary label to distinguish priming methods more precisely. This is important because two priming methods of the same form may differ in their underlying nature or rationale. For example, the priming method designed by Freitas and Higgins (2002) is classified as a type of task framing according to its form, as in this method, participants are asked to perform a writing task, with task instructions framed differently to prime either a promotion focus or a prevention focus. Specifically, participants are asked to either list a hope or an aspiration they currently have (for the purpose of priming a promotion focus orientation), or list a duty or an obligation they currently have (for the purpose of priming a prevention focus orientation).

Another example, taken from Basu and Ng (2021) and Jain et al. (2007), involves participants being instructed to perform an anagram task, which is also labelled as a type of task framing. More specifically, in the condition priming the promotion focus, participants are told that if they correctly unscramble the brand name, they will gain a certain number of points. In the condition priming the prevention focus, in contrast, participants are told that if they incorrectly unscramble the brand name, they will lose a certain number of points. The priming method from Freitas and Higgins (2002) and the priming method from Basu and Ng (2021) and Jain et al. (2007) fall into the task framing category, as in each method participants are required to complete one specific task that is framed differently depending on the condition.

However, when diving deeper and linking the priming methods to regulatory focus theory (Higgins, 1997; 1998), it becomes clear that these two priming methods are grounded in two different regulatory focus features. On the one hand, regulatory focus theory (Higgins, 1997; 1998) proposes that individuals possess two distinct self-guides: ideal self-guides or ought self-guides. Ideal self-guides have a promotion focus, which motivates individuals to attain hopes, wishes and aspirations, while ought self-guides motivate individuals to fulfil duties, responsibilities and obligations. Thus, a promotion focus orientation is connected to strong ideals, whereas a prevention focus orientation is associated with strong oughts (Higgins, 1997; 1998). On the other hand, promotion-focused people are eager to attain gains to approach the matches to the desired end state, whereas prevention-focused people are vigilant to ensure non-losses to avoid mismatches to the desired end state (Higgins, 1997; 1998). Thus, promotion-focused people are more sensitive about gains and non-gains. Conversely, prevention-focused people are more sensitive about non-losses and losses (Higgins, 1998). While both strong ideals and gains are associated with a promotion focus, and both strong oughts and losses are related to a prevention focus, these two pairs of regulatory focus features differ in nature and should be further distinguished. In light of this, it is believed that the underlying nature or rationale behind these priming methods should serve as the second-level classification criterion.

Although two levels of classification criteria are designed, with the first-level criterion for the

first-round classification and the second-level criterion for the second-round classification, not all priming methods for regulatory focus are eligible to undergo the second-round classification. Following the first round of the classification process, a total of three types of priming methods are judged eligible and suitable for the second round of classification. These three priming methods consist of task framing, message framing, and value framing, with the secondary label placed in the bracket. Each type of priming method is labelled in the bracket as either ideal-ought or gain-loss (see Table 4 in the Literature Review chapter for more details). The reason why these three priming methods are eligible for the second round of classification is that the underlying nature or rationale behind these priming methods is relatively explicit, compared with other types of priming methods. Back to the priming method created by Freitas and Higgins (2002), in which participants are asked to write down a hope or an aspiration they currently have to prime a promotion focus, or participants are asked to write down a duty or an obligation they currently have to prime a prevention focus. In this example, thinking about or writing down a hope or an aspiration helps participants align their actual self with their ideal self (Higgins, 1997; 1998). In contrast, thinking about or writing down a duty or an obligation helps participants align their actual self with their ought self (Higgins, 1997; 1998). The connection between a promotion focus and strong ideals, as well as the connection between a prevention focus and strong oughts, is explicit. Thus, it makes sense to label this priming method for regulatory focus as ideal-ought based on its underlying nature.

However, for the remaining priming methods, including physical and mental exercises, self-view (independent vs. interdependent), marketing cues (discount, expiration dates, and familiarity), time metaphors (ego-moving metaphor vs. event-moving metaphor), socialisation (giver-recipient relationship, friend vs. family, cats vs. dogs), short-term mating mindsets, products per se, social approval, product newness and its relationship with perceived cost to purchase, temporal distance from the receipt of last salary, information on a green company or a green product, hedonic food for impulsive consumers, and role models (positive vs. negative), it would be difficult to recognise the regulatory focus features related to those priming methods. Compared to the priming methods eligible for the second round of

classification (task framing, message framing, and value framing) that offers clear instructions or information framed ground in regulatory focus theory (Higgins, 1998), it appears to be hard to associate those “ineligible” priming methods with any regulatory focus features. For instance, Fei et al. (2020) reveal that socialising with a family member or a friend primes different regulatory focus orientations. In this priming method, participants are required to imagine sending a message to either a family member or a friend and write down the name they would send the message to and the content of that message. It is found that interacting with a friend induces a promotion focus among participants, while interacting with a family member activates a prevention focus among participants (Fei et al., 2020). It does not appear straightforward to recognise any explicit links between family members or friends and regulatory focus. This is also true for any other “ineligible” priming methods.

It is worth noting that not all priming methods are capable of inducing two regulatory focus orientations. Certain priming methods include only a single manipulation approach rather than a pair and can therefore activate only a single regulatory focus orientation. These priming methods encompass short-term mating mindsets, information on a green company or a green product, and hedonic food for impulsive consumers. A short-term mating mindset is manipulated by asking participants to imagine being single for a few months and being given the chance to select their optimal dating partner (He and Cunha, 2020). Likewise, hedonic food such as chocolate cakes for impulsive consumers can trigger a promotion focus (Sengupta and Zhou, 2007). These two priming methods cannot be used to prime a prevention focus. With regard to information on a green company or product by Bullard and Manchanda (2013), after being exposed to such information, participants become more prevention-focused. However, this priming method does not address how to induce a promotion focus. In light of this, researchers who seek to manipulate a pair of regulatory focus orientations (both promotion focus and prevention orientations) should be mindful to use the three priming methods mentioned above.

Overall, in this thesis, a comprehensive review of the existing research on priming methods for regulatory focus is conducted. Furthermore, this thesis provides a novel classification

framework that classifies those priming methods according to a two-level criterion. All the priming methods are assessed and labelled. Therefore, the first research objective of this thesis is achieved. The review and the classification framework provide researchers a deeper and more thorough comprehension of priming methods for regulatory focus, from the manipulation procedure for each type of priming method to its underlying rationale. In addition, this procedure provides a clear guideline for the following two empirical studies. A review of the literature on regulatory focus priming reveals that certain external stimuli can temporarily alter an individual's regulatory focus motivations. These externally shaped regulatory focus motivations can have an influence on an individual's perceptions, evaluations, and decision-making (Higgins, 1997,1998; Sengupta and Zhou, 2007; Fei et al., 2020; Borges and Gomez, 2015). This finding leads to the second and third research objectives of this thesis, prompting the researcher to investigate the role of organic food products in activating regulatory focus motivations among consumers, as well as to differentiate organic food products from generic green products.

### **6.2.2 Discussion of Study 1**

In this thesis, two main empirical studies are conducted to address the second research objective (examine how organic food products themselves, as a type of regulatory focus prime, can activate regulatory focus among consumers) and the third research objective (conceptually differentiate organic food products from generic green products). For this purpose, this thesis proposes two hypotheses (H1 and H2), each with two sub-hypotheses (see the Hypothesis Development and Conceptual Framework chapter for more details). Study 1 is conducted to examine H1a (Mere exposure to organic food (vs. conventional food) makes impulsive consumers prefer promotion-framed product claims over prevention-framed product claims), as well as H2a (Mere exposure to organic food (vs. conventional food) makes prudent consumers prefer prevention-framed product claims over promotion-framed product claims).

Following Sengupta and Zhou (2007) and Jia et al. (2022), Study 1 tests whether and how mere exposure to organic food can temporarily change consumers' regulatory focus

orientations. Testing mere exposure to intended marketing objects or situations helps reduce the potential influence of other elements that could confound the results. For instance, Sengupta and Zhou (2007) investigate how hedonically appealing foods (e.g., chocolate cakes) activate consumers' promotion focus motivation by merely exposing participants to a slice of real chocolate cake or the colour pictures of the cake, without any descriptions of how delicious that cake is. The authors find that after exposure to chocolate cakes (compared to apples), participants with high impulsivity exhibit a greater promotion focus. This effect is not found among participants with low impulsivity. Therefore, mere exposure to hedonically appealing foods (e.g., chocolate cakes) can prime a promotion focus among impulsive consumers. Jia et al. (2022) examine how mere exposure to dogs (versus cats) differentially affects consumers' regulatory focus orientations. Dogs tend to be more eager to please their owners and socialise with other dogs, behaviours consistent with a promotion focus. Conversely, cats are typically more cautious, suspicious, boundary-setting, and anxious, traits that are more indicative of a prevention focus (Jia et al., 2022). By presenting participants with a series of colour pictures of dogs (versus cats), their promotion focus (versus prevention focus) is successfully induced. This research further suggests that mere exposure to stimuli can prime regulatory focus orientations, without other information or descriptions of the stimuli.

Similar to Sengupta and Zhou (2007) and Jia et al. (2022), in Study 1, participants are merely exposed to a colour picture of a variety of organic fruits sold in shelves, without providing any specific information on organic foods (e.g., the definition of organic food or the differences between organic food and conventional food). Previous literature has indicated that a message that conveys certain information can activate associated regulatory focus orientations (Cesario et al., 2004; Choi et al., 2020). In the literature review on priming methods for regulatory focus, the method that primes regulatory focus via a message is labelled as "message framing" (see the Literature Review chapter). When presenting a message that emphasises the accomplishment benefits of marketing objectives, consumers may become more promotion-focused (Cesario et al., 2004). In contrast, when highlighting the safety benefits of marketing objectives, consumers may become more prevention-focused

(Cesario et al., 2004). Describing the definition or features of organic food inevitably involves both its accomplishment benefits—such as premium pricing and great taste (Mann, 2003; Septianto et al., 2019; Fifita et al., 2020)—and its safety benefits, such as being free from harmful chemicals (e.g., fertilisers and pesticides) (Mai et al., 2021; Hughner et al., 2007; Baker et al., 2004; Fifita et al., 2020). In this regard, revealing such information may unintentionally manipulate participants to varying extents. Thus, following Sengupta and Zhou (2007) and Jia et al. (2022), Study 1 examines the impact of mere exposure to organic food by only presenting participants with colour pictures of organic food. This minimises the potential confounding effects caused by the “message framing”. The familiarity of organic food products is measured in pretests and main studies to test whether this factor influences the expected effects. The results indicate that the familiarity of organic food products as a control variable does not affect the expected effects.

In Study 1, participants’ regulatory focus orientations are measured by examining consumers’ preferences for out-of-context product claims framed by regulatory focus theory (Higgins, 1998). It is well-established that consumers’ preferences for out-of-context product claims serve as an effective approach to measuring regulatory focus orientations (e.g., Sengupta and Zhou, 2007; Jia et al., 2022; Fei et al., 2020). According to regulatory focus theory (Higgins, 1998; Higgins et al., 2020; Jia et al., 2022; Borges and Gomez, 2015), regulatory focus motivations an individual holds can affect their perceptions, judgements, evaluation, and decision-making, even when those downstream outcomes occur in a distinct context from where the regulatory focus priming takes place. For example, Sengupta and Zhou (2007) aim to test whether mere exposure to hedonically appealing foods (e.g., chocolate cakes) affects regulatory focus. However, the authors measure participants’ regulatory focus through the strategies they use for being a good friend. A promotion-relevant strategy can be “to be emotionally supportive of my friends”, whereas a prevention-relevant strategy can be “to not neglect my friends” (Sengupta and Zhou, 2007). It is clear that strategies for being a good friend are not related to the context. Using the other indirect measurement of regulatory focus, Jia et al. (2022) suggest that participants exposed to dogs prefer the promotion-focused pet toothpaste advertisements that emphasise that these toothpastes could strengthen tooth enamel,

whereas participants exposed to cats prefer the prevention-focused pet toothpaste advertisements that emphasise that these toothpastes could prevent gingivitis and fight plaque buildup. This is because mere exposure to dogs makes consumers more promotion-focused, while mere exposure to cats makes consumers more prevention-focused. Therefore, if consumers' situational regulatory focus is affected by marketing elements or situations, this change in regulatory focus should be reflected in a wide range of resulting consumer behaviours, such as their preferences for regulatory focus claims (Higgins, 1998; Fei et al., 2020).

In light of this, in Study 1, while the colour pictures of organic food serve as a priming method for regulatory focus, participants are asked to indicate their preferences for two claims about a down jacket brand, each framed based on regulatory focus theory (Higgins, 1998) (see the Research Methodology chapter for more details). Regulatory focus theory (Higgins, 1998) suggests that individuals with a promotion-focused orientation tend to prefer promotion-focused frames to prevention-focused frames. In contrast, individuals with a prevention-focused orientation tend to prefer prevention-focused frames to promotion-focused frames. Mishra et al. (2010) indicate that situational regulatory focus primed by consumers' temporal distance from the receipt of their last salary can influence their ad preferences for a number of products, such as lamps, mouthwash, and hand soaps. Likewise, Fei et al. (2020) reveal that consumers' accessibility of friend (vs. family) can prime a promotion focus (vs. prevention focus), affecting an out-of-context consequence: ad preferences for sunscreen. Therefore, it is expected that, in this study, this regulatory focus effect can carry over from the context of organic food products into an out-of-context domain: down jackets.

As expected, the results of Study 1 demonstrate that mere exposure to organic food products does not lead consumers to prefer a single product claim about a down jacket brand. Instead, how organic food products affect consumers' ad preferences depends on an individual trait: consumer impulsiveness. Specifically, after mere exposure to organic food (vs. conventional food), impulsive consumers are prone to indicate a preference for promotion-focused product

claims over prevention-focused product claims. Thus, H1a is supported. In addition, after mere exposure to organic food (vs. conventional food), prudent consumers are inclined to indicate a preference for prevention-focused product claims over promotion-focused product claims. Thus, H2a is supported. The findings of Study 1 are consistent with those from previous research on regulatory focus theory, which indicates that mere exposure to marketing objects (products, services, and brands) or situations can activate associated regulatory focus motivations or goals in consumers (Sengupta and Zhou, 2007; Jia et al., 2022; Fei et al., 2020). This confirms that organic food products can be utilised as an effective priming method for regulatory focus. Further, in line with the previous literature (Higgins et al., 2020; Jia et al., 2022; Borges and Gomez, 2015; Fei et al., 2020), the results of Study 1 suggest that the temporarily primed regulatory focus effect can carry over into the out-of-context situation.

Moreover, the findings of this study suggest that organic food products should be differentiated from other generic green products. According to Ku et al. (2012), framing product claims in green terms is more effective for prevention-focused consumers. Conversely, promotion-focused consumers are more receptive to claims framed in non-green terms. Likewise, Bullard and Manchanda (2013) demonstrate that a green product claim, in contrast to a regular product claim, leads consumers to believe that prevention-focused appeals are more effective than promotion-focused appeals in driving product market success. However, this thesis finds that prudent consumers prefer prevention-focused claims, while impulsive consumers prefer promotion-focused claims.

### **6.2.3 Discussion of Study 2**

As mentioned in the earlier subsection, this thesis proposes two hypotheses (H1 and H2), each with two sub-hypotheses (see the Hypothesis Development and Conceptual Framework chapter for more details). Study 2 is conducted to examine H1b (Mere exposure to organic food (vs. conventional food) induces a promotion focus in impulsive consumers), as well as H2b (Mere exposure to organic food (vs. conventional food) induces a prevention focus in prudent consumers). Similar to Study 1, the purpose of Study 2 is to address the second research objective (examine how organic food products themselves, as a type of regulatory

focus prime, can activate regulatory focus among consumers) and the third research objective (conceptually differentiate organic food products from generic green products). Testing mere exposure to intended marketing objects (e.g., products, services, and brands) or situations helps reduce the potential influence of other confounders (Sengupta and Zhou, 2007; Jia et al., 2022). While Study 2 employs the same mere exposure approach (without providing specific information on organic foods), it uses a slightly different stimulus. Instead of a colour picture of a variety of organic fruits as in Study 1, Study 2 presents participants with a colour picture of organic apples to enhance the generalisability of the results. At the same time, consumers' liking of apples is examined as a control variable. The results indicate that the liking of apples as a control variable does not affect the expected effects.

Building on Study 1 that indirectly measures regulatory focus using ad preferences, this study captures regulatory focus using a direct measurement, the regulatory focus scale (e.g., Fei et al., 2020). Fei et al. (2020) find that social relationships with friends (vs. family members) directly change individuals' regulatory focus. Interacting with a friend activates a promotion focus among individuals, while interacting with a family member induces a prevention focus among individuals. Following Fei et al. (2020), participants' regulatory focus orientations are measured directly via the regulatory focus scale in Study 2. After exposure to organic food (vs. conventional food), participants are asked to indicate the relative importance between variables within the domain of the promotion focus (e.g., hopes) and variables within the domain of the prevention focus (e.g., duties) at that time point (see the Research Methodology chapter for more details).

As expected, the results of Study 2 demonstrate that mere exposure to organic food products does not induce a single regulatory focus orientation. Instead, how organic food products affect consumers' regulatory focus motivational orientations depends on the individual trait: consumer impulsiveness. Specifically, the results of Study 2 indicate that mere exposure to organic food (vs. conventional food) induces a prevention focus orientation in prudent consumers. Thus, H2b is supported. However, the results of Study 2 indicate that mere exposure to organic food (vs. conventional food) does not significantly affect regulatory focus

orientations in impulsive consumers. While the results are not statistically significant when the moderator is at its high value (+1 S.D., impulsive consumers), the data analysis figure (see Figure 11 in the Data Analysis and Results chapter) suggests a discernible trend, indicating that impulsive consumers become more promotion-focused after mere exposure to organic food (vs. conventional food). This pattern, while not conclusive, aligns with theoretical expectations and warrants further investigation. The statistically non-significant results at the high value of the moderator (consumer impulsiveness) can be attributed to the smaller sample size of Study 2 (final 203 participants) compared to Study 1 (final 507 participants). However, the final sample size still exceeds the minimum required sample of 128, as calculated using G\*Power (Cohen, 1988). Due to the time and financial constraints of this thesis programme, it is considered more suitable to stop collecting additional responses or conducting a new experiment.

Nevertheless, the overall model of the moderation analysis of Study 2 is significant (Hayes PROCESS macro Model 1, see Section 5.3.4.2). It can be concluded that mere exposure to organic food (vs. conventional food) induces a prevention focus in prudent consumers, thereby supporting H2b. Mere exposure to organic food (vs. conventional food) does not significantly change regulatory focus orientations in impulsive consumers. Thus, H2a is rejected. Taken together, the findings from Study 1 and Study 2 demonstrate that organic (vs. conventional) food can trigger a prevention focus in prudent consumers, thereby supporting H2. Given that H1a is supported while H1b is rejected, H1 should be considered partially supported. The summary of the results for Study 1 and Study 2 is shown in Table 48.

The findings of Study 2 are consistent with those from previous research on regulatory focus theory, which indicates that mere exposure to marketing objects (products, services, and brands) or situations can activate associated regulatory focus orientations or goals among consumers (Sengupta and Zhou, 2007; Jia et al., 2022; Fei et al., 2020). This further confirms that organic food products per se can be utilised as an effective priming method for regulatory focus.

Moreover, although previous literature suggests that green products are prevention-focused (Ku et al., 2012; Bullard and Manchanda, 2013), this study finds that how organic food products themselves prime regulatory focus depends on consumers' individual trait: impulsiveness. Hence, organic food products should be differentiated from other generic green products.

Table 48 Summary of the research objectives, proposed hypotheses, and results for empirical studies (Study 1 and Study 2)

| Research Objectives                                                                                                                                                                         | Hypothesis (sub-hypotheses)                                                                                                                                        | Result              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <p>1. Empirically examine how organic food products themselves might prime regulatory focus among consumers.</p> <p>2. Differentiate organic food products from generic green products.</p> | H1: Organic food (vs. conventional) food can trigger a promotion focus in impulsive consumers:                                                                     | Partially supported |
|                                                                                                                                                                                             | H1a: Mere exposure to organic food (vs. conventional food) makes impulsive consumers prefer promotion-framed product claims over prevention-framed product claims. | Supported           |
|                                                                                                                                                                                             | H1b: Mere exposure to organic food (vs. conventional food) induces a promotion focus in impulsive consumers.                                                       | Rejected            |
|                                                                                                                                                                                             | H2: Organic (vs. conventional) food can trigger a prevention focus in prudent consumers:                                                                           | Supported           |

|  |                                                                                                                                                                  |           |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | H2a: Mere exposure to organic food (vs. conventional food) makes prudent consumers prefer prevention-framed product claims over promotion-framed product claims. | Supported |
|  | H2b: Mere exposure to organic food (vs. conventional food) induces a prevention focus in prudent consumers.                                                      | Supported |

### 6.3 Theoretical contributions

This thesis makes three major theoretical contributions: the development of a novel classification framework, the identification of conceptual differences between organic and generic green products, and the examination of the moderating role of consumer impulsiveness and regulatory focus priming.

#### 6.3.1 Novel classification framework

This thesis adds knowledge to the literature on regulatory focus priming (e.g., Jia et al., 2022; Fei et al., 2020; Ghiassaleh et al., 2020). Through a comprehensive literature review on priming methods for regulatory focus, this thesis creates a new classification framework for priming methods. It is documented that two prior studies have attempted to classify priming methods for regulatory focus. The first study is Motyka et al. (2014), which classifies priming methods into two categories: self-generated and situation-generated methods. This framework states that its classification is performed according to the source of the priming methods (Motyka et al., 2014). As such, it argues that asking participants to complete a writing task

about either something they ideally would like to do or something they ought to do should be classified as the “self-generated” method. In contrast, asking participants to complete a word completion about either a promotion focus or a prevention focus should be classified as the “situation-generated” method. However, it could be confusing to differentiate the self-generated priming method from the situation-generated one based on the source of regulatory focus, as it originates from “self” in both cases. Further, back to regulatory focus theory and relevant research (Higgins, 1996; 1998), the regulatory focus motivation is a type of stored knowledge that can be activated in an individual (the source) by external objects or situations. In light of this, it would be more appropriate to select the other criterion for the classification framework rather than the source of the priming method for regulatory focus.

The second classification framework documented in the literature contains two parallel categories: situational cues (including goal framing and task framing) as well as marketing objects (including products, services, and brands) (Borges and Gomez, 2015). The priming methods under goal framing in this framework represent the framed marketing message for a product or a service that can help consumers meet their goals. The priming methods under task framing in this framework implement regulatory focus priming by asking participants to complete one or more tasks (Borges and Gomez, 2015). However, the two parallel categories have some overlaps. Since regulatory focus theory is closely tied to goal pursuit and goal selection, task framing may serve the same purpose as goal framing, that is, helping consumers meet their goals. In addition, the priming methods under goal framing also ask participants to complete a task (the writing task), which overlaps with those under task framing. It is also worth noting that the two categories established in this framework do not encompass all priming methods, highlighting the need for a more comprehensive framework.

This thesis creatively adopts a two-level criterion for the classification procedure. The first-level criterion is applied in the initial round of classification, while the second-level criterion is used in the subsequent round. Specifically, the first-level criterion focuses on the form of priming methods for regulatory focus, which is technique-oriented. This level of criterion comes first because the form of priming methods is relatively explicit and

straightforward. In contrast, the second-level criterion focuses on the underlying nature or rationale behind priming methods, which is theory-driven and more implicit. As such, the priming methods for regulatory focus are classified and labelled under this framework, and the underlying nature or rationale behind them based on regulatory focus theory (Higgins, 1997; 1998) are clarified. In doing so, this thesis develops a comprehensive framework that encompasses all the reviewed priming methods. This novel classification framework contributes to a better understanding of how these priming methods could be selected and applied in an appropriate context.

### **6.3.2 Main effect-conceptual differences between organic and generic green products**

Grounded in regulatory focus theory (Higgins, 1998), this thesis helps conceptually differentiate organic food products from other generic green products. Generic green products refer to products designed to have a reduced impact on society and the environment (e.g., living standards, fair pay, and ecosystems) throughout their lifecycle (Scott et al., 2020). Existing literature reveals that generic green products are associated with a strong prevention focus orientation (Bullard and Manchanda, 2013; Ku et al., 2012). For instance, Bullard and Manchanda (2013) suggest that consumers perceive a prevention-focused appeal as more effective than a promotion-focused appeal in driving the market success of a green product. This perception arises because consumers associate ethicality and sustainability with attributes such as care, compassion, gentleness, safety, and protectiveness. These attributes align with prevention-oriented concerns, including security, protection, and responsibility (Higgins, 1998; Higgins et al., 2020), highlighting a connection between sustainability and a prevention focus (Bullard and Manchanda, 2013). Similarly, Ku et al. (2012) indicate that framing product claims in green terms is more effective for prevention-focused consumers, while framing them in non-green terms is more effective for promotion-focused consumers. However, a dearth of research examines the association between organic food products and regulatory focus motivations.

Traditionally, scholars have tended to categorise organic food products under the umbrella of green products (Mai et al., 2021). This is understandable, as the organic farming system is

managed in a green, sustainable, and ethical way (USDA, 2021; Mai et al., 2021). If this is true, according to the previous literature on regulatory focus and generic green products (Bullard and Manchanda, 2013; Ku et al., 2012), organic food products should be more related to a prevention focus orientation. However, Mai et al. (2021) question the traditional understanding of organic food consumption, which suggests that consumers' spending on organic food products is driven by strong commitments to environmental protection or benevolent motives. Interestingly, the authors find that hedonism is the main driver of consumers' spending on organic food products, while environmental commitments and benevolent motives act as obstacles (Mai et al., 2021). Likewise, literature also suggests that consumers often associate organic food products with luxuries, premium, and superior quality, such as taste, colour, and texture (Mann, 2003; Septianto et al., 2019; Fifita et al., 2020; Kong and Ko, 2017; Hughner et al., 2007; Lee and Yun, 2015; Nadricka et al., 2020), as well as heightened enjoyment and happiness (Baker et al., 2004; Lee and Yun, 2015). It is well established that these attributes or perceptions fall within the realm of promotion focus (Higgins, 1998; Chitturi, Raghunathan, and Mahajan, 2008; Sengupta and Zhou, 2007). The inclusive or even controversial findings from the literature motivate this thesis to empirically examine organic food consumption and regulatory focus motivations.

By conducting two experiments, this thesis demonstrates that, unlike generic green products that are more related to a prevention focus (e.g., inducing a prevention focus orientation in consumers), organic food products do not prime a single regulatory focus orientation. Thus, this thesis contributes to the literature on organic food and consumer behaviour (Liu et al., 2025; Maesen and Lamey, 2023; Mai et al., 2021; Leonidou et al., 2022; Giray et al., 2022; Hoskins et al., 2024) by conceptually differentiating organic food products from other generic green products. By investigating the relationship between organic food products and regulatory focus, this thesis also extends the regulatory focus literature (Jia et al., 2022; Fei et al., 2020; Gupta et al., 2024; Pandey and Tripathi, 2023; Baek and Kim, 2023; Swazan and Youn, 2025).

### **6.3.3 Moderation role of consumer impulsiveness and regulatory focus priming**

This thesis extends the literature on regulatory focus priming (Higgins, 1996; 1998; Higgins et al., 2020) by identifying organic food products as a novel type of priming method for regulatory focus. Although the previous literature has revealed a range of priming methods for regulatory focus (e.g., marketing cues, Ramanathan, and Dhar, 2010; socialisation, Jia et al., 2022; task framing, Freitas and Higgins, 2002; “physical” and “mental” exercises, Higgins, 1998; self-view, Aaker and Lee, 2001), relatively little research has focused on products themselves as a source of regulatory focus. Several studies illustrate how various products can prime different regulatory focuses in consumers. Promotion focus can be induced by products such as fruit juice, yoghurt (Borges and Gomez, 2015), teeth whitening (Kordrostami et al., 2021), perfume, nail polish, and jewellery (Ghiassaleh et al., 2020). Conversely, prevention focus is evoked by products such as sunscreen, elliptical trainers (Borges and Gomez, 2015), teeth floss (Kordrostami et al., 2021), helmets, and safety glasses (Ghiassaleh et al., 2020). No known research examines whether and how organic food products may prime regulatory focus orientations among individuals. Inspired by the empirical evidence reported in the previous literature that products per se can be a source of regulatory focus orientations (e.g., Borges and Gomez, 2015; Kordrostami et al., 2021; Ghiassaleh et al., 2020), in particular that generic green products can prime a prevention focus motivation (Bullard and Manchanda, 2013; Ku et al., 2012), this thesis investigates whether and how organic food products might inherently induce regulatory focus orientations. To the best of the author’s knowledge, this is the first research to conduct this type of academic inquiry.

By testing the moderation role of consumer impulsiveness in the relationship between mere exposure to organic food products and regulatory focus motivations, this thesis finds that organic food products prime distinct regulatory focus orientations in consumers characterised by different consumer impulsiveness. It is found that organic food products can prime a promotion focus in impulsive consumers, whereas organic food products can prime a prevention focus in prudent consumers. In doing so, this thesis emphasises the need to consider the role of individual traits when testing regulatory focus priming (Sengupta and Zhou, 2007). Therefore, this thesis also addresses Borges and Gomez’s (2015) call for further investigations on how various products may prime regulatory focus motivations (Borges and

Gomez, 2015).

## **6.4 Practical implications**

### **6.4.1 Marketing organic food products with greater precision**

This thesis offers actionable implications for marketers and companies who seek appropriate marketing communication strategies to promote organic food products. Product claims (or ads) are essential for communicating value to consumers (Cousté et al., 2012) and influencing their purchase decisions. By conducting two empirical studies, this thesis sheds light on how mere exposure to organic food products can influence consumers' regulatory focus orientations and their preferences for product claims framed based on regulatory focus theory (Higgins, 1998). Previous literature shows that promotion-focused consumers respond more favourably to promotion-focused product claims, whereas prevention-focused consumers respond more favourably to prevention-focused product claims (Jia et al., 2022). Using incompatible claims for products can lead to unfavourable consumer responses (Borges and Gomez, 2015; Ghiassaleh et al., 2020; Kordrostami et al., 2021).

Currently, many brands, such as Waitrose, employ a mixed-message strategy to market organic food products. For example, Waitrose adopts promotion-focused product claims to organic baby potatoes ("tender and full of flavour") and organic carrots ("sweet and crunchy"), which emphasises the promotion benefits (great taste and texture) of those products (see Appendix D for more details). In contrast, this retailing giant uses prevention-focused product claims to organic bananas ("grown without reliance on artificial chemicals and fertilisers") and organic wholemeal flours ("milled from wheat grown without reliance on artificial chemicals and fertilisers"), which stresses the prevention benefits (food safety) of those products (see Appendix D for more details). However, this mixed-message communication strategy may backfire (Borges and Gomez 2015; Ghiassaleh et al., 2020; Kordrostami et al., 2021). For example, Borges and Gomez (2015) suggest that the prevention-focused product claims for sunscreen ("... helps you to prevent skin aging and skin cancer") are perceived more favourable than the promotion-focused product claims for the same product ("... helps you look the way you have always dreamed about and fully enjoy your life"). However, other

products, such as fruit juice, are more compatible with promotion-focused product claims than their prevention-focused counterparts (Borges and Gomez 2015). This is also true for green products. Bullard and Manchanda (2013) indicate that consumers believe that prevention-focused product claims (e.g., "... will keep the fabric of your clothes as strong as new") rather than promotion-focused product claims (e.g., "... will not cause damage to the fabric of your clothes") for green laundry detergents will lead to a better positioning in large North American supermarkets. In light of this, marketers and companies should be mindful when designing product claims for organic food products.

This thesis suggests that mere exposure to organic food does not activate a single regulatory focus orientation. This thesis finds that after mere exposure to organic food products, impulsive consumers exhibit stronger preferences for promotion-focused product claims, while prudent consumers exhibit stronger preferences for prevention-focused product claims. The findings imply that organic food marketers and companies may need to implement more flexible marketing communication strategies to promote organic food products. For companies and retailers selling green products, applying prevention-focused product claims can be a convenient and effective marketing communication strategy. However, the findings of this thesis suggest that organic food products should be treated differently from generic green products, as they are conceptually different. Given that consumer impulsiveness plays a key role in determining how organic food products may activate regulatory focus orientations in consumers, measuring consumers' impulsiveness traits and tailoring appropriate product claims to suitable consumer segments can be an effective marketing strategy. Companies and retailers could gauge consumers' impulsiveness traits through membership services. This information enables marketers to more effectively tailor their product claims to consumers in specific regions.

Alternatively, in today's digital landscape, businesses often reach potential consumers via social media ads. Meta ads (formerly known as Facebook ads) serve as a common tool for distributing advertisements to users across the world. Those high-tech companies such as Meta have the capability to label and segment their social media users based on their

browsing preferences and shopping habits. For example, an individual who consistently engages with posts (e.g., rapid likes, shares, and comments) related to impulse-driven products (e.g., fast fashion brands) can be labelled as having impulsive shopping habits by the companies. Rather than relying on self-reported measures to capture consumer impulsiveness in social experiments, labels derived from big data analysis can be a good instrument for targeting consumers. In this scenario, organic food companies can tailor promotion-focused claims (highlighting the premium and hedonic attributes of organic food products) or prevention-focused claims (highlighting the nutrition and safety advantages of organic food products) to resonate with specific consumer impulsiveness segments. For example, if retailers want to promote organic bananas through their online applications or social media platforms, they should ensure that impulsive social media users see advertisements emphasising that their products are full of natural flavour and sweet. Conversely, they should ensure that prudent social media users see advertisements stressing that their products are grown without reliance on artificial chemicals and fertilisers.

Hence, this thesis provides valuable insights for retailers and companies into how marketing messages regarding organic food products can be appropriately framed, enabling companies to achieve their goals with greater precision.

In addition, this thesis also has significant implications for policy-makers. Recently, governments and policy-makers across the world have set out a number of policies and action plans to support organic farming and consumption. For example, the European Commission (EU) aims for at least 25% of the EU's farmland to transition into organic farming practices by 2030, through three policy axes: stimulating consumer demand, boosting production and processing, and enhancing environmental sustainability (EU, 2022). Among them, how to stimulate consumer demand plays a vital role, as produced and distributed organic food products need to be sold to consumers. Effectively advertising organic food products can build consumer trust and increase consumer purchase intention. This thesis demonstrates that press and communications should target the correct consumer segments. For impulsive consumers, communications can highlight the premium and hedonic attributes (such as good

taste) of organic food products, while avoiding information on nutrition and food safety. Conversely, for prudent consumers, it is more effective to convey messages about the nutrition and safety advantages of organic food products, rather than messages about premium and hedonic attributes.

Further, this thesis provides valuable implications for health agencies such as the NHS. A systematic review by Smith-Spangler et al. (2012), encompassing 9 studies and 106,755 samples, reveals that organic produce has a 30% lower risk of detectable pesticide residue contamination than conventional produce. The review further indicates that conventional chicken and pork are 33% more likely to be contaminated with bacteria resistant to three or more antibiotic types compared to their organic alternatives. Eating organic food can reduce the risks of exposure to harmful chemicals for vulnerable groups (Smith-Spangler et al., 2012). While the NHS does not generally recommend organic food as a primary dietary focus for special groups, several NHS hospitals have built partnerships with organisations such as Soil Association to increase local/organic food supply in their wards and canteens (The Guardian, 2007). Communicating proper messages to patients can help convert them to an organic diet. Based on the results of this thesis, prudent patients should receive prevention-focused messages about organic diets. In contrast, impulsive patients should receive promotion-focused messages about organic diets.

#### **6.4.2 Marketing organic food products with a cost-effective approach**

This thesis provides marketers and companies with a cost-effective approach to promoting organic food products. When applying regulatory focus theory (Higgins, 1998) to their marketing strategies, marketers and companies have several options that can potentially situationally change consumers' regulatory focus orientations (see the literature Review chapter for more details). However, relying on an external source of regulatory focus, such as task framing (Freitas and Higgins, 2002) or physical exercises (Higgins, 1998), can be cumbersome and even impractical, as consumers will need to spend time on relevant tasks. In addition, executing such a priming method effectively can be challenging for marketers, such as asking consumers to think about and write down either a hope or aspiration

(promotion-focused priming) or a duty or obligation (prevention-focused priming) (Freitas and Higgins, 2002).

Compared to regulatory focus priming methods that demand additional investment and effort from marketers to achieve the desired effect, products as an internal source of regulatory focus reduce the expenditure and effort required by marketers to promote them. For instance, elliptical trainers are found to be related to a prevention focus (Borges and Gomez, 2015). Therefore, simply emphasising the prevention benefits of an elliptical trainer in product claims (e.g., highlighting its role in protecting consumers from certain diseases) can generate more positive consumer responses, when compared to emphasising its promotion-focused benefits in product claims (e.g., highlighting its ability to boost energy) (Borges and Gomez, 2015). In contrast, employing an external source that is independent of the product itself to prime regulatory focus, as exemplified by Lee (2010), requires consumers to complete a writing task before being exposed to the product claims. This priming method is unlikely to be a pragmatic solution in real-world retail scenarios.

This thesis demonstrates that organic food products per se can inherently induce regulatory focus orientations in consumers. This insight suggests that those unnecessary marketing efforts, such as tasks and physical exercises, can be eliminated, thereby saving time and resources for marketers and companies.

Table 49 Overview of theoretical contributions and practical implications

| Contributions | Theoretical contributions                                                                                                                                                                      | Practical implications                                                                                                                                                           |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | This thesis adds knowledge to the literature on regulatory focus priming by creating a novel classification framework for priming methods for regulatory focus. More importantly, it clarifies | This thesis provides crucial insights for companies, policy-makers, and health agencies into how marketing messages regarding organic food products can be appropriately framed, |

|   |                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                            |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>the rationale behind adopting specific priming methods.</p> <p>A two-level criterion for the classification procedure is adopted, with the first-level criterion focusing on the form of priming methods for regulatory focus, and the second-level criterion examining the underlying nature or rationale behind priming methods.</p>                            | <p>enabling companies to achieve their goals with greater precision.</p>                                                                                                                                                                                                   |
| 2 | <p>This thesis contributes to the literature on organic food and consumer behaviour by conceptually differentiating organic food products from other generic green products. This thesis demonstrates that, unlike generic green products that are more related to a prevention focus, organic food products do not prime a single regulatory focus orientation.</p> | <p>This thesis demonstrates that organic food products per se can inherently induce regulatory focus orientations in consumers. This insight provides companies, policy-makers, and health agencies with a cost-effective approach to promoting organic food products.</p> |
| 3 | <p>This thesis extends the literature on regulatory focus priming by identifying</p>                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                            |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <p>organic food products as a novel type of priming method for regulatory focus. By testing the moderation role of consumer impulsiveness in the relationship between mere exposure to organic food products and regulatory focus motivations, this thesis finds that organic food products can prime a promotion focus in impulsive consumers, whereas organic food products can prime a prevention focus in prudent consumers.</p> |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

## 6.5 Limitations of the study and suggestions for future research

Although this thesis has thoroughly explored the established research aims and objectives and provided what are considered valuable contributions, it has certain limitations. These limitations are related to both the novel classification framework developed by this thesis and the empirical studies. Directions and suggestions for future research are also provided in this section.

First, this thesis has thoroughly reviewed priming methods for regulatory focus published in quality marketing journals (including Journal of Marketing, Journal of Marketing Research, the Journal of Consumer research, Marketing Science, Journal of Consumer Psychology, Journal of the Academy of Marketing Science, International Journal of Research in Marketing, Journal of Retailing, and Journal of Service Research). This focus is justified by the fact that

attempts to develop new priming methods are primarily made by these top-tier journals (AJG 4\* and 4). In contrast, other journals tend to focus more on applying or adapting established methods to prime regulatory focus orientations and examine their role in various relationships. Some exceptions exist, as a number of impactful studies published in AJG 2 and 3 marketing journals have also been examined (e.g., information on green companies or products, Bullard and Manchanda, 2013; products per se, Borges and Gomez, 2015, Kordrostami et al., 2021; task framing (ideal-ought), Li et al., 2022, Wang et al., 2020). However, not all studies published in AJG 2 and 3 marketing journals are included in this review. Future research may conduct a systematic review of priming methods for regulatory focus that encompasses all relevant studies within the marketing domain.

Second, this thesis has developed a comprehensive literature review of priming methods and created a classification framework to enhance the understanding of their use. This framework clarifies the details of how to implement each priming method, the context in which it is applied, and its underlying rationale. However, an important question remains: which priming method is generally more effective in manipulating participants' regulatory focus orientations? Additionally, within each category of priming methods, such as task framing, which specific approach yields the strongest effect? Addressing these questions requires a quantitative research approach. Future research could conduct a meta-analysis to systematically examine and compare the effectiveness of different priming methods in regulatory focus manipulation.

Third, Study 1 has examined how mere exposure to organic food may affect consumers' preferences for product claims framed by regulatory focus theory. The product claims used in this study are not related to organic food products, where the regulatory focus stems from. This aims to test whether this regulatory focus effect could carry over into the downstream outcome within a different context (Aaker and Lee, 2001; Fei et al., 2020; Jia et al., 2020; Sengupta and Zhou, 2007; Zhou and Pham, 2004). This leaves a gap for future research to test whether exposure to organic food can influence consumers' preferences for product claims related to organic food products and other product types.

Fourth, inspired by the prior studies that identify a variety of priming methods for regulatory focus (as listed in Table 4 in the Literature Review chapter), in particular products per se as a type of priming method (Sengupta and Zhou, 2007; Borges and Gomez, 2015; Ghiassaleh et al., 2020; Kordrostami et al., 2021), this thesis examines organic food products per se in terms of priming regulatory focus and validates the effectiveness of this priming method. Given the advantages of products per se as a type of priming method (e.g., cost-effective), it would be beneficial for future research to investigate other new priming methods (e.g., other types of products as a source of regulatory focus) for regulatory focus.

Fifth, one research objective of this thesis is to establish the causality between mere exposure to organic food products and regulatory focus motivations. To this end, two empirical studies are conducted by using 2 different manipulations of mere exposure to organic food products and measuring regulatory orientations in 2 ways (ad preferences and the regulatory focus scale). While using different manipulation methods and measures across different online experiments enhances the generalisability of the outcomes, the outcomes rely on self-reported scales. Future research could examine this causality by measuring actual behaviours via lab experiments (e.g., eye-tracking devices and real choice experiments) and meta-ads (e.g., click-through rates).

Last, due to the time constraint of completing this thesis and the limited budget offered by the programme, the data was collected from China only. Further research could be conducted in other countries to validate the generalisability of the findings.

Overall, this thesis proposes a novel framework that categorises the priming methods for regulatory focus in the existing literature and clarifies the rationale behind those priming methods. Using two experiments, this thesis demonstrates that organic food products are conceptually distinct from other generic green products. Moreover, this thesis identifies organic food as a novel type of priming method for regulatory focus, and how organic food activates regulatory focus among consumers depending on their impulsiveness trait. This thesis sheds light on how organic food products can be appropriately advertised and how

organic food products can be advertised with a cost-effective approach.

## References

- Aaker, J. L., & Lee, A. Y. (2001). "I" seek pleasures and "we" avoid pains: The role of self-regulatory goals in information processing and persuasion. *Journal of Consumer Research*, 28(1), 33-49.
- Baek, T. H., & Kim, M. (2023). Ai robo-advisor anthropomorphism: The impact of anthropomorphic appeals and regulatory focus on investment behaviors. *Journal of Business Research*, 164, 114039.
- Baek, T. H., Bakpayev, M., Yoon, S., & Kim, S. (2022). Smiling AI agents: How anthropomorphism and broad smiles increase charitable giving. *International Journal of Advertising*, 41(5), 850-867.
- Baker, S., Thompson, K. E., Engelken, J., & Huntley, K. (2004). Mapping the values driving organic food choice: Germany vs the UK. *European Journal of Marketing*, 38(8), 995-1012.
- Basu, S., & Ng, S. (2021). 100 a month or 1,200 a year? Regulatory focus and the evaluation of temporally framed attributes. *Journal of Consumer Psychology*, 31(2), 301-318.
- Borges, A., & Gomez, P. (2015). How products induce regulatory fit: Evidence from the health domain. *Journal of Consumer Marketing*, 32(6), 441-449.
- Bosone, L., Martinez, F., & Kalampalikis, N. (2015). When the model fits the frame: The impact of regulatory fit on efficacy appraisal and persuasion in health communication. *Personality and Social Psychology Bulletin*, 41(4), 526-539.
- Brodscholl, J. C., Kober, H., & Higgins, E. T. (2007). Strategies of self-regulation in goal attainment versus goal maintenance. *European Journal of Social Psychology*, 37(4), 628-648.
- Bruner, J. S. (1957). On perceptual readiness. *Psychological Review*, 64(2), 123.
- Bryman, A. 2008. *Social research methods* (3rd ed.). Oxford: Oxford University Press.
- Bullard, O., & Manchanda, R. V. (2013). Do sustainable products make us prevention focused?. *Marketing Letters*, 24, 177-189.
- Burrell, G. and Morgan, G. (2016) *Sociological Paradigms and Organisational Analysis*. Abingdon: Routledge.
- Buss, D. M. (1996). *The evolutionary psychology of human social strategies*.
- Carver, C. S. (1990). *Principles of self-regulation: Action and emotion*. Handbook of Motivation and Cognition: Foundations of Social Behavior, 2.

- Carver, C. S., & Scheier, M. F. (2012). *Attention and self-regulation: A control-theory approach to human behavior*. Springer Science & Business Media.
- Casado-Aranda, L. A., Sanchez-Fernandez, J., & Ibanez-Zapata, J. A. (2022). It is all about our impulsiveness—How consumer impulsiveness modulates neural evaluation of hedonic and utilitarian banners. *Journal of Retailing and Consumer Services*, 67, 102997.
- Cesario, J., Grant, H., & Higgins, E. T. (2004). Regulatory fit and persuasion: Transfer from "feeling right". *Journal of Personality and Social Psychology*, 86(3), 388.
- Chang, C. T., Lee, H. C., Lee, Y. K., & Wang, T. P. (2023). "I Doubt It Works!" the negative impacts of anthropomorphizing healthcare products. *Journal of Business Research*, 164, 114008.
- Chen, H., Ng, S., & Rao, A. R. (2005). Cultural differences in consumer impatience. *Journal of Marketing Research*, 42(3), 291-301.
- Chernev, A. (2004). Goal–attribute compatibility in consumer choice. *Journal of Consumer Psychology*, 14(1-2), 141-150.
- Chitturi, R., Raghunathan, R., & Mahajan, V. (2008). Delight by design: The role of hedonic versus utilitarian benefits. *Journal of Marketing*, 72(3), 48-63.
- Choi, J., & Park, H. Y. (2021). How donor's regulatory focus changes the effectiveness of a sadness-evoking charity appeal. *International Journal of Research in Marketing*, 38(3), 749-769.
- Choi, W. J., Sun, H., Liu, Y., & Chen, H. (2020). Guess who buys cheap? The effect of consumers' goal orientation on product preference. *Journal of Consumer Psychology*, 30(3), 506-514.
- Chung, N., Song, H. G., & Lee, H. (2017). Consumers' impulsive buying behavior of restaurant products in social commerce. *International Journal of Contemporary Hospitality Management*, 29(2), 709-731.
- Coelho, F., Aniceto, I., Bairrada, C. M., & Silva, P. (2023). Personal values and impulse buying: The mediating role of hedonic shopping motivations. *Journal of Retailing and Consumer Services*, 72, 103236.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, Routledge, New York.
- Collis, J. and Hussey, R. (2014). *Business Research: a practical guide for undergraduate and*
- Cousté, N. L., Martos-Partal, M., & Martínez-Ros, E. (2012). The power of a package: product claims drive purchase decisions. *Journal of Advertising Research*, 52(3), 364-375.

- Cramer, P. (1968). *Word association*. New York: Academic Press
- Crotty, M. (1998). *The Foundations of Social Research*. London: Sage Publications.
- Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior and Human Decision Processes*, 69(2), 117-132.
- Cucchiara, C., Kwon, S., & Ha, S. (2015). Message framing and consumer responses to organic seafood labeling. *British Food Journal*, 117(5), 1547-1563.
- Dai, X., Lin, Y., Liang, J., & Yang, C. (2024). Appearance for females, functionality for males? The false lay belief about gender difference in product preference. *Journal of Consumer Research*, 50(6), 1136-1156.
- Dale, K. R., Raney, A. A., Janicke, S. H., Sanders, M. S., & Oliver, M. B. (2017). YouTube for good: A content analysis and examination of elicitors of self-transcendent media. *Journal of Communication*, 67(6), 897-919.
- Das, G. (2016). Regulatory focus as a moderator of retail shopping behaviour. *Journal of Strategic Marketing*, 24(6), 484-499.
- Das, G., Mukherjee, A., & Smith, R. J. (2018). The perfect fit: The moderating role of selling cues on hedonic and utilitarian product types. *Journal of Retailing*, 94(2), 203-216.
- Das, G., Roy, R., & Spence, M. T. (2020). The mitigating effect of matching regulatory focus with arousal-inducing stimuli in service failure situations. *Psychology & Marketing*, 37(10), 1420-1432.
- Dixon, D., & Mikolon, S. (2021). Cents of self: How and when self-signals influence consumer value derived from choices of green products. *International Journal of Research in Marketing*, 38(2), 365-386.
- Douglas, S. P., & Craig, C. S. (2007). Collaborative and iterative translation: An alternative approach to back translation. *Journal of International Marketing*, 15(1), 30-43.
- Duggan Jennifer (2015). (2021, March 26). China's middle class turns to organics after food safety scares. The Guardian.  
<https://www.theguardian.com/sustainable-business/2015/may/14/china-middle-class-organics-food-safety-scares>
- Dutta, S., Biswas, A., & Grewal, D. (2011). Regret from postpurchase discovery of lower market

prices: do price refunds help?. *Journal of Marketing*, 75(6), 124-138.

edn. Harlow: Pearson Education Limited.

EU (2022), *Organic Action Plan* [Online]. Available at: [https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming/organic-action-plan\\_en](https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming/organic-action-plan_en) [Accessed 8 July. 2022].

Fei, X., You, Y., & Yang, X. (2020). "We" are different: Exploring the diverse effects of friend and family accessibility on consumers' product preferences. *Journal of Consumer Psychology*, 30(3), 543-550.

Ferguson, T. J., & Wells, G. L. (1980). Priming of mediators in causal attribution. *Journal of Personality and Social Psychology*, 38(3), 461.

Field, A. and Hole, G. (2003). *How to Design and Report Experiments*. London: SAGE

Fifita, I. M., Seo, Y., Ko, E., Conroy, D., & Hong, D. (2020). Fashioning organics: Wellbeing, sustainability, and status consumption practices. *Journal of Business Research*, 117, 664-671.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.

Förster, J., Higgins, E. T., & Idson, L. C. (1998). Approach and avoidance strength during goal attainment: regulatory focus and the "goal looms larger" effect. *Journal of Personality and Social Psychology*, 75(5), 1115.

Freitas, A. L., & Higgins, E. T. (2002). Enjoying goal-directed action: The role of regulatory fit. *Psychological science*, 13(1), 1-6.

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, 69(8), 3192-3198.

Ghiassaleh, A., Kocher, B., & Czellar, S. (2020). Best seller!? Unintended negative consequences of popularity signs on consumer choice behavior. *International Journal of Research in Marketing*, 37(4), 805-820.

Gibson, D. E. (2003). Developing the professional self-concept: Role model construals in early, middle, and late career stages. *Organization science*, 14(5), 591-610.

Gifford, K., & Bernard, J. C. (2006). Influencing consumer purchase likelihood of organic food. *International Journal of Consumer Studies*, 30(2), 155-163.

Giray, C., Yon, B., Alniacik, U., & Giriskan, Y. (2022). How does mothers' mood matter on their

- choice of organic food? Controlled eye-tracking study. *Journal of Business Research*, 144, 1175-1185.
- Givi, J., & Das, G. (2023). Givers eschew gifts that are inferior to their own: How social norms, regulatory focus, and concerns about offending lead givers astray. *Journal of Consumer Psychology*, 33(2), 363-376.
- Gorman, C. A., Meriac, J. P., Overstreet, B. L., Apodaca, S., McIntyre, A. L., Park, P., & Godbey, J. N. (2012). A meta-analysis of the regulatory focus nomological network: Work-related antecedents and consequences. *Journal of Vocational Behavior*, 80(1), 160-172.
- Grant, S. J., & Xie, Y. (2007). Hedging your bets and assessing the outcome. *Journal of Marketing Research*, 44(3), 516-524.
- Gray, J. A. (1982). Précis of The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system. *Behavioral and Brain Sciences*, 5(3), 469-484.
- Gupta, M., Das, G., Septianto, F., & Hagtvedt, H. (2024). The impact of scarcity cues on purchase likelihood of art-infused products. *Journal of the Academy of Marketing Science*, 52(2), 470-488.
- Hair, J. F. Jr., Bush, R. P. and Ortinau, D. T. (2006) *Marketing research within a changing information environment*. 3rd edn. New York: McGraw-Hill.
- Hair, J. F., Black, W. C., Babin, B. J. and Anderson, R. E. (2019) *Multivariate data analysis*. 8th edn. Andover, Hampshire, UK: Cengage Learning EMEA.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*: Pearson College division. *Person: London, UK*.
- Hamilton, R. W., & Biehal, G. J. (2005). Achieving your goals or protecting their future? The effects of self-view on goals and choices. *Journal of Consumer Research*, 32(2), 277-283.
- Haselton, M. G., & Buss, D. M. (2000). Error management theory: a new perspective on biases in cross-sex mind reading. *Journal of Personality and Social Psychology*, 78(1), 81.
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis* (3rd ed.). Guilford Press.
- Hazlett, A., Molden, D. C., & Sackett, A. M. (2011). Hoping for the best or preparing for the worst? Regulatory focus and preferences for optimism and pessimism in predicting personal outcomes. *Social Cognition*, 29(1), 74-96.

- He, Y., & Cunha Jr, M. (2020). Love leads to action: Short-term mating mindset mitigates the status-quo bias by enhancing promotion focus. *Journal of Consumer Psychology*, 30(4), 631-651.
- Heron, J. (1996). *Co-operative Inquiry: Research into the Human Condition*. London: Sage.
- Herzenstein, M., Posavac, S. S., & Brakus, J. J. (2007). Adoption of new and really new products: The effects of self-regulation systems and risk salience. *Journal of Marketing Research*, 44(2), 251-260.
- Higgins, E. T. (1981). Accessibility of social constructs: information processing consequences if individual and contextual variability. *Personality, Cognition, and Social Interaction*, 69-121.
- Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological Review*, 94(3), 319.
- Higgins, E. T. (1996). Activation: Accessibility, and salience. *Social psychology: Handbook of basic principles*, 133-168.
- Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.), *Socialpsychology: Handbook of basic principles* (pp. 133–168). New York: Guilford.
- Higgins, E. T. (1996). The "self digest": self-knowledge serving self-regulatory functions. *Journal of Personality and Social Psychology*, 71(6), 1062.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30.
- Higgins, E. T. (2000). Making a good decision: Value from fit. *The American Psychologist*, 55(11), 1217–1230.
- Higgins, E. T. (2014). Promotion and prevention: How “0” can create dual motivational forces. *Dual-process Theories of the Social Mind*, 1, 423-436.
- Higgins, E. T. (2018). What distinguishes promotion and prevention? Attaining “+ 1” from “0” as non-gain versus maintaining “0” as non-loss. *Polish Psychological Bulletin*, 49(1), 40-49.
- Higgins, E. T., & Brendl, C. M. (1995). Accessibility and applicability: Some "activation rules" influencing judgment. *Journal of Experimental Social Psychology*, 31(3), 218-243.
- Higgins, E. T., & Pinelli, F. (2020). Regulatory focus and fit effects in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 7(1), 25-48.

- Higgins, E. T., Friedman, R. S., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology*, 31(1), 3-23.
- Higgins, E. T., Nakkawita, E., & Cornwell, J. F. (2020). Beyond outcomes: How regulatory focus motivates consumer goal pursuit processes. *Consumer Psychology Review*, 3(1), 76-90.
- Higgins, E. T., Roney, C. J. R., Crowe, E., & Hymes, C. (1994). Ideal versus ought predilections for approach and avoidance distinct self-regulatory systems. *Journal of Personality and Social Psychology*, 66(2), 276-286.
- Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: strength of regulatory focus as moderator. *Journal of Personality and Social Psychology*, 72(3), 515.
- Higgins, T., & Tykocinski, O. (1992). Self-discrepancies and biographical memory: Personality and cognition at the level of psychological situation. *Personality and Social Psychology Bulletin*, 18(5), 527-535.
- Hoskins, J., Konuk, F. A., & Machin, J. E. (2024). The contribution of organic private label products to private label share outcomes. *European Journal of Marketing*, 58(9), 2031-2060.
- Hossain, M. M., Heinonen, V., & Islam, K. Z. (2008). Consumption of foods and foodstuffs processed with hazardous chemicals: a case study of Bangladesh. *International Journal of Consumer Studies*, 32(6), 588-595.
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour: An International Research Review*, 6(2-3), 94-110.
- IFIC (2020). 2020 Food and Health Survey [Online]. Available at: <https://foodinsight.org/2020-food-and-health-survey/>. [Accessed 23 Jan. 2022].
- Jain, S. P., Agrawal, N., & Maheswaran, D. (2006). When more may be less: The effects of regulatory focus on responses to different comparative frames. *Journal of Consumer Research*, 33(1), 91-98.
- Jain, S. P., Lindsey, C., Agrawal, N., & Maheswaran, D. (2007). For better or for worse? Valenced comparative frames and regulatory focus. *Journal of Consumer Research*, 34(1), 57-65.
- Jia, L., Yang, X., & Jiang, Y. (2022). The pet exposure effect: Exploring the differential impact of dogs versus cats on consumer mindsets. *Journal of Marketing*, 86(5), 42-57.

- Jiang, Y., Cho, A., & Adaval, R. (2009). The unique consequences of feeling lucky: Implications for consumer behavior. *Journal of Consumer Psychology*, 19(2), 171-184.
- Jie, Y. (2020). Older is better: Consumers prefer older drugs. *Psychology & Marketing*, 37(11), 1498-1510.
- Jo, H., Chung, N., Hlee, S., & Koo, C. (2022). Perceived affordances and regret in online travel agencies. *Journal of Travel Research*, 61(5), 1024-1042.
- Johnson, P. D., Smith, M. B., Wallace, J. C., Hill, A. D., & Baron, R. A. (2015). A review of multilevel regulatory focus in organizations. *Journal of Management*, 41(5), 1501-1529.
- Johnson, P., & Clark, M. (2006). *Business and management research methodologies*. SAGE Publications Ltd.
- Jonason, P. K., Garcia, J. R., Webster, G. D., Li, N. P., & Fisher, H. E. (2015). Relationship dealbreakers: Traits people avoid in potential mates. *Personality and Social Psychology Bulletin*, 41(12), 1697-1711.
- Kaltcheva, V., & Weitz, B. A. (2006). The moderating influence of motivational orientation on the relationship between shopping environment arousal and behavior. *Journal of Marketing*, 70(1), 107-118.
- Khare, A., & Chowdhury, T. G. (2015). Food categorization flexibility increases the preference for indulgent foods. *Journal of Consumer Psychology*, 25(4), 546-560.
- Kim, K., & Park, J. (2019). Cultural influences on brand extension judgments: Opposing effects of thinking style and regulatory focus. *International Journal of Research in Marketing*, 36(1), 137-150.
- Kim, W., Ryoo, Y., Lee, S., & Lee, J. A. (2023). Chatbot advertising as a double-edged sword: The roles of regulatory focus and privacy concerns. *Journal of Advertising*, 52(4), 504-522.
- Kirmani, A., & Zhu, R. (2007). Vigilant against manipulation: The effect of regulatory focus on the use of persuasion knowledge. *Journal of Marketing Research*, 44(4), 688-701.
- Kordrostami, E., Liu-Thompkins, Y., & Rahmani, V. (2021). Investigating the influence of regulatory focus on the efficacy of online review volume versus valence. *European Journal of Marketing*, 55(1), 297-314.
- Kotler, P., & Keller, K. L. (2016). *A framework for marketing management*. Prentice Hall.
- Ku, H.-H., Kuo, C.-C., Wu, C.-L., & Wu, C.-Y. (2012). Communicating Green Marketing Appeals

Effectively: The Role of Consumers' Motivational Orientation to Promotion versus Prevention. *Journal of Advertising*, 41(4), 41–50.

Labroo, A. A., & Lee, A. Y. (2006). Between two brands: A goal fluency account of brand evaluation. *Journal of Marketing Research*, 43(3), 374-385.

Lagomarsino, M., Lemarié, L., & Puntiroli, M. (2020). When saving the planet is worth more than avoiding destruction: The importance of message framing when speaking to egoistic individuals. *Journal of Business Research*, 118, 162-176.

Lalot, F., Gollwitzer, P. M., Quiamzade, A., & Oettingen, G. (2022). Boosted by closure! Regulatory focus predicts motivation and task persistence in the aftermath of task-unrelated goal closure. *European Journal of Social Psychology*, 52(5-6), 944-962.

Lanaj, K., Chang, C. H., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: a review and meta-analysis. *Psychological Bulletin*, 138(5), 998.

Lechner, A. T., & Mathmann, F. (2021). Bringing service interactions into focus: Prevention-versus promotion-focused customers' sensitivity to employee display authenticity. *Journal of Service Research*, 24(2), 284-300.

Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, 86(2), 205.

Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, 86(2), 205.

Lee, A. Y., Aaker, J. L., & Gardner, W. L. (2000). The pleasures and pains of distinct self-construals: the role of interdependence in regulatory focus. *Journal of Personality and Social Psychology*, 78(6), 1122.

Lee, A. Y., Aaker, J. L., & Gardner, W. L. (2000). The pleasures and pains of distinct self-construals: the role of interdependence in regulatory focus. *Journal of Personality and Social Psychology*, 78(6), 1122.

Lee, A. Y., Keller, P. A., & Sternthal, B. (2010). Value from regulatory construal fit: The persuasive impact of fit between consumer goals and message concreteness. *Journal of Consumer Research*, 36(5), 735-747.

Lee, A. Y., Keller, P. A., & Sternthal, B. (2010). Value from regulatory construal fit: The persuasive impact of fit between consumer goals and message concreteness. *Journal of Consumer*

*Research*, 36(5), 735-747.

- Lee, H. J., & Yun, Z. S. (2015). Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food Quality and Preference*, 39, 259-267.
- Lee, K., Choi, J., & Li, Y. J. (2014). Regulatory focus as a predictor of attitudes toward partitioned and combined pricing. *Journal of Consumer Psychology*, 24(3), 355-362.
- Leonidou, L. C., Eteokleous, P. P., Christofi, A. M., & Korfiatis, N. (2022). Drivers, outcomes, and moderators of consumer intention to buy organic goods: Meta-analysis, implications, and future agenda. *Journal of Business Research*, 151, 339-354.
- Li, Y., Liu, B., & Xie, L. (2022). Celebrity endorsement in international destination marketing: Evidence from eye-tracking techniques and laboratory experiments. *Journal of Business Research*, 150, 553-566.
- Lin, Y. C., & Chang, C. C. A. (2012). Double standard: The role of environmental consciousness in green product usage. *Journal of Marketing*, 76(5), 125-134.
- Liu, P., Wen, H., & Mattila, A. S. (2025). Centering on health and wellbeing: Examining consumers' organic food purchasing decisions in restaurants when traveling. *International Journal of Hospitality Management*, 126, 104082.
- Liu, S. Q., Mattila, A. S., & Bolton, L. E. (2018). Selling painful yet pleasurable service offerings: An examination of hedonic appeals. *Journal of Service Research*, 21(3), 336-352.
- Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83(4), 854.
- Loureiro, M. L., McCluskey, J. J., & Mittelhammer, R. C. (2001). Assessing consumer preferences for organic, eco-labeled, and regular apples. *Journal of Agricultural and Resource Economics*, 404-416.
- Louro, M. J., Pieters, R., & Zeelenberg, M. (2005). Negative returns on positive emotions: The influence of pride and self-regulatory goals on repurchase decisions. *Journal of Consumer Research*, 31(4), 833-840.
- Luan, J., Filieri, R., Xiao, J., Han, Q., Zhu, B., & Wang, T. (2023). Product information and green consumption: An integrated perspective of regulatory focus, self-construal, and temporal

- distance. *Information & Management*, 60(2), 103746.
- Luo, Y. E., Wong, V., & Chou, T. J. (2016). The role of product newness in activating consumer regulatory goals. *International Journal of Research in Marketing*, 33(3), 600-611.
- Maddux, J. E., & Rogers, R. W. (1983). Protection motivation and self-efficacy: A revised theory of fear appeals and attitude change. *Journal of Experimental Social Psychology*, 19(5), 469-479.
- Maeng, A., Tanner, R. J., & Soman, D. (2013). Conservative when crowded: Social crowding and consumer choice. *Journal of Marketing Research*, 50(6), 739-752.
- Maesen, S., & Lamey, L. (2023). The impact of organic specialist store entry on category performance at incumbent stores. *Journal of Marketing*, 87(1), 97-113.
- Mai, R., Hoffmann, S., & Balderjahn, I. (2021). When drivers become inhibitors of organic consumption: The need for a multistage view. *Journal of the Academy of Marketing Science*, 49(6), 1151-1174.
- Mai, R., Hoffmann, S., & Balderjahn, I. (2021). When drivers become inhibitors of organic consumption: The need for a multistage view. *Journal of the Academy of Marketing Science*, 49(6), 1151-1174.
- Malhotra, N. K. (1996). *Marketing research: An applied orientation*. Prentice Hall.
- Malodia, S., Otterbring, T., Taheri, B., & Dhir, A. (2025). How negative framing affects VR tourism adoption: exploring the role of travel anxiety during crisis events. *Journal of Travel Research*, 64(5), 1121-1140.
- Min Kong, H., & Ko, E. (2017). Why do consumers choose sustainable fashion? A cross-cultural study of South Korean, Chinese, and Japanese consumers. *Journal of Global Fashion Marketing*, 8(3), 220-234.
- Mishra, H., Mishra, A., & Nayakankuppam, D. (2010). How salary receipt affects consumers' regulatory motivations and product preferences. *Journal of Marketing*, 74(5), 93-103.
- Mo, T., Cho, Y. N., & Wong, N. (2022). "I must have done something good": Justifying luxury consumption with karmic beliefs. *Journal of Business Research*, 144, 193-200.
- Motyka, S., Grewal, D., Puccinelli, N. M., Roggeveen, A. L., Avnet, T., Daryanto, A., ... & Wetzels, M. (2014). Regulatory fit: A meta-analytic synthesis. *Journal of Consumer Psychology*, 24(3), 394-410.
- Nadricka, K., Millet, K., & Verlegh, P. W. (2020). When organic products are tasty: Taste inferences

from an Organic= Healthy Association. *Food Quality and Preference*, 83, 103896.

Nagaraj, S. (2021). Role of consumer health consciousness, food safety & attitude on organic food purchase in emerging market: A serial mediation model. *Journal of Retailing and Consumer Services*, 59, 102423.

Niese, Z. A., Libby, L. K., & Pfent, A. M. (2021). When the going gets tough, the committed get going: Preexisting goal commitment determines the consequences of experiencing regulatory nonfit. *Journal of Personality and Social Psychology*, 121(3), 447.

NielsenIQ (2021), An inside look into the 2021 global consumer health and wellness revolution [Online]. Available at: <https://nielseniq.com/global/en/insights/report/2021/an-inside-look-into-the-2021-global-consumer-health-and-wellness-revolution/>. [Accessed 23 Jan. 2022].

P Simmons, J., D Nelson, L., & Simonsohn, U. (2021). Pre-registration: Why and how. *Journal of Consumer Psychology*, 31(1), 151-162.

Pallant, J. (2020) *SPSS Survival Manual-A step by step guide to data analysis using IBM SPSS*. 7th ed. London: Routledge.

Pandey, A., & Tripathi, S. (2023). To go or to let it go: A regulatory focus perspective on Bundle Consumption. *Journal of Service Research*, 26(1), 136-150.

Pang, S. M., Tan, B. C., & Lau, T. C. (2021). Antecedents of consumers' purchase intention towards organic food: Integration of theory of planned behavior and protection motivation theory. *Sustainability*, 13(9), 5218.

Petersen, J. A., Kushwaha, T., & Kumar, V. (2015). Marketing communication strategies and consumer financial decision making: The role of national culture. *Journal of Marketing*, 79(1), 44-63.

Pham, M. T., & Avnet, T. (2004). Ideals and oughts and the reliance on affect versus substance in persuasion. *Journal of Consumer Research*, 30(4), 503-518.

Pham, M. T., & Higgins, E. T. (2005). Promotion and prevention in consumer decision-making: The state of the art and theoretical propositions. *Inside Consumption*, 8-43.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.

- Prentice, C., Chen, J., & Wang, X. (2019). The influence of product and personal attributes on organic food marketing. *Journal of Retailing and Consumer Services*, 46, 70-78.
- Puri, R. (1996). Measuring and modifying consumer impulsiveness: A cost-benefit accessibility framework. *Journal of Consumer Psychology*.
- Ramanathan, S., & Dhar, S. K. (2010). The effect of sales promotions on the size and composition of the shopping basket: Regulatory compatibility from framing and temporal restrictions. *Journal of Marketing Research*, 47(3), 542-552.
- Ramanathan, S., & Menon, G. (2006). Time-varying effects of chronic hedonic goals on impulsive behavior. *Journal of Marketing Research*, 43(4), 628-641.
- Rathee, S., Banker, S., Mishra, A., & Mishra, H. (2023). Algorithms propagate gender bias in the marketplace—with consumers' cooperation. *Journal of Consumer Psychology*, 33(4), 621-631.
- Robins, R. W., & John, O. P. (1997). The quest for self-insight: Theory and research on accuracy and bias in self-perception. In *Handbook of Personality Psychology* (pp. 649-679). Academic Press.
- Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *The Journal of Psychology*, 91(1), 93-114.
- Roney, C. J., Higgins, E. T., & Shah, J. (1995). Goals and framing: How outcome focus influences motivation and emotion. *Personality and Social Psychology Bulletin*, 21(11), 1151-1160.
- Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22(3), 305-313.
- Roy, R., & Ng, S. (2012). Regulatory focus and preference reversal between hedonic and utilitarian consumption. *Journal of Consumer Behaviour*, 11(1), 81-88.
- Saunders, M., Lewis, P. and Thornhill, A. (2019). *Research Methods for Business Students*. 8th
- Scott, S. E., Rozin, P., & Small, D. A. (2020). Consumers prefer “natural” more for preventatives than for curatives. *Journal of Consumer Research*, 47(3), 454-471.
- Sengupta, J., & Zhou, R. (2007). Understanding impulsive eaters' choice behaviors: The motivational influences of regulatory focus. *Journal of Marketing Research*, 44(2), 297-308.
- Septianto, F., Kemper, J., & Paramita, W. (2019). The role of imagery in promoting organic food. *Journal of Business Research*, 101, 104-115.

- Septianto, F., Seo, Y., Sung, B., & Zhao, F. (2020). Authenticity and exclusivity appeals in luxury advertising: the role of promotion and prevention pride. *European Journal of Marketing*, 54(6), 1305-1323.
- Shah, J., & Higgins, E. T. (1997). Expectancy×value effects: Regulatory focus as determinant of magnitude and direction. *Journal of Personality and Social Psychology*, 73(3), 447.
- Shah, J., Higgins, T., & Friedman, R. S. (1998). Performance incentives and means: how regulatory focus influences goal attainment. *Journal of Personality and Social Psychology*, 74(2), 285.
- Shine, B. C., Park, J., & Wyer Jr, R. S. (2007). Brand synergy effects in multiple brand extensions. *Journal of Marketing Research*, 44(4), 663-670.
- Smith-Spangler, C., Brandeau, M. L., Hunter, G. E., Bavinger, J. C., Pearson, M., Eschbach, P. J., ... and Bravata, D. M. (2012). Are organic foods safer or healthier than conventional alternatives? A systematic review. *Annals of Internal Medicine*, 157(5), 348-366.
- Soil Association (2021). Soil Association 2021 Organic Market Report [Online]. Available at: <https://www.soilassociation.org/certification/market-research-and-data/organic-market-report/>. [Accessed 23 Jan. 2022].
- Som, A., & Lee, Y. H. (2012). The joint effects of choice assortment and regulatory focus on choice behavior. *International Journal of Research in Marketing*, 29(2), 202-209.
- Soon, J. M., Vanany, I., Wahab, I. R. A., Sani, N. A., Hamdan, R. H., & Jamaludin, M. H. (2022). Protection Motivation Theory and consumers' food safety behaviour in response to COVID-19. *Food Control*, 138, 109029.
- Srull, T. K., & Wyer, R. S. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social Psychology*, 37(10), 1660.
- Streicher, M. C., Estes, Z., & Büttner, O. B. (2021). Exploratory shopping: attention affects in-store exploration and unplanned purchasing. *Journal of Consumer Research*, 48(1), 51-76.
- Swazan, I. S., & Youn, S. Y. (2025). Blockchain in Luxury Resale: The Impact of Blockchain Technology Through Regulatory Focus and Uncertainty Reduction Theories. *Journal of Consumer Behaviour*, 24(1), 512-526.
- Tabachnick, B. G., and Fidell, L. S. (2019). *Using multivariate statistics*. 6th edn. New York, USA: Pearson Education.

- The Guardian. (2007, May 8). Organic group reveals recipe for better hospital meals. <https://www.theguardian.com/society/2007/may/08/hospitals.health>
- Thompson, G. D., & Kidwell, J. (1998). Explaining the choice of organic produce: cosmetic defects, prices, and consumer preferences. *American Journal of Agricultural Economics*, 80(2), 277-287.
- Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of Personality and Social Psychology*, 84(4), 871.
- Trope, Y., & Liberman, N. (2000). Temporal construal and time-dependent changes in preference. *Journal of Personality and Social Psychology*, 79(6), 876.
- Trudel, R., Murray, K. B., & Cotte, J. (2012). Beyond expectations: The effect of regulatory focus on consumer satisfaction. *International Journal of Research in Marketing*, 29(1), 93-97.
- Tuan Pham, M., & Chang, H. H. (2010). Regulatory focus, regulatory fit, and the search and consideration of choice alternatives. *Journal of Consumer Research*, 37(4), 626-640.
- Tulving, E. (1983). *Elements of episodic memory*. New York: Oxford University Press
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.
- USDA (2021), *Organic 101: What the USDA Organic Label Means* [Online]. Available at: <https://www.usda.gov/media/blog/2012/03/22/organic-101-what-usda-organic-label-means> [Accessed 4 Dec. 2024].
- USDA (2024), *USDA Invests Nearly \$121M in Specialty Crops Research and Organic Agriculture Production* [Online]. Available at: <https://www.usda.gov/media/press-releases/2024/09/10/usda-invests-nearly-121m-specialty-crops-research-and-organic> [Accessed 4 Dec. 2024].
- Van Doorn, J., & Verhoef, P. C. (2015). Drivers of and barriers to organic purchase behavior. *Journal of Retailing*, 91(3), 436-450.
- Verma, S., Guha, A., Biswas, A., & Grewal, D. (2019). Are low price and price matching guarantees equivalent? The effects of different price guarantees on consumers' evaluations. *Journal of Retailing*, 95(3), 99-108.
- Verplanken, B., & Sato, A. (2011). The psychology of impulse buying: An integrative self-regulation approach. *Journal of Consumer Policy*, 34, 197-210.

- Wang, L., Jin, M., & Yang, Z. (2020). Regulatory focus and consumption of counterfeit luxury goods: Roles of functional theories of attitudes and perceived similarity. *Journal of Business Research*, 107, 50-61.
- Westjohn, S. A., Arnold, M. J., Magnusson, P., Zdravkovic, S., & Zhou, J. X. (2009). Technology readiness and usage: a global-identity perspective. *Journal of the Academy of Marketing Science*, 37, 250-265.
- Xu, X., & Chen, R. (2020). Time metaphor and regulatory focus. *European Journal of Marketing*, 54(8), 1865-1881.
- Yeo, J., & Park, J. (2006). Effects of parent-extension similarity and self regulatory focus on evaluations of brand extensions. *Journal of Consumer Psychology*, 16(3), 272-282.
- Yoon, Y., Sarial-Abi, G., & Gürhan-Canli, Z. (2012). Effect of regulatory focus on selective information processing. *Journal of Consumer Research*, 39(1), 93-110.
- Yu, W., Han, X., Ding, L., & He, M. (2021). Organic food corporate image and customer co-developing behavior: The mediating role of consumer trust and purchase intention. *Journal of Retailing and Consumer Services*, 59, 102377.
- Zhao, G., & Pechmann, C. (2007). The impact of regulatory focus on adolescents' response to antismoking advertising campaigns. *Journal of Marketing Research*, 44(4), 671-687.
- Zhou, R., & Pham, M. T. (2004). Promotion and prevention across mental accounts: When financial products dictate consumers' investment goals. *Journal of Consumer Research*, 31(1), 125-135.
- Zhou, X., Lou, C., & Huang, X. (2024). Transcendent brand activism advertising: Explicating the roles of color and message framing in advertising effectiveness. *Journal of Advertising*, 53(2), 183-199.
- Zhu, R., & Meyers-Levy, J. (2007). Exploring the cognitive mechanism that underlies regulatory focus effects. *Journal of Consumer Research*, 34(1), 89-96.

## **Appendix A: Literature review for health consciousness (rival moderator)**

Individual characteristics can affect the activation of regulatory focus (Sengupta and Zhou, 2007). Health consciousness is a dispositional trait that could influence how organic food triggers a regulatory focus. Health consciousness is an offshoot of the self-consciousness trait, which measures the extent to which an individual is conscious of their own health (Gould, 1990). Previous literature suggests that health consciousness serves as a significant motivational factor, prompting consumers to engage in health-related behaviours (Mai et al., 2016). Consumers characterised by high health consciousness are more willing to buy the products with instrumental, functional and health-related benefits, whereas consumers with a lower level of health consciousness are prone to try the products that can offer fun, pleasure and health-unrelated benefits (Mai et al., 2016; Pozharliev et al., 2023). Based on this theorising, health-conscious consumers might purchase organic food to achieve their “promotion” needs and goals for pleasure, taste, enjoyment and luxury. In contrast, less health-conscious consumers might purchase organic food to fulfil their “prevention” needs and goals for safety, obligation, nutrition and health. Therefore, it is possible that less health-conscious consumers possess a stronger association between organic food and a promotion focus, whereas health-conscious consumers possess a stronger association between organic food and a prevention focus. Thus, this thesis tests health consciousness as a rival moderator.

Importantly, health consciousness is conceptually different from prevention focus. Literature shows health consciousness can motivate individuals to pursue their health goals in two manners: “maintain health” (prevention focus) or “improve health” (promotion focus) (Wardle and Steptoe, 2003; Mai and Hoffmann, 2015). For example, health-conscious consumers assign greater significance to both desirable nutrients (e.g., vitamins and minerals) and undesirable nutrients (e.g., saturated fats and sugars) (Hoefkens et al., 2013; Shin and Mattila, 2019). While health can be related to a prevention focus, it is merely one of the

dimensions within the domain of prevention focus (Higgins, 1998; Aaker and Lee, 2001).

Consumers may also associate organic food with other prevention-focused variables such as safety, obligation and nutrition.

## References

- Aaker, J., & Lee, A. (2001). "I" Seek Pleasures and "We" Avoid Pains: The Role of Self-Regulatory Goals in Information Processing and Persuasion. *Journal of Consumer Research*, 28(1), 33–49.
- Gould, S. J. (1990). Health consciousness and health behavior: the application of a new health consciousness scale. *American Journal of Preventive Medicine*, 6(4), 228–237.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1–46.
- Hoefkens, C., Valli, V., Mazzocchi, M., Traill, W. B., & Verbeke, W. (2013). European consumers' perceived seriousness of their eating habits relative to other personal health risks. *Preventive Medicine*, 57(5), 618–622.
- Mai, R., & Hoffmann, S. (2015). How to Combat the Unhealthy = Tasty Intuition: The Influencing Role of Health Consciousness. *Journal of Public Policy & Marketing*, 34(1), 63–83.
- Mai, R., Symmank, C., & Seeberg-Elverfeldt, B. (2016). Light and Pale Colors in Food Packaging: When Does This Package Cue Signal Superior Healthiness or Inferior Tastiness? *Journal of Retailing*, 92(4), 426–444.
- Pozharliev, R., De Angelis, M., Rossi, D., Bagozzi, R., & Amatulli, C. (2023). I might try it: Marketing actions to reduce consumer disgust toward insect-based food. *Journal of Retailing*, 99(1), 149–167.
- Sengupta, J., & Zhou, R. (2007). Understanding Impulsive Eaters' Choice Behaviors: The Motivational Influences of Regulatory Focus. *Journal of Marketing Research*, 44(2), 297–308.
- Shin, J., & Mattila, A. S. (2019). When organic food choices shape subsequent food choices: The interplay of gender and health consciousness. *International Journal of Hospitality Management*, 76, 94–101.

Wardle, J., & Steptoe, A. (2003). Socioeconomic differences in attitudes and beliefs about healthy lifestyles. *Journal of Epidemiology and Community Health* (1979), 57(6), 440–443.

## Appendix B: Ethics application

### Consent Form

#### Measurement of Consumers' Reactions to Organic Food Ads

(\*This consent form will be used for all online studies)

| <i>Please tick the appropriate boxes</i>                                                                                                                                                                                                                                                                                                                                                           | Yes                      | No                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|
| <b>Taking Part in the Project</b>                                                                                                                                                                                                                                                                                                                                                                  |                          |                          |
| I have read and understood the project information sheet or the project has been fully explained to me. (If you will answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)                                                                                                                      | <input type="checkbox"/> | <input type="checkbox"/> |
| I have been given the opportunity to ask questions about the project.                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> | <input type="checkbox"/> |
| I agree to take part in the project. I understand that taking part in the project will include completing a questionnaire. I will be required to answer a series of questions about my thoughts, feelings, personality, and general demographics. The survey will take about 6 minutes to complete.                                                                                                | <input type="checkbox"/> | <input type="checkbox"/> |
| I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.                                                                                                                                                                           | <input type="checkbox"/> | <input type="checkbox"/> |
| I understand that my taking part is voluntary and that I can withdraw from the study at any time; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw. Partial data will not be analysed. However, if I choose to withdraw, I will not receive any compensation for the part of the survey I have completed. | <input type="checkbox"/> | <input type="checkbox"/> |

|                                                                                                                                                                                                                                                                                                                                             |                          |                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|
| I understand that this study contains a number of attention checks to make sure that participants are finishing the tasks honestly and completely. As long as you read the instructions and complete the tasks in good faith, your compensation will be approved. If you fail the attention checks, you will not receive your compensation. | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>How my information will be used during and after the project</b>                                                                                                                                                                                                                                                                         |                          |                          |
| I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.                                                                                                                                                                                             | <input type="checkbox"/> | <input type="checkbox"/> |
| I understand and agree that my words may be quoted in publications and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.                                                                                                                                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.                                                                                                                                                     | <input type="checkbox"/> | <input type="checkbox"/> |
| I understand and agree that other authorised researchers may use my data in publications and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.                                                                                                                       | <input type="checkbox"/> | <input type="checkbox"/> |
| I give permission for the survey data that I provide to be deposited in TUoS Google Drive so it can be used for future research and learning.                                                                                                                                                                                               | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>So that the information you provide can be used legally by the researchers</b>                                                                                                                                                                                                                                                           |                          |                          |
| I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.                                                                                                                                                                                                                   | <input type="checkbox"/> | <input type="checkbox"/> |

Name of participant

Signature

Date signed

Name of Researcher

Signature

Date signed

## Information Sheet

### 1. Research Project Title:

Measurement of consumers' reactions to organic food ads

### 2. Invitation paragraph

You are hereby invited to take part in a research project the title of which is presented to you in the previous paragraph. The purpose of this Participant Information Sheet is to allow you to weigh all pros and cons before giving your consent to participate therein. Please take care to review and thoroughly examine the information presented to you below. You are welcome to ask any questions concerning the scope of the research project and any possible issues that may present themselves in its process. Take your time to address all your questions and think about unclear moments. Thank you for your kind attention to reading this.

You are eligible to participate if you are over 18. You must be located in China and read and write in Mandarin. If you belong to a vulnerable group (e.g., minors, children, elderly individuals, pregnant women, etc.), please do not participate in this research.

### 3. What is the project's purpose?

The purpose of this study is to help academics, farmers, food manufacturers, consumers and policy-makers understand which type of ads can be most effective. The findings of this research can help these stakeholders craft effective ads for organic food products.

### 4. Why have I been chosen?

You are selected to participate because you are 18 years of age or older, live in China, and can read and write in Mandarin.

### 5. Do I have to take part?

Participation in this study is entirely voluntary. If you choose to take part, you will receive this information sheet and be asked to provide your consent. You are free to withdraw at any stage without facing any negative consequences. To withdraw, simply close your browser; any incomplete responses will not be included in the analysis. Please note, if you exit the study before finishing, you will not be eligible for compensation for the portion completed.

Taking part in this research does not constitute a legal contract or establish any form of employment relationship with the University of Sheffield.

### 6. What will happen to me if I take part? What do I have to do?

Should you choose to participate in this study, you will be invited to complete an

online questionnaire. This will include questions regarding your opinions, emotional responses, personality traits, and general demographic details, such as your racial or ethnic background. The survey is expected to take approximately six minutes to finish. If you have any queries about the study, please feel free to get in touch with us.

#### **7. What are the possible disadvantages and risks of taking part?**

The risks to your participation in this online survey are those associated with basic computer tasks, including boredom, fatigue or mild stress. I will abide by the university's specialist research ethics guidance and get consent from each participant before the test starts. No sensitive/violent or any other harmful information/methods will be involved in this test.

You are allowed to withdraw from the experiment at any time, without needing to give a reason.

#### **8. What are the possible benefits of taking part?**

You will receive Chinese Yuan (the amount will be calculated based on Credamo's instructions) as compensation for your time (around 6 minutes).

The benefit to you is the learning experience from participating in a research study. The benefit to society is the contribution to scientific knowledge, and you will be able to contribute to filling this research gap. The academics, farmers, food manufacturers, consumers and policy-makers may also benefit from your responses and create more effective marketing cues.

#### **9. Will my taking part in this project be kept confidential?**

All data gathered in this study will be treated as confidential. To protect your privacy, a unique identification number will be used instead of your name, ensuring that your identity cannot be linked to the information collected.

You will not be identifiable in any reports, presentations, or publications unless you have given clear, written permission to be named. Anonymised data may be accessed by other members of the process evaluation team for the purpose of analysis, but your name will not be disclosed. If you agree to have your data shared with other researchers—for instance, via a data repository—any personal details will be removed, unless you explicitly ask for them to be included.

#### **10. What is the legal basis for processing my personal data?**

In compliance with the extant legislation on data protection, the researcher is bound to inform you that the legal basis applied in the course of processing your data for this research is that of the necessity of 'the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University of Sheffield's Privacy Notice below:

<https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

**11. What will happen to the data collected, and the results of the research project?**

All participant information will be stored securely on a password-protected computer and shared through the University of Sheffield's Google Drive system. You will be assigned a unique identification number, and staff who are not directly involved with you will only be able to identify you by this number. No personal information—such as your name or the location of the services you access—will be included in the survey data. The findings from this study may be presented anonymously at conferences or published in scientific journals. All research outputs will exclude any identifying information, ensuring that you cannot be personally identified. I will store your anonymised information on a password protected computer database for at least one year after the project ends.

**12. Who is organising and funding the research?**

The research project is organised under the guidelines issued by the University of Sheffield. No external funding has been received from any other organisation and/or company whatsoever.

**13. Who is the Data Controller?**

For this study, the University of Sheffield is the organisation in charge of managing the data. This means it holds overall responsibility for ensuring your personal information is handled securely and used appropriately.

**14. Who has ethically reviewed the project?**

This study has received ethical approval through the University of Sheffield's Ethics Review Procedure, overseen by the Sheffield University Management School.

**15. What if something goes wrong and I wish to complain about the research or report a concern or incident?**

If you have any concerns or are unhappy with any part of the research, you are encouraged to reach out initially to [Prof. Fraser McLeay, University of Sheffield]. Should you feel that your concern has not been resolved to your satisfaction, you may then contact [Prof. Hesam Olya, University of Sheffield].

For matters specifically related to the handling of your personal data, please refer to the University's Privacy Notice for guidance on how to raise a complaint: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

**16. Contact for further information**

Huaiyu Li

Supervisor: Prof. Fraser McLeay

Supervisor: Prof. Hesam Olya

Research Ethics & Integrity Manager:

**You will be given a copy of the information sheet and, if appropriate, a signed consent form to keep.**

**Thank you for your decision to take part in the research project!**

If you have any questions about the study or would like to raise a concern, please get in touch with the Sheffield University Management School.

## Appendix C: Interview themes

Participants mentioned they purchased organic food from a specific area for organic food within large supermarkets.

*I saw a variety of green and fresh organic fruits and vegetables displayed on the shelves of a refrigerator in a specific area of a large supermarket (R2).*

*I buy organic food in high-end large supermarkets. I like to buy organic vegetables (R3).*

All organic food products have the organic certificate.

*The origin of the vegetables was marked as Beijing Xiaotangshan, and they were clearly organic foods (R5).*

*They had an organic certificate (R1).*

*When I see an organic label, I know it is organic food (R3).*

## Appendix D: Product claims



Figure 1 Baby potatoes



Figure 2 Carrots



Figure 3 Wholemeal flour