

The influence of rivalry on sustainable decision-making in the supply chain: exploring the role of psychological factors

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Abstract

This study investigates the impact of competition on sustainable decision-making within supply chains and explores the psychological factors involved. While prior research has highlighted rivalry's potential to promote unethical behaviour, its influence on unsustainable practices remains unexplored. This study aims to bridge this gap, focusing on how psychological stakes and perspective-taking contribute to this relationship, especially in situations involving status recognition and earlier unethical behaviour. The research followed a 2x2 factorial design in two studies, manipulating the variables. The findings indicate no direct relationship between rivalry and sustainable behaviour. A possible explanation why the results do not indicate a relationship is because the rivalry manipulation failed. However, psychological stakes mediate the relationship with increased rivalry leading to higher stakes and decreased sustainable behaviour. The psychological stakes are especially high when the rival is recognized for having a high status. Perspective-taking does not appear to mediate the relationship. In addition, previous unethical behaviour by the rival shows no effect on the level of perspective-taking. This research contributes to the literature on sustainability in the context of rivalry and enhances our understanding of psychological factors that may play a role in this.

Keywords:

Rivalry, sustainable decision-making, unsustainable decision-making, supply chain, psychological stakes, perspective-taking, sustainability, status recognition, unethical behaviour

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1. Introduction

Nowadays firms are getting held more accountable for the way they operate on economic, social, and environmental aims caused by their internal operations and by their suppliers' operations (Hartmann & Moeller, 2014; Koberg & Longoni, 2019). Firms are operating in a global market which results in suppliers delivering their services and products all over the world. These supply chains play a crucial role in getting to a more sustainable future, as the buying firms often give out certain requirements to become a supplier of them and thus often encouraging them to become sustainable (Gavronski et al., 2011; Klassen & Vereecke, 2012; Vachon & Klassen, 2008). The term sustainable future in this context involves sustainable decision-making, which refers to creating a future where businesses are focussed on environmental and social practises that minimize their negative impact and promote positive contributions to society and the planet. The emphasis on sustainability arises from the increasing awareness of the importance of ethical decisions within the supply-chain (Beamon, 2005). Next to the impact of the supply-chain on the wellbeing of society and the planet, the supply chain also plays a vital role in gaining a competitive advantage in the marketplace. As in today's business landscape, organisations are increasingly competing against each other based on the efficiency and effectiveness of their supply chains, rather than just their individual products or services (Ketchen & Hult, 2007).

Supply chains are thus very important for the success of organisations in getting a competitive advantage and the well-being of society and the environment. However, there are concerns if the sustainable practices of most firms are actually helpful in protecting the environment or social well-being (Montabon et al., 2016; Pagell & Shevchenko, 2014; Whiteman et al., 2013). One reason is in the extent of market competition. Becoming more sustainable often results in incurring costs, which can lead to a weakened competitive position, particularly in a highly competitive market (Duanmu et al., 2018). Competition, and especially rivalry, can affect the sustainable decision-making process. Rivalry differs from competition as it involves a higher significance placed on the competitive context due to relational factors (Kilduff et al., 2010). The competitive mindset within rivalry can weaken ethical considerations, favouring immediate gains over long-term sustainability (Kilduff & Galinsky, 2017; Malhotra et al., 2008). This could result in prioritising short-term value, disregarding environmental impacts, and compromising overall supply chain sustainability. In essence, the pursuit of competitiveness might lead to unsustainable practices, driven by heightened social comparison and performance-oriented motivations (Garcia et al., 2013; Kilduff et al., 2010).

The first phenomenon that can explain why there may be an increase in unethical behaviour are the psychological stakes. Psychological stakes refer to the emotional investment and personal importance that individuals place on achieving a goal or winning a competition. High psychological stakes can cause concerns about the contingency of self-worth and status-concerns (Kilduff et al., 2016). The mindset within rivalling businesses invokes higher psychological stakes compared to competition lacking relational context. As so, rivalry creates a winning-at-all-costs mentality, which can cause a more performance-oriented approach, often resulting in more unethical behaviour (Kilduff et al., 2016).

The second phenomenon that may explain why there may be an increase in unethical behaviour is perspective-taking. Perspective-taking is the process of imagining the thoughts, feelings, and motivations of others (Pierce et al., 2013). In a competitive context, perspective-taking can draw attention to conflicting interests and to how a rival's action may threaten one's own self-interest. This may cause the actor to make decisions based on what they believe their competitors or rivals will do, rather than what is ethically right (Pierce et al., 2013).

In the context of rivalry, the increase in unethical behaviour explained by the phenomena could have unintended consequences. It may cause that decision-makers within the supply chain turn a blind eye to certain factors to gain an advantage over the rival. One of these factors is the environmental sustainability concerns. There is a growing awareness to adopt sustainable practices in order to ensure long-term success. Unfortunately, in the context of rivalry, the pressure to win can lead to a short-term focus on maximizing profits at any cost, even if it means sacrificing long-term sustainability. This tension between wanting to win over a rival on short term note and sustainable practises on the long term raises important questions of how firms should navigate between these trade-offs and make ethical decision in their supply chain operations. While existing research investigated the relationship between rivalry and unethical behaviour by conducting empirical studies, there is a gap of how rivalry may affect the sustainable decision-making process within the supply chain. Although it is likely that the concepts psychological stakes and perspective-taking play a role in the relationship between rivalry and sustainable decision-making, the specific circumstances under which each concept shows more effect remains unclear.

The problem addressed in this study is the possible negative effect of rivalry on sustainability within the supply chain and how psychological factors play a role in this. The goal of this study is to investigate the relationship between rivalry and unsustainable decision-making and how perspective-taking and psychological stakes mediate this relationship. In this way, it may offer better insights into how rivalry affects the decision-making processes that affect sustainability. The next research question is formulated for this research:

“How does rivalry affect the decision-making processes of sustainability within the supply chain and which psychological factors play a role?”

This research contributes to the literature of sustainability in the context of rivalry and also enhances our understanding of sustainability as a whole. First, it gives clarity into whether rivalry actually causes more unsustainable behaviour and whether psychological stakes or perspective-taking show more effect in certain situations like the perceived status of the rival or previous unethical behaviour. This will add to the work of Kilduff et al. (2016) and Pierce et al. (2013) by showing if these psychological factors play a role in the relationship between rivalry and unsustainable decision-making. Secondly, it tests the assumption of Blader and Chen (2011) that suggests that when the rivalling or opposing actor is considered to have a lower status, the high-status party's reaction is shaped by their status maintenance concerns. Thirdly, it will

assess whether perspective-taking in competitive context invoke reactive egoism by Epley et al. (2006) and questions the negative effect of perspective-taking on unsustainable decision-making.

The findings of this study can provide insights into the interplay between these variables and provides a more comprehensive understanding of rivalry and its influence on the decisions being made on sustainability. Also, it helps gain a better understanding of the underlying psychological mechanisms that underpin the relationship between rivalry and unsustainable decision-making. The insights into unsustainable decision-making can give strategies or implementations to mitigate the unsustainable practises. It may provide guidance for organisations seeking to promote sustainability or help them find out why they remain unsustainable despite their efforts.

2. Theoretical framework

2.1. Sustainable supply chain management

Sustainable supply chain management (SSCM) is concerned with implementing the triple bottom line theory (TBL) (Gimenez et al., 2012) across a focal firm's supply chain processes (Castillo et al., 2018; Koberg & Longoni, 2019). SSCM is integrating environmental, social, and economic goals across the supply chain to improve sustainable practises (Koberg & Longoni, 2019). Seuring and Muller (2008) define SSCM as "the management of material, information, and capital flows as well as cooperation among companies in the supply chain while taking goals from all three dimensions of sustainable development (environmental, social, and economic) into account which are derived from customer and stakeholder requirements".

Within this context, key antecedents influencing sustainable behaviour in SSCM include Environmental Orientation (EO), SSCM practices, Top Management Commitment (TMC), and sustainability performance (El-Garaihy et al., 2022). The purchasing department, with its boundary-spanning role in the supply chain, can significantly impact sustainability. The growing emphasis on sustainability in organisations is driven by external motivations, including increasing demand for corporate social responsibility (CSR) from customers and governments (Quintens, 2017). Customers now expect organisations to demonstrate good corporate citizenship. Embracing sustainability practices not only reduces long-term costs and maintains competitiveness but also enhances reputation and brand image.

In current literature it is no longer the question whether sustainability pays off; rather it has been surpassed by the question of how firms can improve or to be more environmentally sustainable and socially responsible (Castillo et al., 2018). However, in recent studies, there has been a growing concern about whether the typical practices of organisations in the context of SSCM are genuinely effective in protecting the environment or promoting social well-being (Montabon et al., 2016; Pagell & Shevchenko, 2014; Whiteman et al., 2013). It is essential to understand the factors that influence sustainable decision-making within organisations to address these concerns and advance sustainability practices. As a result of this concern, researchers should pay closer attention to the daily steps managers can take to enhance sustainability inside the supply chain. In this way, they can learn why, over time, even well intended efforts can lead to business as usual, and what can be done to prevent this (Shevchenko et al., 2016; Wright & Nyberg, 2017).

One explanation for business remaining unsustainable can be that the risks associated with becoming truly sustainable are seen greater than the risk of remaining unsustainable. This results in firms taking actions to merely compensate for their unsustainable behaviour (Shevchenko et al., 2016). Another explanation may be that companies face competing demands from social, economic, and environmental aspects. These are continuously evaluated by people within and outside the organisation. As a result, the discourse around creating shareholder value becomes the norm widely accepted (Wright & Nyberg, 2017). Focusing on

shareholder value may lead companies prioritising this need above other stakeholders, such as the environment.

Rivalry can also be an explanation why some firms act less sustainable than others. Most SSCM literature explains how becoming more sustainable can lead to a competitive advantage (Barney, 2012; Gold et al., 2010; Rao & Holt, 2005). However, firms that want to become truly sustainable are likely to incur costs, which can result to harming the firm especially in a highly cost-competitive market (Duanmu et al., 2018). As not all consumers are willing to pay more for sustainable products (Pretner et al., 2021; Tey et al., 2018). Empirical evidence on the impact of rivalry is scarce in the literature of SSCM. Understanding how rivalry affects unsustainable decision-making within the supply chain would be particularly interesting.

In this study the focus will be primarily on the unsustainable decision-making process of the environmental dimension of the TBL theory. Environmental practises can include investments to measure and prevent pollution, the adaptation of environmental management systems and achievement of environmental certifications such as ISO14001 (Awaysheh & Klassen, 2010; Delmas & Montiel, 2009; Vachon, 2007).

2.2. Rivalry and unethical behaviour

Competitive behaviour is defined as the pursuit of assets perceived to be scarce and contested (Malhotra, 2010). This competitive behaviour can sometimes cause people to act in bad ways to win or achieve their goals. According to Malhotra (2010) this motivation or desire to win can cause for unethical strategies.

Moreover, rivalry is likely to cause more unethical behaviour than competing with a non-rival (Kilduff et al., 2016). The main reason for this because people within rivalry feel there is more at stake than in normal competition, and losing will affect them in their contingency of self-worth or status perception. Thus, rivalry can't be placed under the same construct as competition. However, rivalry is not wholly distinct from competition. Rivals are inherently actors in competition but also more than that due to their history and ongoing relationship (Kilduff, 2014). Research suggest that rivalry is more than opposing goals or contested resources (Kilduff, 2014; Kilduff et al., 2010). Normal competition misses the historical and relational factors, that are essential to rivalry. So, we define rivalry as fierce competition with relational context. Organisations that tend to see each other as rivals are similar to one another (demographic characteristics, expertise, position, etc.), are repeatedly in competition, and have been evenly matched in during prior contests (Kilduff et al., 2010). These are all factors that will affect the importance felt of the actors, which is less felt within normal competition.

There are multiple explanations of how behaviour in rivalry changes. Two dominant explanations are the psychological stakes and perspective taking. Kilduff et al. (2016) describe how competition raises the psychological stakes for the actors involved. Psychological stakes refer to the emotional investment that actors have in a competitive situation. These psychological stakes can be split into two categories. First, competition against rivals may have

greater implications for one's sense than against competition against non-rivals. Secondly, the psychological stakes in rivalry may be increased by the concern over one's relative status, or level of social standing (Kilduff et al., 2016). To give an example: imagine two leading tech companies that are direct competitors. Their rivalry is known and has spanned several years. Each time one company releases a new product or innovation, the other company feels the pressure to outdo them. The psychological stakes are raised as each company strives to maintain or improve its position relative to the other. This intense competition may lead to for example sabotaging the rival's reputation.

Perspective taking is the process of imagining the mind and thoughts of another individual (and thus organisation). Pierce et al. (2013) suggest perspective taking functions as a relational amplifier. In competitive contexts, it triggers hyper-competition, often leading to unethical behaviour to prevent themselves or the organisation from being exploited. Again, imagine two leading companies who have a long-standing rivalry. Whenever one company launches a new product or innovation, the other immediately engages in perspective-taking and realises the potential threat it poses to their market position. Fearing being outperformed, they resort to unethical behaviour like spreading false rumours to mitigate the impact and maintain their position.

Rivalry can therefore create a winning-at-all-costs mentality when the psychological stakes are high (Kilduff, 2014), or create a self-protection-at-any-costs mind-set in perspective-taking (Pierce et al., 2013). These mentalities lead the actors to adapt a stronger performance orientation, which then increases unethical behaviour (Kilduff, 2014; Kilduff et al., 2010). Unethical behaviour is defined in this research as behaviour that falls outside of generally accepted norms of moral behaviour (Kilduff et al., 2016; Reynolds & Ceranic, 2007; Trevino et al., 2006). The impact of the unethical behaviour caused by rivalry can have negative consequences for both society and organisations. Specific examples for the supply chain include damage to brand reputation, legal and financial penalties, supply chain disruptions, poor employee morale, and negative impact on the environment. However, the existing literature does not adequately address the impact of this unethical behaviour on the sustainable decision-making processes within the supply chain. As a result, this study aims to investigate whether rivalry leads to less sustainable decision-making, with the focus on the concepts of psychological stakes proposed by Kilduff et al. (2016) and perspective-taking proposed by Pierce et al. (2013).

2.3. Psychological stakes

Psychological stakes refer to the emotional investment and personal importance that individuals place on achieving a goal or winning a competition. In a rivalry, these stakes can become intense and drive individuals to engage in unethical behaviour to gain an advantage. Rivals invoke greater psychological stakes, in the form of increased **contingency of self-worth** and increased **status concerns** compared to non-rivals (Kilduff et al., 2016). A consequence is that people adopt a stronger performance orientation against rivals, which leads to greater unethical behaviour (Kilduff et al., 2016). Just thinking about a rival can make someone more

likely to act unethically, this implies that being in a competitive mindset can override a person's sense of morality (Kilduff & Galinsky, 2017).

According to Kilduff et al. (2016), the psychological stakes are influenced by two aspects. First is that competition with rivals may have a greater impact on one's self-worth than competition with non-rivals. According to the theory of the contingency of self-worth, people's self-esteem is linked to their performance in certain areas, and competition is one of them. Rivals, who are similar to the person, attract more attention and social comparison, and who have a long-standing competitive relationship, are likely to have a greater impact on self-esteem than competition with non-rivals (Kilduff et al., 2016). The higher psychological stakes in rivalry can also be explained by the social comparison theory. The theory explains that comparison concerns are the desire to achieve or maintain a superior relative position over, in this case, the rival (Garcia et al., 2013).

Another aspect of rivalry that can heighten psychological stakes is the emphasis on one's relative status or level of social standing, such as respect and prestige (Anderson et al., 2001; Blader & Chen, 2011; Magee & Galinsky, 2008). This is in alignment with the social comparison theory. Unlike competition with new or unknown competitors, rivalry involves ongoing relationships and regular competition with known rivals. This can create an increased sense of concern over one's status in relation to their rivals, compared to competition with non-rivals. This is because rivalry includes expectations of future competition, and people may care more about how they are perceived by their rivals (Kilduff et al., 2016). It is important to note that individuals attach greater value when recalling status loss than when recalling to potential status gain (Pettit et al., 2010). This implies that psychological stakes are high when it concerns status loss opposed to a rival, instead of status gain. It is not necessarily about winning, but about not losing.

2.4. Perspective-taking

Perspective-taking is the active cognitive process of imagining the world from another's vantage point or imagining oneself in another's shoes to understand their visual viewpoint, thoughts, motivations, intentions, and/or emotions (Ku et al., 2015). Perspective-taking creates and maintains social bonds because individuals or organisations can see the situation from the perspective of others (Galinsky et al., 2005). Perspective-taking can also have negative consequences. In a competitive context, it can also draw attention to conflicting interests and to how a rival's action may threaten one's own self-interest. Competition invites competition (Pierce et al., 2013). The actor may take actions based on what they believe their competitors or rivals will do, rather than what is ethically right. This can pervert the age-old axiom "do unto others as you would have them do unto you" into "do unto others as you think they will try to do unto you." This can be explained because perspective-taking functions as a relational amplifier that intensifies exiting cooperative or competitive impulses (Pierce et al., 2013). For example, if an organisation **predicts unethical behaviour by a rival**, it may also engage in unfair practices to remain competitive, even though it is unethical behaviour.

That perspective-taking can lead to more unethical behaviour is supported by other literature (Epley et al., 2006; Galinsky et al., 2005; Okimoto & Wenzel, 2011). In a paper of Epley et al. (2006) a series of experiments show that considering others' perspectives in competitive contexts activates egoistic theories of their likely behaviour, resulting in people acting more egoistically themselves. This concept is called reactive egoism. All this literature suggests that in competitive contexts, perspective-taking is likely to bring up unwanted or unethical behaviour. This has to do with the reasoning of the actor that the competitor will act in a way to **prevent exploitation** by a rival.

3. Hypothesis development

Unethical behaviour within the supply chain can have far reaching consequences, not only for individuals, but also for organisations, entire industries, and the global economy. Previous research explored how rivalry may contribute to more unethical behaviour (Kilduff et al., 2016; Pierce et al., 2013). In the context of rivalry, the increase in unethical behaviour may cause that decision-makers within the supply chain may turn a blind eye to certain factors to gain an advantage over the rival. One of these factors is the environmental sustainability concerns, which may be sacrificed in the pursuit of short-term gains.

This research addresses a gap in the literature surrounding the impact of rivalry and unethical behaviour on sustainability decision-making within supply chains. While previous studies have provided empirical evidence of the relationship between rivalry and unethical behaviour, the specific implications for sustainability remain unexplored. Additionally, the existing literature has not examined the varying influences of psychological stakes or perspective-taking in different scenarios of sustainable decision-making. Studying these interactions is meaningful because it helps understand how rivalry impacts sustainable decision-making and can help promote sustainable practices within supply chains.

The present study aims to address these gaps within the existing literature by investigating the relationship between rivalry, sustainable decision-making, and the influence of psychological stakes and perspective-taking in different scenarios. This study hypothesises that unethical behaviour caused by rivalry is positively associated with unsustainable decision-making within the supply chain. Moreover, it is expected that the influence of psychological stakes or perspective-taking differs within different scenarios. The next research models are hypothesized in this chapter.

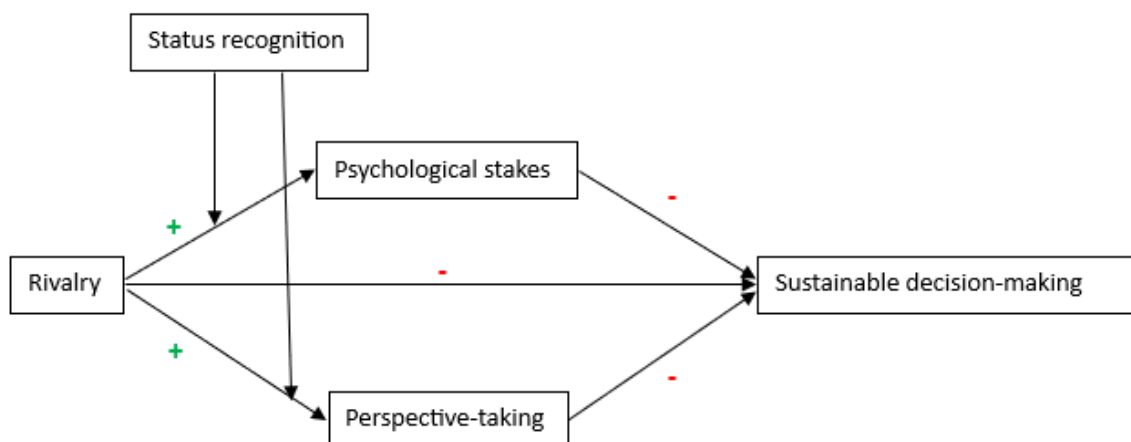


Figure 1: Study 1

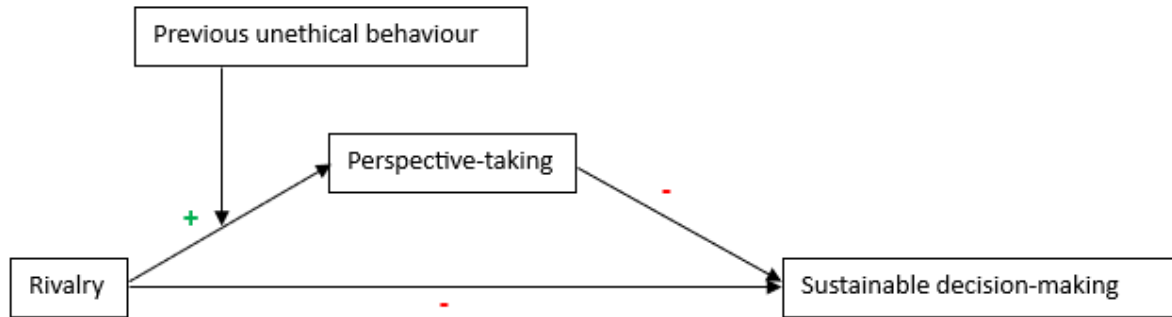


Figure 2: Study 2

3.1. Rivalry and sustainable decision-making

Rivalry can have unintended consequences in the context of decision-making within supply chains. In the competitive world of business, decision-makers often find themselves consumed by the drive to outperform their rivals. This heightened emotional state can drive them to make impulsive and harmful decisions (Malhotra et al., 2008).

Research by Kilduff and Galinsky (2017) has further shown that even thinking about a rival can make someone more likely to act unethically, which implies that being in a competitive mindset can override a person's sense of morality. In such an environment, the pursuit of immediate gains can overshadow long-term sustainability considerations. Decisions may prioritise maximizing short-term value (Malhotra et al., 2008), and possibly ignore environmental impacts.

If the organisation commits to remaining sustainable, the end result is that they remain economically viable in the short term (Malhotra et al., 2008). However, this short-term focus may come at the expense of the supply chain's overall sustainability. For instance, to gain a competitive edge, decision-makers might choose for cheaper but environmentally damaging sourcing options in the pursuit of cost savings.

In conclusion, rivalry in supply chain decision-making may lead to more unsustainable decisions, prioritising short-term gains over long-term sustainability. Decision-makers may overlook environmental and ethical concerns in the search for competitive advantage. The effects of rivalry can be understood through the lens of social comparison, as it elicits greater social comparison concerns and self-relevance of competition (Garcia et al., 2013), intensifying motivation and performance-oriented performance (Kilduff et al., 2010).

Hypothesis 1. *Rivalry causes more unsustainable decision-making.*

3.2. The mediating effect of psychological stakes

Unethical behaviour caused by rivalry is influenced by psychological factors that heighten the stakes involved for individuals or an organisation (Kilduff et al., 2016). The psychological stakes

can refer to the importance that an individual or organisation feels for the outcome of a decision or rivalry (Kilduff & Galinsky, 2017). This can also be described as the 'emotional investment'. The importance can vary according to what losing to a rivalry may do to one's contingency of self-worth, social comparison, and relative social status (Blader & Chen, 2011; Garcia et al., 2013; Kilduff et al., 2016).

Because in rivalry the rivals are often similar or comparable with each other and have a long-standing competitive relationship, they are likely to have more impact on the self-esteem and social comparison concerns than non-rivals. As such, these psychological stakes can mediate the link between rivalry and unsustainable decision-making, because when the emotional investment is high, such as in rivalry, the actor may engage in unethical behaviour which leads to unsustainable decision-making.

Moreover, when for instance losing a deal within the supply chain from a rival influences the self-worth or refer to the perceived social status of an individual or organisation, they will be more likely to make unsustainable decisions to, at least, maintain their status (Pettit et al., 2010) or contingency of self-worth (Kilduff et al., 2016). In addition, Garcia et al. (2013) explains in the social comparison theory that social comparison is an important source for competitive behaviour and also drives this behaviour. It highlights that the comparison concerns are the desire to achieve or maintain a superior relative position over, in this case, the rival (Garcia et al., 2013).

The discussed factors all add up to how the psychological stakes may rise when there is a lot on stake, especially in rivalry. So, the higher the emotional investment and stakes are, the more unsustainable decision-making is expected. Understanding the role of psychological stakes involved in rivalry and decision-making is key for getting a better understanding of (un)sustainable decision-making. In summary, it is expected that the psychological stakes in play mediate the relationship between rivalry and unsustainable decision-making, the following hypothesis is suggested to be tested:

Hypothesis 2. *Rivalry and unsustainable decision-making are mediated by psychological stakes.*

3.3. The mediating effect of perspective-taking

Research has shown that perspective-taking can promote empathy, cooperation, reduce conflict, and aggression (Pierce et al., 2013). In perspective-taking, individuals are able to empathize with another and look at things from their perspective, which can cause for a more cooperative behaviour and find mutually beneficial solutions. However, Pierce et al. (2013) shows that there is no evidence that perspective-taking in a competitive setting actually decreased the unethical behaviour in cooperative contexts. This shows that perspective-taking may create the foundation for cooperation but does not necessarily increase moral behaviour. In addition to this, perspective-taking has a darker negative effect within competition. Multiple studies highlight the darker side which may result in more unethical behaviour (Epley et al.,

2006; Galinsky et al., 2005; Okimoto & Wenzel, 2011). So, in the context of rivalry, perspective-taking can lead to a win-at-all-costs mentality, leading to more unethical behaviour. This is similar to the increase in psychological stakes that is discussed earlier within rivalry. However, perspective-taking is more a self-protection-at-any-costs mentality (Pierce et al., 2013). Epley et al. (2006) add to this by explaining the phenomenon reactive egoism. In a study he shows in a series of experiments that in competitive contexts, when considering the others' perspective it activates egoistic theories of their likely behaviour, leading people to counter by behaving more egoistically themselves (Epley et al., 2006).

To summarize, perspective-taking can have both positive and negative effects within the decision-making processes. While it can promote cooperation and empathy in some contexts, it can also lead to a self-protection-at-any-costs mentality within competitive contexts like in rivalry. This may lead to an increase in unethical behaviour which can cause for more unsustainable decision making. Therefore, it is expected that perspective-taking mediates the relationship between rivalry and unsustainable decision making.

Hypothesis 3. *Rivalry and unsustainable decision-making are mediated by perspective-taking.*

3.4. Factors that moderate the effect of psychological stakes and perspective-taking

To determine whether psychological stakes or perspective-taking show more influence in the effect between rivalry and sustainable decision-making, the concepts must be distinguished. Again, this is done with the two key papers by (Kilduff et al., 2016) and (Pierce et al., 2013). The key indicators of the construct are listed in Table 1. Why these are the key indicators is discussed further below.

Psychological stakes	Perspective-taking
Contingency of self-worth	Predicted unethical behaviour by rival
Status concerns	Prevent exploitation

Table 1: Key indicators construct stakes and perspective.

3.4.1. Psychological stakes: rivalry and low-high status firms

Social comparison is a process where individuals, or organisations, compare themselves among their achievements, abilities, and traits. Also known as the tendency to self-evaluate by comparing ourselves to others. This social comparison is an important source and driver of competitive behaviour (Garcia et al., 2013). Social comparison is increased by individual and situational factors. Individual factors that increase comparison concerns are the similarity, closeness, relevance, and individual differences (Garcia et al., 2013). These factors especially relevant concerning rivalry as it is shown in a study by Kilduff et al. (2010) that similarity, repeated competition, and the competitiveness result in rivalry. Competition with a non-rival has lower social comparison concerns, as the individual factors that drive the concerns are

lower than with a rival. Therefore, because the factors of rivalry overlap with the comparison concerns, the comparison concerns within rivalry are high.

As a result, organisations can have an increased concern over their status relative to their rivals as opposed to non-rival competitors (Kilduff et al., 2016). In support of this, Anderson et al. (2012) suggests that people care more about their social status against well-known members of their face-to-face groups than about their status in society broadly. These status concerns are more central among those with relatively high status than opposed to lower status parties (Blader & Chen, 2011). Blader and Chen (2011) show that when the rivaling or opposing actor is considered to have a lower status, the high-status party's reaction is shaped by their status maintenance concerns. It is important to note that the high-status party does not necessarily want to gain a higher status, yet it is primarily about not losing status. This suggests that the psychological stakes are higher when the rival has a lower status, because it may affect the contingency of self-worth and status concerns more than losing to a rival with higher status. The above does not exclude that there is no positive relationship between the psychological stakes and rivals with a higher status than the focal firm. However, because of the supporting literature it is expected that the relationship between rivalry and psychological stakes is stronger with a rival with lower status, because of the status maintenance concerns. If this theory is applied within perspective-taking, the focal actor may take into account when the rivaling actor has a higher status, that the higher-status rival will do his best to outperform the focal lower-status firm. This could lead to a change in decision-making by the focal actor, as the actor expects that the rival may engage in unethical behaviour to win.

In conclusion, the social comparison concerns within rivalry are higher than they would be with non-rivals. This also increases the status concerns and the psychological stakes for the focal actor. This will result in a more performance-oriented approach which will lead to more unethical behaviour (Kilduff et al., 2016). This may also lead to an increase in more unsustainable behaviour within the decision-making in the supply chain.

Hypothesis 4. *The effect of rivalry on psychological stakes is moderated by status in a way that when the rival has been recognized for a lower status this effect is stronger compared to a higher status.*

Hypothesis 4a. *The effect of rivalry on perspective-taking is moderated by status in a way that when the rival has been recognized for a higher status this effect is stronger compared to a lower status.*

3.4.2. Perspective-taking: rivalry when competitor engaged in unethical behaviour. Perspective-taking is a self-protection-at-any-costs mentality (Pierce et al., 2013). This self-protection mentality is triggered when a competitor or rival has been engaged in unethical behaviours before. This is because when the rival has engaged in unethical behaviour earlier, it triggers a defensive response, causing to prioritise self-protection over ethical considerations to not be exploited (Pierce et al., 2013). Epley et al. (2006) explains in his study the phenomenon

reactive egoism. In competitive contexts, considering others' perspectives can lead to believe that others would behave more selfishly, and this increase in the perceived selfishness contributes to the reactive increase in selfishness among the actor himself.

The defensive response triggered by perspective-taking and amplified by reactive egoism as the rival has previously engaged in unethical behaviour can lead to perceiving the rival as more selfish and less trustworthy. As a result, by engaging this perspective of their rival the focal actor is more likely to prioritise their own self-interest. In this way, perspective-taking can take on a 'dark' side, whereas it is used as a means of self-protection rather than as a tool for empathic understanding.

Hypothesis 5. *The effect of rivalry on perspective-taking is moderated by the history of unethical behaviour in a way that when the rival has previously engaged in unethical behaviour this effect is stronger compared to no previous unethical behaviour.*

4. Methodology and results

Two vignette-based experiments are conducted to test the causal relationships proposed in the hypothesis development. The vignettes are scenario's where the different variables are manipulated. The vignettes can be found in Appendix V1 and V2. Experiments are used to study causal relationships by establishing the effect that an independent variable has on a dependent variable (Bell, 2009), and are a common research methodology for studying human behaviour in many disciplines (Bendoly et al., 2006). In this case, an experimental design can provide valuable insights in the unsustainable decision-making processes within the supply chain, in the context of rivalry. We conducted two different studies to investigate our hypotheses. The first study utilizes a 2x2 factorial design (non-rival vs. rivalry and low status rival vs. high status rival) on the dependent variable unsustainable decision-making.

The second study also uses a 2x2 factorial design (non-rival vs. rivalry and no previous unethical behaviour by rival vs. previous unethical behaviour by rival) on the dependent variable sustainable decision-making.

This design enables to investigate the main effects of rivalry and status/previous unethical behaviour, as well as their interaction. Also, the phenomena perspective-taking and psychological stakes are measured to seek for possible mediation pathways. Both studies draw on a scenario-based experiment using varying versions of a descriptive vignette to convey scripted information about specific factors of interest to participants (Rungtusanatham et al., 2011). The vignettes can be found in appendix V1 and V2. The vignettes are inspired by similar vignettes used in a working paper by Pulles, Veldman and Buijs (2021).

4.1. Study 1. Rivalry and status

In study 1, we investigate the effects of rivalry and status on the unsustainable decision-making process within the supply chain. A total of 100 participants were recruited via prolific, existing out of 59% females and 41% males. In Table 2 there is an overview of the demographics of the participants.

On average, each participant spent around 4 minutes on the study and received a payment of 0.47 pounds. After formally accepting to enter the study, each participant was randomly assigned to one of the four treatments manipulating rivalry and the perceived status of the rival. Also, the psychological stakes and perspective-taking are measured to seek for a possible mediation pathway.

Category	Percentage
Region	
Europe	62%
North America	13%
South Africa	17%
Age Group	
25-34 years old	41%
18-24 years old	34%
Education	
Bachelor's	44%
High school	19%
Master's	16%
Some college	16%
Employment	
Full-time	49%
Part-time	18%
Student	16%

Table 2: Demographics study 1

4.1.1. Procedure and scenario

The participants in all scenarios in study 1 were presented a company description and an explanation of the supply chain their company has to deal with. The scenario that the participant is shown describes that their company wants to expand their production line "As the purchasing manager, you are responsible for ensuring that the organisation has a

stable supply of components for expanding this envisioned product line. One of ProTech primary challenges is to purchase sufficient amounts of rare earth materials to meet the increasing production levels.”. Their current supplier is mining the rare-earth metals in a relatively sustainable way, however a lower-cost supplier appeared with questionable sustainable mining practices.

After this, they were randomly assigned to one of the four conditions. The four conditions were non-rival/low status, non-rival/high status, rival/low status, and rival/high status. The level of rivalry and status of the rival were manipulated. Participants were then asked to rate the likelihood on a 7-point Likert scale (extremely low-extremely high) if they would keep sourcing from the current supplier to keep the commitment to sustainability or source from the new supplier and neglect the sustainability issues.

The independent variable of rivalry was operationalised by categorising the participants in two conditions: non-rival and rival. The manipulation of rivalry is derived from the work of Kilduff et al. (2010) in which he shows that similarity, repeated competition and competitiveness are variables that cause rivalry. This manipulation aimed to stimulate real-life competitive scenario’s and induce a sense of rivalry. The manipulation is shown in Table 3. The full scenario and manipulation are described in Appendix V1.

Non-rival	Manipulation
Appellation	Another firm
No history	You have heard of TechWares, but you do not regularly cross paths
Rival	Manipulation
Appellation	Your main rival
History	Your company and TechWares are similar organisations that regularly cross paths and have a long history of competing

Table 3: Rivalry manipulation study 1

Next to this, the perceived status of the rival was manipulated by presenting the participants with information regarding the status of the opposing actor. The manipulation is shown in Table 4. The full scenario and manipulation are described in Appendix V1.

Low status	Manipulation
Appellation	Lower-status tech organisation
Status loss	It especially concerns you that losing this deal will give TechWares an edge in the market, and your company may lose status to this <i>low-status</i> rival
High status	Manipulation
Appellation	Higher-status tech organisation
Status loss	It especially concerns you that losing this deal will give TechWares an edge in the market, and your company may lose status to this <i>high-status</i> rival

Table 4: Status recognition manipulation study 1

4.1.2. Manipulation checks

To evaluate the efficacy of the rival manipulation two items derived from the work of Kilduff (2014) were used “I consider this organization to be a rival” and “Competition against this organization were more important to me because of the relationship that exists(ed)”. The scales for these measures were ranging from 1 = *not at all* to 7 = *very much*. This manipulation was tested via an independent t-test. The results showed that there is no significant difference between the means of the rivalry manipulation in the group non-rival in comparison to the group rival (two-sided $p = .687, p > .05$), suggesting a lack of successful manipulation.

	Group	N	Mean
Rival manipulation	Non-rival	49	4.3980
	Rival	51	4.3039

Table 5: Manipulation check rivalry study 1

Next to this, to check the efficacy of the status manipulation, two items were used with the question: after considering the status of the opposing party “I would rate the importance of this decision to be” and “how would you rate the status of the opposing party” to assess if the difference in status of the opposed party is noticed by the participant. The scale for the perceived importance was ranging from 1 = *totally not important* to 7 = *very much important* and the scale for the status was ranging from 1 = *very low* to 7 = *very high*. This manipulation was also tested via an independent t-test. The results showed that there is no significant difference between the means of the status manipulation in the group low-status in comparison to the high-status group (two-sided $p = .061, p > .05$). As the p-value is close to the threshold, we can state there is a trend towards a difference, but it did not reach statistical significance. Despite the failed manipulations, we continue our study and note this as a important limitation.

	Group	N	Mean
Status manipulation	Low status	49	4.5714
	High status	51	4.9804

Table 6: Status recognition manipulation study 1

4.1.3. Measures

The independent variable of study one is rivalry which is subdivided in two groups (1=non-rival, 2=rival). The dependent variable was measured via two questions (“the likelihood is whether they will keep sourcing from their current supplier and keep their commitment to sustainability in the competition with the opposing firm” and “the likelihood is whether they will buy from their new supplier and neglect the sustainability issues in the competition with the opposing firm”) with a Likert scale (1=extremely unlikely to 7=extremely likely). The variable sustainable decision-making is computed with subtracting the likelihood of the current supplier of the likelihood of the new supplier. The higher the variable, the more sustainable decision-making.

The variables psychological stakes and perspective-taking are both measured via two questions and are derived from a working paper by Pulles, Veldman and Buijs (2021). Psychological stakes

were measured via the questions: “In deciding whether you as the purchasing manager should purchase from MiningInc...” 1) ... it was important to my personal sense of success to outperform the opposing firm, and 2) outperforming the opposing firm gave me a sense of self-respect. Perspective-taking was measured via the questions: “In deciding whether you as the purchasing manager should purchase from MiningInc...” 1) I imagined what the opposing firm would be thinking, and 2) I tried to imagine the decision that the opposing firm would make. The answers from both questions were summed up and divided by two, the higher the stakes felt or more perspective taken of the opposing party.

4.1.4. Validity and reliability

Several tests were conducted to assess the measurement instrument in terms of reliability and validity. We first assessed the measurement model by conducting a principal component analysis (PCA) for the construct’s psychological stakes and perspective-taking. The PCA indicates a significant result ($<.001$) on the Bartlett’s Test of Sphericity, suggesting the variables do relate to one another enough to run a meaningful EFA. The KMO results indicate a moderate sampling adequacy (.614). The PCA shows that the items of the constructs load well together, suggesting that the variables are strongly correlated and share underlying dimensions. The analysis of the correlation matrix using the HTMT approach show evidence of discriminant validity, as the correlations are below the threshold of 1 (Henseler et al., 2015). Furthermore, the high communalities (.774 to .857), and strong loadings of items on the rotated components (.844 to .924) all contribute to the evidence of construct validity (Hair. et al., 2010). The Cronbach alpha values ranged between .74 to .841. These values well exceed the recommended threshold of .7 (Nunnally, 1978), which indicates satisfactory levels for internal consistency reliability.

4.1.5. Results

4.1.5.1. Rivalry and unsustainable behaviour

A One-way ANOVA test was conducted to test H1. The results are shown in Table 1. In contradiction to the expectation that rivalry will impact sustainable behaviour, the relationship between rivalry and sustainable behaviour is not significant. The p-value of 0.639 suggests that the observed variation between the groups is not statistically significant at a significance level of 0.05 ($n=100$). Therefore, it cannot be concluded that a significant part of the variance can be explained by the group rivalry based on this ANOVA, thus H1 is rejected.

Sustainable behaviour	Sum of Squares	Degrees of Freedom	Mean Square	F-value	p-value
Between groups	1.770	1	1.770	0.221	0.639
Within groups	784.980	98	8.010		
Total	786.750	99			

Table 7: ANOVA rivalry and sustainable behaviour study 1

The descriptives are illustrated in Table 8 to get a better understanding of the answers. In Table 8 “Current” means what the likelihood is whether they will keep sourcing from their current supplier and keep their commitment to sustainability in the competition with the opposing firm and “New” means what the likelihood is whether they will buy from their new supplier and neglect the sustainability issues in the competition with the opposing firm.

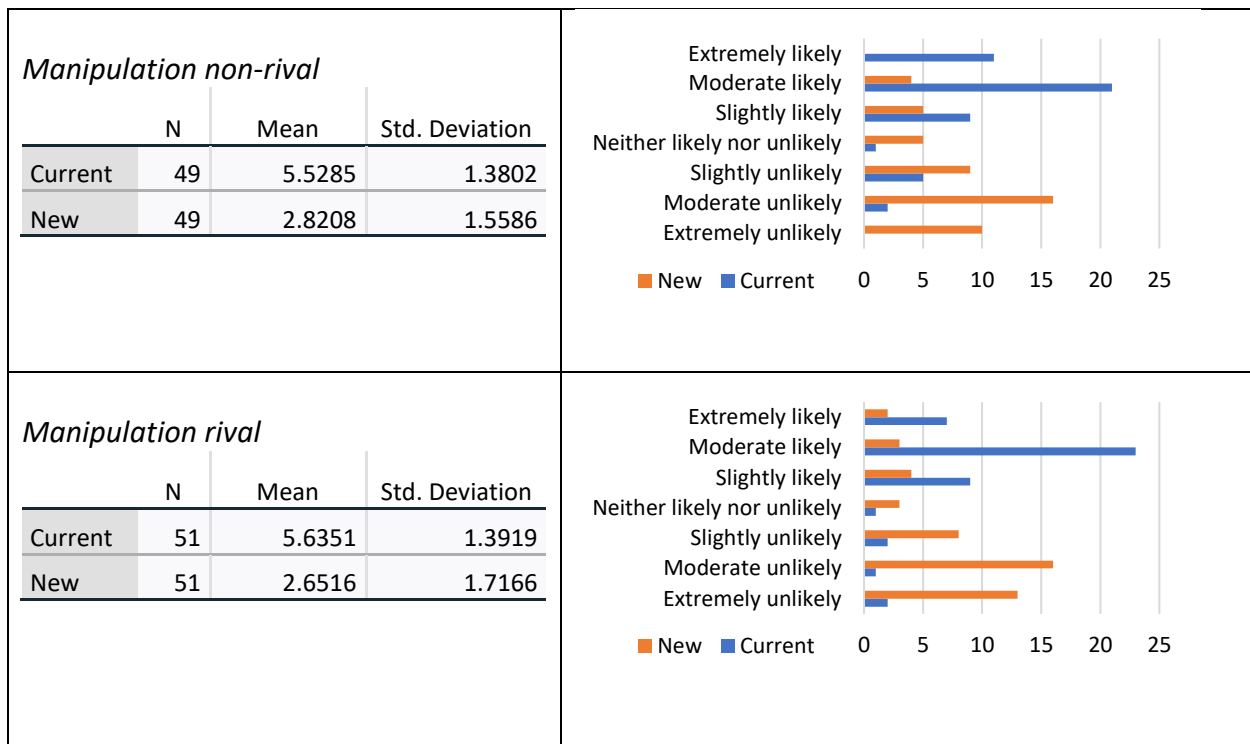


Table 8: descriptives questions rivalry - sustainable behaviour study 1

4.1.5.2. Mediating factors in rivalry and unsustainable decision-making: psychological stakes and perspective-taking

Hypotheses 2 and 3 are tested with the Hayes PROCESS macro. The model used in this test is model 4 for the mediation effect of psychological stakes and perspective-taking.

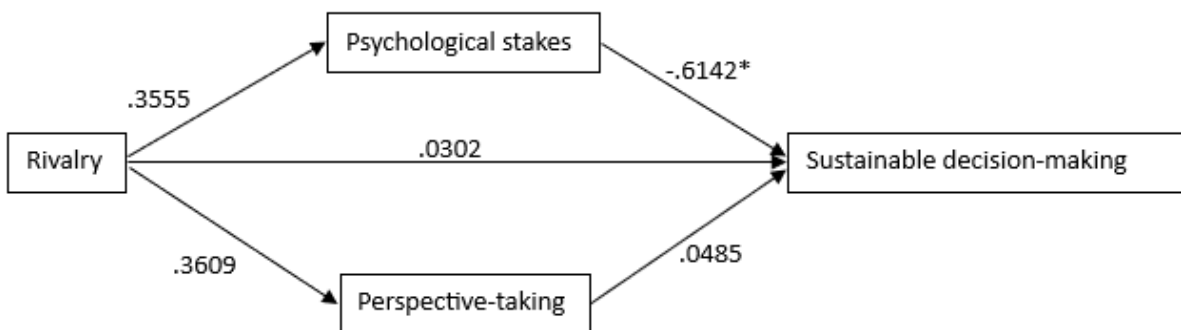


Figure 3: Mediation model Study 1

First, we look at whether rivalry and sustainable decision-making are mediated by psychological stakes. The results derived from model 4 show that the indirect effect of psychological stakes on the relationship between rivalry and sustainable behaviour is significant, as the p-value (.0025) is lower than the threshold of $p = .05$. However, we see that rivalry does not necessarily

cause for more psychological stakes felt, as the coefficient for group rivalry on psychological stakes is .3555. Nevertheless, this is not significant.

The regression results indicate a significant negative effect with a coefficient (-.6142) of psychological stakes on sustainable behaviour, suggesting that higher levels of psychological stakes are associated with lower levels of sustainable behaviour. With this information, we can accept hypothesis 2 stating that the relationship between rivalry and unsustainable decision-making is mediated by psychological stakes.

Secondly, we look at whether rivalry and sustainable decision-making are mediated by perspective-taking. The results derived from model 4 suggest that the indirect effect of perspective-taking on the relationship between rivalry and sustainable behaviour is not significant, as the p-value (.7991) is higher than .05. Also, the regression results indicate a non-significant negative effect ($p > .05$) with a coefficient (.0485) of perspective-taking on sustainable behaviour. There is no evidence suggesting that engaging in more perspective-taking leads to a decrease in sustainable behaviour. Consequently, we reject Hypothesis 3, which proposes that rivalry and unsustainable decision-making are mediated by perspective-taking.

Hypothesis	Model	Variable	Indirect Effect	p-value	Coefficient	Standard Error
2	4	Psychological Stakes (PS)	0.2184	0.0025	-0.6142	0.1978
3	4	Perspective-Taking (PT)	0.0175	0.7991	0.0485	0.1901

Table 9: Mediation variables between rivalry and sustainable decision-making study 1

4.1.5.3. Exploring the Impact of Status Recognition on Rivalry Dynamics

For answering hypothesis 4, we use data from derived from model 4 of the Hayes PROCESS macro. Hypothesis 4 proposes that the impact of rivalry on psychological stakes is influenced by the status of the rival. Specifically, this impact is stronger when the rival's lower status has been acknowledged, as opposed to a higher status.

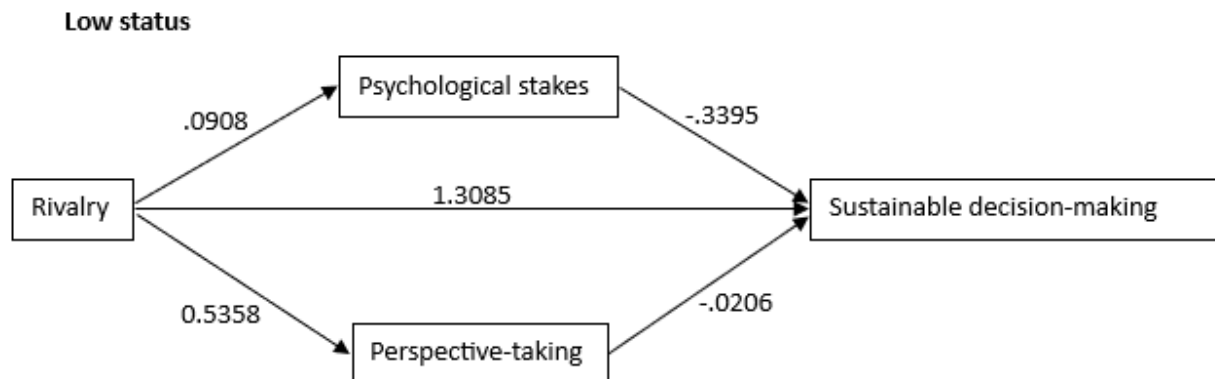


Figure 4: Low status recognition Study 1

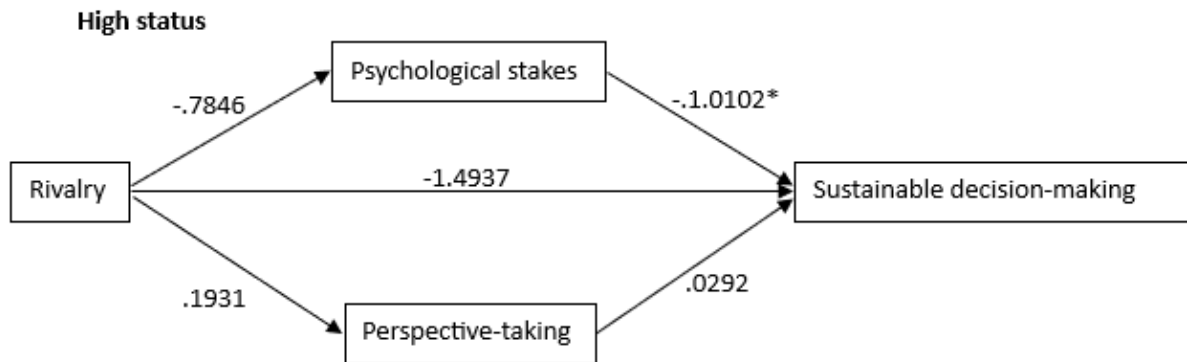


Figure 5: High status recognition Study 1

To see if there is an effect of status recognition, two analyses were run to check whether there is a difference between low-status or high-status. This was done via creating two data sheets: one for the group low status and one for the group high status. The different groups were run with the same model as with hypothesis 2 and 3. Looking at the results in Figure 3 and 4, the psychological stakes exert a more significant effect on the connection between rivalry and sustainable decision-making among the high-status group. The psychological stakes in the low status group have a non-significant effect on sustainable decision-making with a coefficient of -.3395. In the high-status group, the Figure reveals a significant path with a coefficient of -1.0102. We reject Hypothesis 4 as the results are in contrast with this Hypothesis: psychological stakes do not show a stronger effect with low status, but with high status. What is also noticeable in the results is the big change in coefficient of rivalry on psychological stakes within the low-status model versus the high-status model. The high-status model suggests that rivalry decreases the psychological stakes. Next to this, the direct coefficient of rivalry on sustainable decision-making shows a big difference, with in the low-status group suggesting that rivalry heightens sustainable decision-making and in the high-status group it lowers the sustainable decision-making.

For answering Hypothesis 4a we use the same approach as Hypothesis 4. Hypothesis 4a. proposes that the impact of rivalry on perspective-taking is influenced by the status of the rival. Specifically, this impact is stronger when the rival's higher status has been acknowledged, as opposed to a lower status. We used the same approach as H4. If we take a look at the results, we can see that there are no big differences between the low-status group and the high-status group. Based on these findings we reject Hypothesis 4a.

Hypothesis	Status	Variable	Indirect Effect	p-value	Coefficient	Standard Error
4	Low	Psychological stakes	-0.0308	0.2670	-0.3395	0.3021
4	High	Psychological stakes	0.7926	0.0005	-1.0102	0.2687
4a.	Low	Perspective-taking	-0.0110	0.9458	0.5358	0.3016
4a.	High	Perspective-taking	0.0056	0.9049	0.0292	0.2434

Table 10: Results status recognition study 1

4.2. Study 2. Rivalry and previous unethical behaviour

The purpose of study 2 is to investigate the effects of rivalry and previous unethical behaviour by the rival on the unsustainable decision-making process within the supply chain. A total of 100 participants were recruited via prolific, existing out of 48% females and 52% males. In Table 11 there is an overview of the demographics of the participants.

On average, each participant spent around 4 minutes on the study and received a payment of 0.45 pounds. After formally accepting to enter the study, each participant was randomly assigned to one of the four treatments manipulating rivalry and previous unethical behaviour by the rival. Also, perspective-taking is measured to seek for a possible mediation pathway.

Category	Percentage
Region	
Europe	65%
North America	9%
South Africa	18%
Age Group	
18-24 years old	39%
25-34 years old	36%
Education	
Bachelor's	38%
Master's	21%
Some college	19%
High school	18%
Employment	
Full-time	47%
Student	26%
Part-time	15%

Table 11: Demographics study 2

4.2.1. Procedure and scenario

The participants are presented a similar company- and supply chain description as in study 1. After this, they were randomly assigned to one of the four conditions. The level of rivalry and previous unethical behaviour of the rival were manipulated. The participants are then asked to take the perspective of the opposing party. They were asked as the purchasing manager of their company to make a decision to keep sourcing from the current supplier and keep their commitment to sustainability or engage in less sustainable behaviour by sourcing from the new supplier to keep up with the potential competition.

Rivalry is operationalised and manipulated similar to study 1. The other variable, previous unethical behaviour was also manipulated. The manipulation is shown in Table 12. The full scenario and manipulation are described in Appendix V1.

Previous unethical behaviour	Manipulation
No history	TechWares has no history of engaging in unethical behaviour when it comes to sustainability
No previous unethical behaviour	Manipulation
History	TechWares Is known for engaging in unethical behaviour when it comes to sustainability

Table 12: Manipulation of previous unethical behaviour

4.2.2. Manipulation checks

The same manipulation checks were used for rivalry as in study 1. To check the efficacy of the manipulation we use an independent t-test to check if there is a difference in the sense of rivalry felt by the different groups. As in study one, this test also showed that there is no significant difference between the group non-rival and rival (two-sided $p = .978$, $p > .05$), suggesting a lack of successful manipulation.

	Group	N	Mean
Rival manipulation	Non-rival	52	4.5673
	Rival	48	4.5729

Table 13: Rivalry manipulation study 2

Next to this, to check the efficacy of the variable previous unethical behaviour, two items were added: as the purchasing manager, I believe that ‘the opposing party has engaged in unethical behaviour before’ and ‘the opposing party has a clean sheet of doing business’. The scale on this item ranged from 1 = *strongly disagree* to 7 = *strongly agree*. The second item was reversely coded so the higher it is, the less of a clean sheet was noticed, resulting in more unethical behaviour. The results of this manipulation check were found to be statistically significant between the groups with participants in the group of no previous unethical behaviour and in the group of previous unethical behaviour (two-sided $p = .<0.001$, $p < .05$), indicating that the manipulation effectively influences the intended variable.

	Group	N	Mean
History of unethical behaviour manipulation	No history	51	4.0294
	History	49	4.6837

Table 14: History of unethical behaviour manipulation study 2

4.2.3. Measures

The same measures were used as in Study 1.

4.2.4. Validity and reliability

The same approach for testing the validity and reliability of this study is used as in Study 1. The PCA indicates a significant result ($<.001$) on the Bartlett’s Test of Sphericity, suggesting the variables do relate to one another enough to run a meaningful EFA. The KMO results indicate a moderate sampling adequacy (.537). The PCA shows that the items of the constructs load well together, suggesting that the variables are strongly correlated and share underlying dimensions. The analysis of the correlation matrix using the HTMT approach shows evidence of discriminant validity, as the correlations are below the threshold of 1 (Henseler et al., 2015). Furthermore, the high communalities (.773 to .895), and strong loadings of items on the rotated components (.850 to .940) all contribute to the evidence of construct validity (Hair. et al., 2010). The Cronbach alpha values ranged between .710 to .883. These values well exceed the recommended threshold of .7 (Nunnally, 1978), which indicates satisfactory levels for internal consistency reliability.

4.2.5. Results

4.2.5.1. Rivalry and unsustainable behaviour

A One-way ANOVA test was conducted to test H1. The results are shown in Table 15. The results show, similar as in study 1, that the relationship between rivalry and sustainable

behaviour is not significant with the p-value of .471, which is above the threshold of $p = .05$. So, we reject the first hypothesis ($n=100$).

Sustainable behaviour	Sum of Squares	Degrees of Freedom	Mean Square	F-value	p-value
Between groups	4.536	1	4.546	0.523	0.471
Within groups	849.224	98	8.666		
Total	853.760	99			

Table 15: ANOVA rivalry and sustainable behaviour study 2

The descriptives are illustrated in Table 16 to get a better understanding of the answers. In Table 16 “Current” means what the likelihood is whether they will keep sourcing from their current supplier and keep their commitment to sustainability in the competition with the opposing firm and “New” means what the likelihood is whether they will buy from their new supplier and neglect the sustainability issues in the competition with the opposing firm.

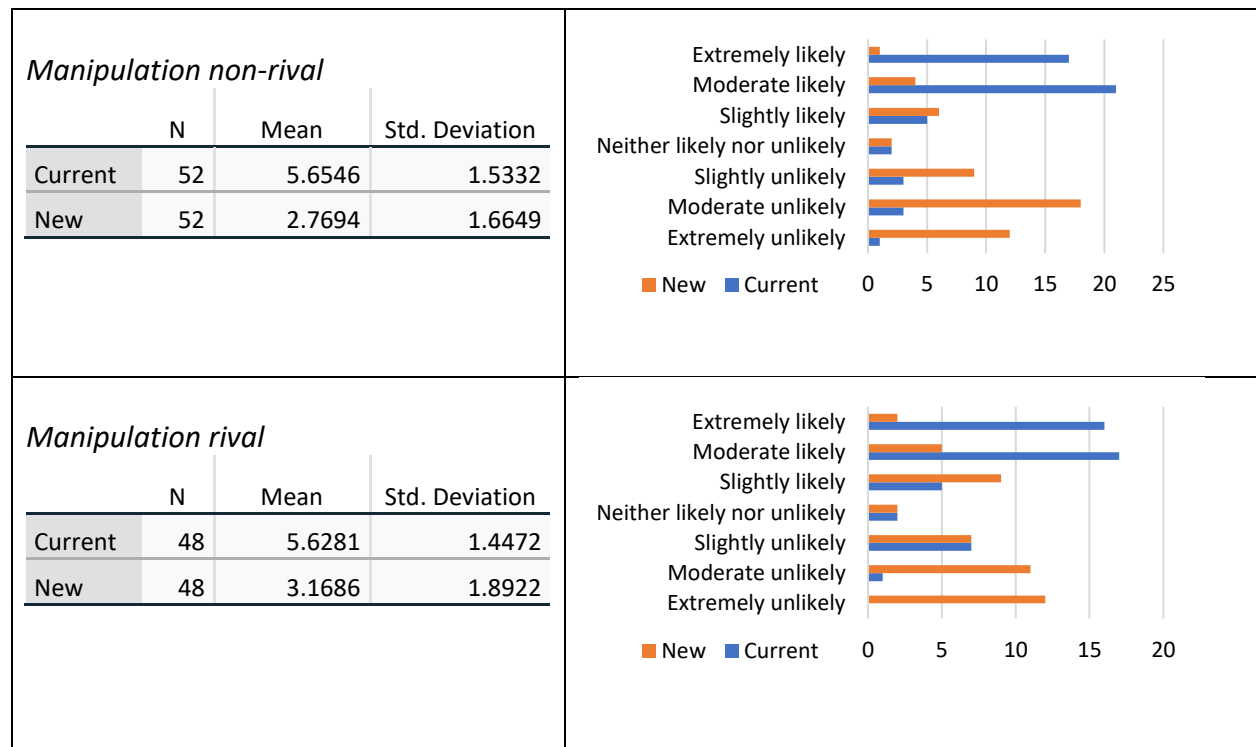


Table 16: descriptives questions rivalry - sustainable behaviour study 2

4.2.5.2. Mediating factors in rivalry and unsustainable decision-making: psychological stakes and perspective-taking

Hypotheses 2 and 3 are tested with the Hayes PROCESS macro. The model used in this test is model 4 for the mediation effect of psychological stakes and perspective-taking.



Figure 6: Mediation model Study 2

First, we look at whether rivalry and sustainable decision-making are mediated by psychological stakes. The results derived from model 4 show that the indirect effect of psychological stakes on the relationship between rivalry and sustainable behaviour is not significant, as the p-value (.9528) is higher than the threshold of $p = .05$. Also, the effect of psychological stakes on the relationship is very small (.0011). So, in contradiction to study 1, we reject the first hypothesis as there is no evidence in this study to support it.

Secondly, we look at whether rivalry and sustainable decision-making are mediated by perspective-taking. The results derived from model 4 suggest that the indirect effect of perspective-taking on the relationship between rivalry and sustainable behaviour is not significant, as the p-value (.6919) is higher than .05. Again, there is no evidence to support Hypothesis 3, and thus we reject it.

Hypothesis	Model	Variable	Indirect Effect	p-value	Coefficient	Standard Error
2	4	Psychological Stakes (PS)	0.011	0.9528	0.0127	0.2137
3	4	Perspective-Taking (PT)	0.0492	0.6919	0.0834	0.2098

Table 17: Mediation variables between rivalry and sustainable decision-making study 2

4.2.5.3. Exploring the Impact of Previous Unethical Behaviour on Rivalry Dynamics

For answering hypothesis 5, which suggests that perspective-taking shows more effect in the relationship between rivalry and unsustainable decision-making when the rival has previously engaged in unethical behaviour compared to no previous unethical behaviour, we also use model 4 of the Hayes PROCESS Macro.

No history

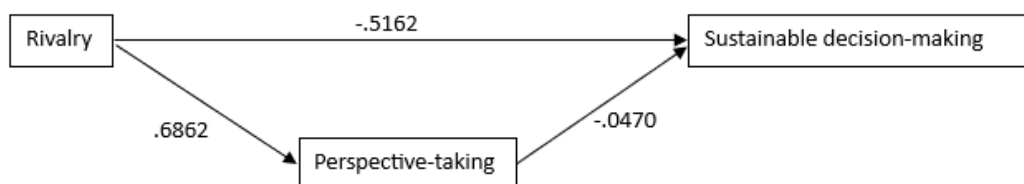


Figure 7: No history of unethical behaviour Study 2

History

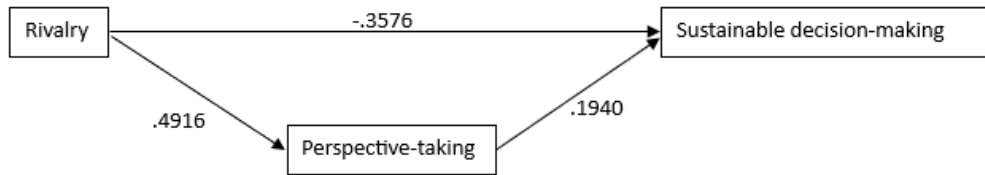


Figure 8: History of unethical behaviour Study 2

Hypothesis	History	Variable	Indirect Effect	p-value	Coefficient	Standard Error
	No	Perspective-taking	-0.0322	0.8836	-0.0470	0.3191
5	Yes	Perspective-taking	0.0954	0.4858	0.1940	0.2760

Table 18: Results history of previous unethical behaviour study 2

The results indicate no big difference within the coefficients looking at the model for no previous unethical behaviour and previous unethical behaviour. Perspective-taking does not show a stronger effect with the rival having a history of unethical behaviour. This is why we reject Hypothesis 5.

5. Discussion

The outcomes of the studies conducted within this research have provided insights into the relationship between rivalry and unsustainable decision-making, and mediating factors like psychological stakes and perspective-taking. Also, different dynamics like status recognition and previous unethical behaviour were explored. It provides a more comprehensive understanding of rivalry and its influence on the decisions being made on sustainability. Additionally, it enhances our understanding of the psychological reasons behind the connection between rivalry and making decisions that are not sustainable. The understanding of unsustainable decision-making could offer strategies to address such practices, potentially guiding organisations in their pursuit of sustainability or uncovering reasons for their ongoing unsustainable behaviours. In this chapter we summarise the results of our empirical studies and highlight the theoretical insights. The limitations are discussed, as well as the implications for the interpretation of the results. This chapter ends with recommendations for future research.

5.1. Findings

In contrary to Hypothesis 1, suggesting that rivalry causes more unsustainable decision-making, we did not find any evidence that this is the case in both studies. However, what is interesting is that no matter which manipulation was used, the participants showed a left skewed answer on the likelihood that they will keep their commitment to sustainability and a right skewed answer on the likelihood that they will neglect sustainability issues. This implicates that regardless of the manipulation at play, the participants showed more sustainable decision-making than unsustainable decision-making. A possible explanation to this is that with most of the participants, the need to conduct sustainable practises is more important than outperforming an opponent.

When examining Hypothesis 2, the mediating effect of psychological stakes, we found that the stakes play a significant role in the relationship between rivalry and sustainable decision-making in Study 1. The more rivalry increased, it heightened the psychological stakes, which in turn led to a decrease in sustainable behaviour, and thus an increase in unsustainable behaviour. This is in line with the work of Kilduff et al. (2016), who suggests that rivalry increases the psychological stakes by creating of a winning-at-all-costs mentality and a more performance-oriented approach. Furthermore, we did not find any mediating effects of perspective-taking, Hypothesis 3 in both studies. This may suggest that rivalry does not necessarily leads to a protection-at-all-costs mentality which may result in more unethical behaviour, and thus more unsustainable decision-making (Pierce et al., 2013).

The results of status recognition indicate that psychological stakes play a stronger role in influencing the relationship between rivalry and sustainable decision-making when the rival has been acknowledged for its higher status compared to the lower status of the focal firm. This is in contrast to the literature of Blader and Chen (2011) which suggests that when the rivalling or opposing actor is considered to have a lower status, the high-status party's reaction is shaped by their status maintenance concerns. The results in Study 1 may suggest that a lower status organisation wants to gain on a higher status organisation and can in this process feel

heightened psychological stakes that further drive performance, in line with Kilduff et al. (2016). Furthermore, some odd relationships in the models like the high-status model that suggests that rivalry lowers the psychological stakes and the low-status model that suggests that rivalry increases sustainable decision-making may be a result of the failed rivalry manipulation. Status recognition did not noticeably influence the model with perspective-taking, suggesting that despite of which status the rival has, it does not alter the relationship between rivalry, perspective-taking and sustainable decision-making.

Interpreting the results of the model of previous unethical behaviour, we can suggest that we did not find the phenomenon reactive egoism by Epley et al. (2006) in the results. There are no signals that previous unethical behaviour leads to more unsustainable decision-making to prevent exploitation by the rival or causes more selfish behaviour by the focal firm.

5.2. Theoretical implications

First, the findings suggest that rivalry does not directly lead to more unsustainable decisions. This challenges the assumption made that rivalry may lead to neglecting the long-term goals, like sustainability, over the short-term gains. In addition to this, the results of the studies indicate that choosing the sustainable option is important. Which manipulation is at play, does not necessarily matter according to our results for choosing the sustainable option. This further adds to the literature of Quintens (2017), which suggests that sustainability in organisations is growing in emphasis. We show in this research that the participants are more likely to make the sustainable decision than to make the decision that may outperform the rival. While prior studies have indicated that rivalry could result in increased unethical decision-making, this research reveals that it does not necessarily lead to an increase in unsustainable decision-making.

Secondly, Study 1 highlights the mediating role of psychological stakes in the relationship between rivalry and sustainable decision-making. This is in line of earlier work by Kilduff et al. (2016), which suggests that rivalry may heighten the psychological stakes. We added status as a possible moderating factor in the psychological stakes model. We contribute to the theory by showing that status can be an important factor in moderating this relationship by further heightening the psychological stakes. It was expected that the moderating effect was stronger within the focal firm having a higher status opposed to the rivalling firm. Blader and Chen (2011) show that when the rivalling or opposing actor is considered to have a lower status, the high-status party's reaction is shaped by their status maintenance concerns. This may implicate that it could cause for more unsustainable decision-making to win over the rival. Our research shows that it is the other way around, and that when the focal firm has a lower status it heightens the psychological stakes more, causing for more unsustainable decision-making. However, this does fit the social comparison theory of Garcia et al. (2013), which suggests that there are concerns to achieve or maintain a superior relative position over the opponent, in this case the rival. This is an important contribution to the theory and can be explained by the theory. The contingency of self-worth could already be lower because of the low-status, and the status concerns are high as they feel perceived lower than the rival. This could indulge the performance-oriented approach of Kilduff et al. (2016) more. This may implicate that status

concerns within the low-group are higher than the status-maintenance concerns of higher status parties.

Finally, the theory proposed by Pierce et al. (2013) suggests that engaging in perspective-taking during competitive scenarios, such as rivalry, could lead to an increase in unethical behaviour. When considering the others' perspective it activates egoistic theories of their likely behaviour, leading people to counter by behaving more egoistically themselves (Epley et al., 2006). Consequently, we hypothesised that there would be an increase in unsustainable decision-making when our rival had previously shown unethical behaviour. However, our findings indicate no significant effect, implying that perspective-taking and reactive egoism do not necessarily correlate with a rise in unsustainable decision-making. This contribution prompts further exploration by questioning the commonly perceived negative role of perspective-taking within competitive contexts. While we've gained preliminary insights, we acknowledge that the contribution in this aspect may require additional development and exploration.

5.3. Managerial implications

Firstly, the research provides an insight into the factors that influence unsustainable decision-making in the context of rivalry. Managers can use these insights to get a better understanding of the dynamics at play and in this way, use this knowledge to promote sustainable behaviour. An example regarding the mediating effect of psychological stakes could be to create awareness about the heightened psychological stakes and implement interventions to reduce the negative impact on the sustainable decisions.

Secondly, our studies highlight that the participants consistently showed a preference for the more sustainable choice, nevertheless the manipulation used. This may suggest an intrinsic motivation for showing sustainable behaviour. Managers could use this in their advantage by using this intrinsic motivation by emphasising sustainability goals and integrating them into the decision-making process in the supply chain. In this way, organisations can really step into the right direction in truly getting more sustainable.

Managers cannot draw definite conclusions about whether rivalry causes for more unsustainable behaviour due to the failed manipulation of rivalry. This may hinder to fully understand this relationship. Also, managers must be cautious to interpretate the findings to their own organisation, as it may not be generalizable for all industries since the studies were conducted in a specific context.

To promote engaging in more sustainable decision-making, managers and policy makers could consider initiatives such as sustainability training (Bilderback, 2023), or establishing reward systems that recognize and motivate sustainable choices within the supply chain. Collaborative partnerships and knowledge-sharing platforms could also be established to enable organizations to learn from each other's successes and challenges in pursuing sustainability (Lozano, 2008). Additionally, integrating sustainability metrics into performance evaluations and reporting mechanisms can help incorporate sustainable practices into the organisational culture.

5.4. Limitations and future research

While the results of these studies provide valuable insights, it is important to also acknowledge the limitations. The first one being the failed manipulation of rivalry. Creating a sense of rivalry among the participants was not successful. This lack of manipulation limits the ability to draw definitive conclusions about the impact of rivalry on sustainability. In addition to this it is important to also address the same problem with the manipulation of status recognition, which was not significant. Also, the findings may not be generalizable to all industries, as the studies were conducted with specific contexts. Furthermore, while considering a lot of factors that may influence the relationship between rivalry and unsustainable decision-making, like the psychological stakes, perspective-taking, status recognition, and history of unethical behaviour, there may be other variables influencing this relationship which were not accounted for. Next to this, the variable unethical behaviour as a moderator can be explored more, as unethical behaviour in this study was not defined for the participants. It may be that certain types of unethical behaviour may influence the relationship between rivalry and unsustainable decision-making more.

Moreover, the participants within the studies were not specifically in the field of supply chain management, meaning that they do not necessarily represent the professionals or individuals who normally make these decisions. The inclusion of the participants with various backgrounds could cause variation and possible biases in the responses. As the participants may have different prior experiences, knowledge and perspectives on sustainability and rivalry than those directly involved in supply chain management. These differences can contribute to how they react on the different experimental manipulations, what could have affected the results.

This paper offers valuable insights for advancing research in this area. A future study should aim at improving the rivalry and status manipulation. Since the failed manipulation in this study makes it hard to draw definitive conclusions. By improving and refining these manipulations a real sense of rivalry can be created and the participants will better acknowledge the perceived status.

Secondly, by conducting the studies within the specific field of supply chain management, it can provide a more accurate understanding with the different dynamics at play. By recruiting more participants specifically out this field of supply chain management the results will be more applicable and relevant to the real-world decision-making process within the supply chain. Next to this, it would also be interesting to put these participants through different contexts to uncover possible other influences.

Thirdly, to gain a better understanding of the factors influencing unsustainable decision-making in the context of rivalry, future studies can explore more variables. For instance, future research could focus on investigating the role of organisational culture as a factor of sustainable decision-making within the context of rivalry. Organisation culture is widely recognized for its contribution to ensuring corporate sustainability (Ketprapakorn & Kantabutra, 2022). It is interesting to see how an organisation's values, norms, and practices interact with the dynamics of rivalry. This exploration could provide deeper insights into the mechanisms

underlying sustainable choices. This can involve examining how a culture of sustainability, ethics, or collaboration influences decision-making under competitive pressures. Additionally, future research might explore other potential variables such as stakeholder influence or the role of media pressure.

Finally, by conducting qualitative research next to the quantitative, it may help to give a deeper understanding of the underlying mechanisms and contextual factors influencing the relationship between rivalry and unsustainable decision-making. A qualitative approach will help finding more perspectives and motivations.

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Appendixes

V1: non-rival/rival X low status of non-rival/high status of rival

Company introduction

Imagine you are a purchasing manager at ProTech, a leading technology company that manufactures consumer goods such as laptops, tablets, and smartphones. ProTech recently announced plans to expand its product lines to include smart home devices such as smart thermostats and smart doorbells.

As the purchasing manager, you are responsible for ensuring that the organisation has a stable supply of components for expanding this envisioned product line.

One of ProTech primary challenges is to purchase sufficient amounts of rare earth materials to meet the increasing production levels.

The supply chain

ProTech has been sourcing rare earth materials from a well-known supplier, GoodMining, that specialises in mining these rare materials in a relatively sustainable way.

However, recently, a new supplier, MiningInc, has emerged as a possible source of rare-earth metals. MiningInc is a large mining firm that operates in various countries and is known for offering lower-cost metals than GoodMining. However, you have come to learn that MiningInc mining operations are not environmentally sustainable, and that they have been accused of water pollution, deforestation, and releasing harmful substances into the air. Nevertheless, all the mines of MiningInc do comply with the environmental legislation of the local governments.

MANIPULATION

In addition, you have come to know from your business analyst that another firm/your main rival, Techwares, also has an interest in purchasing rare-earth materials from MiningInc. TechWares is a lower-status tech organisation/higher-status tech organisation. You have heard of TechWares, but you do not regularly cross paths/Your company and TechWares are similar organisations that regularly cross paths and have a long history of competing. You are worried that if TechWares will buy from MiningInc, it could put pressure on your company to also consider this supplier. It especially concerns you that losing this deal will give TechWares an edge in the market, and your company may lose status to this low-status/high-status firm/rival.

You have to decide whether you purchase the rare-earth metals from GoodMining and maintain your commitment to sustainability, or do you risk the reputation of your company by purchasing from MiningInc to compete with the other firm/your main rival?

V2: non-rival/rival X no history of unethical behaviour/previous history of unethical behaviour

(Repeated company description and supply chain from V1)

In addition, you have come to know from your business analyst that another firm/your main rival, TechWares, also has an interest in purchasing rare-earth materials from MiningInc. You know that TechWares has no history of engaging in unethical behaviour when it comes to sustainability/is known for engaging in unethical behaviour when it comes to sustainability. You have heard of TechWares, but you do not regularly cross paths/Your company and TechWares are similar organisations that regularly cross paths and have a long history of competing. You are concerned that if TechWares will buy from MiningInc, it could put pressure on your company to also consider this supplier.

You have to decide whether you purchase the rare-earth metals from GoodMining and maintain your commitment to sustainability, or do you risk the reputation of your company by purchasing from MiningInc to compete with the other firm/your main rival?