



Words to use with care? CEO dispositional optimism vs overconfidence

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ARTICLE INFO

Keywords:

Overconfidence
Dispositional optimism
Supplier's relationship-specific investments

ABSTRACT

CEO overconfidence and dispositional optimism are often used interchangeably. This paper addresses two key issues that result in this problem, (1) the conflation and confounding between CEO overconfidence and dispositional optimism; (2) the lack of consideration for the other parties' individual traits. To expose the theoretical and empirical distinctions, we examine the interaction between supplier and customer, and its effects on supplier's relationship-specific investments. Theory indicates that both traits show a proclivity to overinvestments, but interestingly, results differ when accounting by the other parties' optimism and overconfidence. Specifically, the customer CEOs optimism strengthens this relationship while overconfidence weakens it.

1. Introduction

Manager traits are relevant to research because of their strong effect on firm and stakeholder decisions-making (Bamber et al., 2010; Davis et al., 2014; Malmendier and Tate, 2005; Phua et al., 2018). However, the lack of a meticulous approach to psychological characteristics is a "problem for understanding past research and informing future progress" (Heavey et al., 2022, p. 1430). Thus, we focus in two psychological traits that literature tends to mistakenly treats interchangeably, CEO overconfidence and CEO dispositional optimism (Heger and Papageorge, 2018). We address two problems in prior research: (1) confusion between CEO overconfidence and dispositional optimism (Campbell et al., 2011; Heavey et al., 2022); and (2) limited focus on one individual's traits without considering interacting parties. We investigate overconfidence and dispositional optimism in supply chain scenarios involving customer and supplier CEOs, enabling us to explore the interaction.

Both overconfidence and dispositional optimism predict a positive future outlook but differ significantly; a positive outlook is not dispositional optimism ("optimism" to refer to "dispositional optimism" for brevity). Expectancy theory and clinical psychology (Carver et al., 2010) often refer to optimism as "confidence" in a certain outcome. However, this "confidence" refers to the naïve, benevolent, and faithful belief that something is very likely to happen, and not the self-efficacy that defines overconfidence (Davis et al., 2014). As Heavey et al., (2022) point out, "Even in the absence of confidence, optimists may forecast positive future performance [and] confident individuals are not necessarily optimistic." Optimism signifies a strong belief or overestimation, distinct from the over-precision seen in overconfident individuals. These distinctions between optimism and overconfidence caution against their interchangeable treatment in the literature (Campbell et al., 2011; Lee et al., 2016; Liu et al., 2009).

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We rely on a text-based proxy to measure Optimism and an options-based measure to capture the Overconfidence of both the customer and supplier CEOs of public supply-chain partners (Campbell et al., 2011; Davis et al., 2014; Malmendier and Tate, 2005; Phua et al., 2018). We examine the correlation between relationship-specific investments and these managerial characteristics. Results indicate that both overconfident and optimistic suppliers have high relationship-specific investments. However, the customer's optimism increase the likelihood of strengthening this relationship, while overconfidence weakens it; in essence suppliers inevitably incur on relationship-specific investments, but some may intensify that behavior substantially above others.² Johnson-Neyman intervals show that extreme customer optimism has an even stronger effect, consistent with theory, personality traits are better perceived by others when behavioral patterns are exacerbated (Malmendier and Tate, 2005).

This study adds to CEO psychological traits literature by distinguishing the effects of optimism from overconfidence. These distinctions affect bilateral relationships and influence relationship specific investments. In essence, we clarify the mechanisms driving reactions to optimism and overconfidence (Heavey et al., 2022). Disentangling these theoretical mechanisms and empirical challenges contributes to the finance, accounting, management, and entrepreneurship research's theoretical, methodological, and empirical validation (Abernethy and Wallis, 2018).

2. Related literature

Table 1 contains the aspects of distinction between CEO optimism and overconfidence that apply to firm management and the potential to influence differently the interaction between parties.

We test these differences by examining relationship-specific investments (RSI) in the supply chain. Prior literature finds a positive correlation between customer overconfidence and RSI, attributing the result to suppliers "buying in" to the overconfident customer's vision (Phua et al., 2018). However, suppliers are cautious when interacting with an overconfident customer that are particularly risky (Nelson and Schwartz, 2019). Additionally, Transaction Cost Economics (TCE) suggests that RSI are subject to risks from the non-investing party capturing rents from the investor if the investment has less value outside of the relationship. Collectively, comparing optimism and overconfidence suggest that an optimistic customer will be collaborative with their supply-chain partner, reducing hold-up problems (Haruvy et al., 2018).

Using the supply chain allows us to observe the overconfidence and optimism of both the customer and supplier CEO. Perception of another CEOs psychological traits often depends on the observer. During interpersonal interchanges, psychological traits are intensified or exacerbated, they can become more apparent to others due to the distinctive ways in which they influence behavior, interactions, and reactions. People often perceive these traits through direct observation, interactions, collaboration, and feedback (Paulhus and Bruce, 1992), which shape how they understand and relate to the individual exhibiting them.

Overconfident individuals may be the subject of social reluctance because being overly confident involves taking risks, not necessarily wanted by others (Paulhus, 1998). Others observe this bias, even in the supply chain (Anderson et al., 2006; Harrison et al., 2002; Littlepage et al., 1997; Nelson and Schwartz, 2019; Paulhus and Bruce, 1992; Peltokorpi, 2008). Furthermore, groups perceive individuals with unjustified confidence as more self-centered and less dedicated to the group's success, which reduces cooperation.

While a unilateral analysis may indicate that overconfident customers attract larger supplier's RSI (Phua et al., 2018). A bilateral approach, one that involves both sides, entails different mechanisms and results (Grove, 2020). While suppliers have inevitable dependencies with customers; an optimistic CEO may be reluctant to engage in high levels of RSI when they perceive that the customer's CEO is overconfident. This caution occurs because optimistic people "take active steps to make sure good things do happen" as a self-care anticipatory action (Carver et al., 2010, p. 883); withholding investments as protective self-care mechanism. If the overconfident CEO exhibits excessive certainty in their decisions, the supplier's CEO could perceive the customer's CEO as someone underestimating the challenges and risks. The supplier's CEO might recognize that the overconfident CEO's decision-making is underestimating other market signals. As a result, the supplier's optimistic CEO may perceive a higher level of risk in the situation reducing the likelihood of engaging in high levels of relationship-specific investments. Overall, the differing communication and risk perceptions between an optimistic supplier CEO and overconfident customer CEO can lead to a situation where the supplier CEO is reluctant to invest heavily in RSIs.

H1. *The relationship between a supplier's CEO's dispositional optimism and the relationship specific investments is negatively moderated by the customer's CEO overconfidence.*

Contrary to the case of having an overconfident CEO as a counterpart, both CEOs may exhibit high optimism. A CEO that is optimistic is likely to attract more investments due to their positive and amiable demeanor, which is often founded in positive relationships and effective conflict resolution skills. Optimists excel in forming connections and adeptly handling conflicts through better commitment to high priority tasks (Geers et al., 2009). Further, optimistic individuals approach relationships in a manner that encourages efficient issue-solving; similar to how optimists utilize problem-oriented coping during stressful situations (Assad et al., 2007). One significant factor in this dynamic is that individuals with an optimistic disposition tend to cultivate deeper social bonds and forge closer relationships (Carver et al., 2010; Helweg-Larsen et al., 2002). An optimistic CEO's distinctive approach to processing information strengthens their appeal to the supplier because social identity processes are driven by a cognitive motive aimed to diminishing uncertainty (Hogg, 2001). Despite their acknowledgement of negative aspects, optimists emphasize the most pertinent

² We acknowledge that CEO matching with firms is an endogenous process as is the matching of customers and suppliers.

Table 1
Key distinctions between dispositional optimism and overconfidence.

Aspect	Dispositional Optimism	Overconfidence
Attitude towards risk	More willing to take on risks founded on beliefs instead of self-efficacy (Carver et al., 2010; Hmieleski and Baron, 2009).	Tends to underestimate risks (Moore and Healy, 2008) given the overestimation of their capabilities (Mathew and Hambrick, 1997).
Information processing	Focuses on the positive the benefits and opportunities (Angelini and Cavapozzi, 2017).	Overestimates own knowledge (Moore and Healy, 2008) downplaying negative due to confirmation bias (Nickerson, 1998).
Reaction to losses	Views losses as temporary and emphasize the most pertinent and valuable facets of this information (Aspinwall et al., 2001).	May struggle to accept losses and blame the circumstances or others (Chen et al., 2015; Gervais et al., 2007).
Long-term perspective	Maintains a long-term outlook and high-priority objectives (Geers et al., 2009).	Overreaction to private information and underestimations of public information induces short-horizon (Chuang and Lee, 2006).
Trust and Cooperation	Optimism and its link to generalized trust, promote tie formation between individuals (Andersson, 2012). They are more cooperative and collaborative, as they expect good things to happen when working with others. (Peterson and Park, 2006).	Overconfident individuals may be less inclined to trust others' opinions or expertise, for example, overconfident CEOs are less prone to hire advisors (Becher and Juergens, 2013).
Communication	Optimists are generally more positive and constructive in their communication, which can enhance their ability to resolve conflicts and maintain positive relationships. Offering emotional support and encouragement. (Srivastava et al., 2006).	Overconfident individuals may come across as arrogant or dismissive, as they tend to believe they know best (Mathew and Hambrick, 1997). Hindering communication (Lajoy, 1976)
Conflict Resolution	Optimists are often more resilient in the face of relationship conflicts, believing that issues can be resolved, and relationships can improve over time. They are more likely to adopt a problem-solving approach (Geers et al., 2009)	Overconfidence may make it difficult for individuals to acknowledge others viewpoints during conflicts (Neale and Bazerman, 1985), prolonging disputes and delaying conflict resolution.
Empathy	Optimists often exhibit greater empathy, as their positive outlook may make it easier for them to understand and support others in times of need (Hojat et al., 2015).	Overconfidence is characterized by a self-serving behavior, that may lead to a lack of empathy, as individuals may be less attuned the needs of other (Kramer et al., 1993; Weinstein, 1980).
Social Support	Optimistic people are easier to like (Carver et al., 1994; Helweg-Larsen et al., 2002) and cultivate deeper social bonds and closer relationships (Carver et al., 2010; Helweg-Larsen et al., 2002).	The tendency to overestimate one's abilities are perceived by others, leading to a reluctance in others to establish cooperation (Anderson et al., 2008, 2006).
Coping with Stress and Contingency Planning	Better adjustment during stressors (Scheier and Carver, 1985) because they are more likely to reach out to their social networks for support (Brisette et al., 2002). "People who expect good things to happen take active steps to make sure good things do happen" (Carver et al., 2010, p. 883).	Overconfident individuals more vulnerable to stress (Dorn and Matthews, 1995). Because stress restricts objective situation awareness it may impact effective coping or problem solving (Manktelow and Jones, 1987). Overconfident individuals may neglect contingency planning because they may not acknowledge the possibility of failure or setbacks.
Safety Mechanisms	Optimistic are characterized by a proactive self-care mechanisms (Aspinwall and Taylor, 1997) identifying situations where precaution is necessary.	Overconfident individuals tend to disregard safety mechanisms, believing the possess greater competence than their peers (Wohleber and Matthews, 2016).

and valuable facets of this information (Aspinwall et al., 2001) as a way of efficiently refocusing. An optimistic CEO is naturally inclined to collaborate with another CEO who not only recognizes potential challenges, but also demonstrates the knack for distilling actionable insights from such information. Optimistic CEOs working together are more likely to work through problems and believe that they will use investments collaboratively in the future. Consequently, the direct link between the CEO's inherent optimism and investments specific to the supplier-customer relationship will be positively influenced by the optimistic outlook of the customer's CEO, increasing the likelihood that supplier's CEO may engage on high level of relationship-specific investments.

H2. *The relationship between a supplier's CEO's dispositional optimism and the relationship specific investments is positively moderated by the customer's CEO dispositional optimism.*

3. Methods

3.1. Sample

We rely on disclosures of major customers to construct a sample of public customer-supplier pairs.³ We use the Compustat Segment database to identify these (Cen et al., 2017) and match the sample with ExecuComp to obtain option-holding and compensation data. We further match firms to the CIQ Transcript Database, where we collect CEO speaking parts during earnings conference calls. We require both the customer and supplier CEOs to have sufficient speaking parts during the sample period to analyze psychological traits. We obtain firm financial variables and market variables from Compustat and CRSP, respectively. This selection process results in a

³ SFAS 131 requires firms to disclose customers that account for 10% or more of revenue.

sample of 1273 Supplier-Customer-Year triads.⁴

3.2. Dependent variable

The dependent variable is the supplier's RSI. Relationship-specific investments facilitate activity between the customer and supplier and are at risk of rent extraction by the customer due to lower value outside of the relationship (Klein et al., 1978; Williamson, 1987). Following Phua et al. (2018), we use R&D expense to capture investment. R&D expense is scaled by the supplier's total assets and multiplied by percentage of sales to the major customer. We then define Hi_RSI for suppliers that have above median RSI.

3.3. Independent variables

We measured customer and supplier CEO optimism following Davis et al. (2015). We captured when managers consistently use positive over negative language when describing the performance of the firm via text analysis on CEOs' language patterns in the earnings calls (see also Rogers et al. (2011)) for capturing dispositional optimism using text analysis). Prior research concludes that individuals with a positive outlook tend to make extensive use of positive language (Madar et al., 2019; Scheier and Carver, 1985; Scheier et al., 1994; Zhang et al., 2020). For example, Gordon et al. (2016) found a correlation of 0.626 between LOT-R scores and the utilization of positive and negative words. Furthermore, Gordon et al. (2016)'s analysis underscores the enduring nature of dispositional optimism as a trait, indicating that, the presence of positive and negative words does not act as indicators of one's psychological state.

We contrast optimism with each CEOs' overconfidence. Both CEOs' overconfidence are proxied using Holder67 (Campbell et al., 2011), which posits overconfident CEOs are characterized by failing to exercise in-the-money options. A CEO is labeled as overconfident when their average moneyness surpasses the 67% threshold for consecutive years or more. Importantly, Holder67 captures the CEO's belief in their own self-efficacy, while Optimism captures general beliefs orthogonal to firm's economics.

3.4. Controls

We follow prior research and control for concurrent accounting variables as well as the CEO's observable characteristics (Fang et al., 2022; Lai et al., 2021; Phua et al., 2018). Firm controls include customer and supplier capital expenditures, cash, return on assets, sales, and sales growth. CEO characteristics measured in our dataset include age, bonuses, size, salary, and tenure. This approach is congruent with existing scholarly work (e.g., Chen et al. (2022)) and allows us to identify CEO characteristics that could impact the supplier-customer relationships.

4. Results

4.1. Descriptive statistics

Table 2 provides descriptive statistics and correlations for our final sample of 1273 observations. 21% of suppliers have High RSI. The average CEO is slightly optimistic and overconfidence is common in the sample with 63% of customers and 51% of supplier-years being identified as overconfident. Customer companies are much larger than suppliers, though not to the same scale as in related paper as requiring conference call data for optimism biases towards including larger firms. Correlations indicate that both supplier overconfidence and optimism are positively correlated with High RSI. Overconfidence and optimism are negatively correlated (-0.03), indicating that the measures capture distinct constructs.

4.2. Model results

We regress High RSI on Optimism, Overconfidence, and their interactions to investigate how they differentially impact the supplier's investment decisions. Table 3 shows the results using a Logit to test the likelihood that these two specific traits effects that suppliers CEO would engage (or not) on intensified relationship specific investments. Logit models are appropriate with dichotomous dependent variables, such as high or low investment levels (Hoetker, 2007).

We first present control models, which indicate that 45% of the variance in High RSI is explained by relevant controls and year indicators. Models 1 and 2 provide evidence that overconfident suppliers are 12.7% more likely to have High RSI. The effect of supplier optimism is not significant for the whole sample. The customer's managerial characteristics do not show significant correlation with the supplier's RSI, despite prior research demonstrating the correlation between customer overconfidence and supplier investment (Fang et al., 2022; Phua et al., 2018). The difference with prior research is likely attributable to our sample selection necessary for the current question.

Models 3 and 4 include the interaction between customer overconfidence and supplier optimism. The interaction term is negative and marginally significant, indicating that optimistic suppliers are not as likely to be high investors when their customer is

⁴ We note that we obtain fewer observations per year than similar studies (Fang et al. 2022; Phua et al. 2018). This discrepancy is due to, our analysis requiring data on the supplier's CEO to understand the interaction of psychological traits.

Table 2
Descriptive statistics.

Name	Mean	SD	M	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 HighRSI	0.21	0.41	0.00	-													
2 Customer Dispositional Optimism	0.01	0.01	0.01	0	-												
3 Supplier Dispositional Optimism	0.01	0.01	0.01	.05*	.05*	-											
4 Customer Overconfidence	0.63	0.48	1.00	-0.07**	-0.02	-0.03	-										
5 Supplier Overconfidence.	0.51	0.5	1.00	.21***	-0.07**	-0.03	-0.03	-									
6 Size Difference	2.28	2.1	2.22	0.01	-0.02	-0.09***	-0.08***	0.02	-								
7 Customer CEO Age	57.52	5.65	57.00	-0.06**	-0.16***	-0.09***	.20***	-0.01	-0.06**	-							
8 Supplier CEO Age	55.51	7.82	55.00	0.02	-0.02	.05*	.12***	-0.08***	-0.02	.05*	-						
9 Customer CEO Tenure	9.52	7.58	8.00	-0.10***	-0.05*	0	.34***	-0.04	-0.08**	.35***	-0.02	-					
10 Supplier CEO Tenure	8.86	5.93	8.00	-0.05*	0	0.02	.06**	.20***	0.04	.06**	.27***	.06**	-				
11 Customer CEO Duality	0.74	0.44	1.00	.10***	-0.12***	-0.05	0.03	.06**	.17***	.10***	-0.11***	.11***	-0.09***	-			
12 Supplier CEO Duality	0.58	0.49	1.00	-0.06**	0	0.02	-0.03	.17***	-0.02	-0.04	-0.01	-0.04	.15***	0.02	-		
13 Customer CEO Stocks Award	5710	5028	4941	0.02	-0.07**	-0.03	-0.04	.10***	.32***	0	-0.05*	-0.04	.06**	.19***	.07***	-	
14 Supplier CEO Stocks Award	2343	3279	1275	0.04	0	.05*	0.01	0	-0.38***	-0.01	-0.02	-0.01	-0.09***	-0.04	.12***	.06**	-
17 Customer CEO Salary	0.13	0.06	0.12	-0.03	.05*	-0.02	-0.09***	0.04	.32***	-0.06**	-0.13***	-0.03	-0.11***	.24***	.12***	.24***	-0.02
18 Supplier CEO Salary	0.07	0.03	0.07	-0.06**	0.02	.05*	0.04	.11***	-0.46***	0.01	.08***	-0.04	-0.17***	0.02	.16***	0.02	.52***
19 Customer CEO Bonus	0.04	0.13	0.00	-0.08***	-0.09***	0	-0.08***	.15***	.17***	-0.02	-0.11***	0.03	0.05	.09***	.10***	.08***	-0.06**
20 Supplier CEO Bonus	0.02	0.05	0.00	-0.14***	-0.07***	-0.13***	0	-0.05*	-0.02	-0.01	-0.19***	0.02	0.01	-0.02	.15***	0.02	.22***
21 Customer Firm Cash	0.12	0.11	0.09	0	.05*	.12**	.07**	-0.07**	0.02	-0.01	.15***	.10***	.10***	-0.14***	-0.05*	-0.10***	-0.05*
22 Supplier Firm Cash	0.16	0.18	0.09	.53***	0.01	0.01	-0.07**	.21***	.08***	-0.10***	-0.09***	-0.13***	0	.09***	-0.08***	-0.01	-0.05*
23 Customer Firm ROA	0.06	0.07	0.05	0.01	.14***	.07**	.13**	-0.06**	0.04	0.03	.06**	.06**	.11***	-0.12***	-0.02	-0.03	-0.04
24 Supplier Firm ROA	0.04	0.11	0.03	.15***	-0.01	0.03	-0.03	.18***	-0.12***	-0.06**	-0.10***	-0.03	0	0.03	0.04	-0.05*	0.03
25 Customer Firm Capex	0.06	0.06	0.03	-0.24***	-0.06**	-0.09***	.17**	-0.07**	0	.15***	0.02	.25***	.12***	-0.05**	-0.05*	.06**	-0.07**
26 Supplier Firm Capex	0.04	0.08	0.02	-0.04	-0.10***	-0.02	.12***	.14***	0.01	0	0.04	-0.02	-0.02	.07***	-0.01	.06**	-0.03
27 Customer Firm Sales Growth	1.05	0.17	1.04	0.04	.06**	.07**	.10***	0.04	-0.05*	0.02	.06**	.08***	0.04	-0.07**	-0.01	-0.07***	0.01
28 Supplier Firm Sales Growth	1.12	0.28	1.07	.14***	0	.09***	.06**	.08***	0.03	0	0	0.03	-0.03	0.03	-0.02	.05*	-0.01
29 Fluidity Difference	0	3.84	-0.11	-0.32***	0.02	-0.07**	-0.05*	-0.05*	.28***	.05*	-0.09***	.05*	.10***	-0.13***	0.04	0.02	-0.15***
30 Customer Leverage	0.25	0.26	0.20	-0.15***	0.02	0.04	-0.04	.09***	0.01	-0.02	-0.10***	-0.06**	-0.12***	0	-0.09***	-0.10***	-0.06**
31 Supplier Leverage	0.31	0.28	0.30	-0.26***	0.03	0.03	.07**	-0.15***	-0.20***	0.03	.05*	.06**	0.02	-0.15***	-0.07**	0.02	.09***
Mean				15	16	17	18	19	20	21	22	23	24	25	26	27	28
18 Supplier CEO Salary	0.07	0.03	0.07	.10***	-												
19 Customer CEO Bonus	0.04	0.13	0.00	.26***	0.02	-											
20 Supplier CEO Bonus	0.02	0.05	0.00	-0.04	0	0.05	-										
21 Customer Firm Cash	0.12	0.11	0.09	-0.25***	-0.07***	0	-0.03	-									
22 Supplier Firm Cash	0.16	0.18	0.09	-0.04	-0.22***	0	-0.16***	.05*	-								
23 Customer Firm ROA	0.06	0.07	0.05	-0.11***	-0.05*	-0.10***	0.02	.25***	0.01	-							
24 Supplier Firm ROA	0.04	0.11	0.03	0	0.01	.07***	-0.02	0	.24***	.09***	-						
25 Customer Firm Capex	0.06	0.06	0.03	-0.15***	-0.09***	-0.09***	.06**	-0.15***	-0.23***	.12***	-0.07**	-					
26 Supplier Firm Capex	0.04	0.08	0.02	-0.07**	-0.06**	-0.01	0	-0.07**	-0.05*	-0.05	.06**	.34***	-				
27 Customer Firm Sales Growth	1.05	0.17	1.04	-0.14***	-0.05*	-0.05*	-0.02	.09***	.06**	.31***	.14***	.08***	0.01	-			
28 Supplier Firm Sales Growth	1.12	0.28	1.07	0	-0.11***	0.01	0.03	-0.01	.11***	.09***	.22***	0.02	.27***	.28***	-		
29 Fluidity Difference	0	3.84	-0.11	.08***	-0.21***	.08***	.07**	.07***	-0.19***	-0.06**	-0.12***	.16***	-0.06**	0	-0.11***	-	
30 Customer Leverage	0.25	0.26	0.20	.17***	0.03	.08***	-0.06**	-0.04	0	-0.07**	0.04	.05*	.10***	-0.05*	-0.06**	.16***	-
31 Supplier Leverage	0.31	0.28	0.30	-0.05***	.13*	-0.10***	.09***	.07**	-0.38***	.19***	-0.10***	.14***	-0.05*	0.02	-0.05*	0.01	.40***

$N = 1273$.

Not.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

Table 3
Logistic regression predicting high suppliers specific investments.

	LOGIT High/Low Supplier's Relationship Specific Investments									
	Controls (RSE)	Controls (Clustered)	Model 1 (RSE)	Model 2 (Clustered)	Model 3 (RSE)	Model 4 (Clustered)	Model 5 (RSE)	Model 6 (Clustered)	Model 7 (RSE)	Model 8 (Clustered)
Interactions										
Supplier Dispositional Optimism X Customer Overconfidence					-5.157* (2.965)	-5.157 (3.497)			-4.957* (2.936)	-4.957 (3.402)
Supplier Dispositional Optimism X Customer Dispositional Optimism							425.531** (196.977)	425.531** (201.346)	412.699** (197.102)	412.699* (213.619)
Independent Variables										
Customer Dispositional Optimism			-0.726 (1.245)	-0.726 (1.657)	-0.762 (1.248)	-0.762 (1.657)	-5.470** (2.460)	-5.470* (2.978)	-5.361** (2.462)	-5.361* (2.992)
Supplier Dispositional Optimism			1.986 (1.464)	1.986 (3.227)	5.163** (2.445)	5.163 (3.527)	-2.676 (2.464)	-2.676 (3.584)	0.518 (3.167)	0.518 (4.027)
Customer Overconfidence			-0.037* (0.021)	-0.037 (0.035)	0.023 (0.040)	0.023 (0.059)	-0.038* (0.021)	-0.038 (0.035)	0.02 (0.040)	0.02 (0.059)
Supplier Overconfidence			0.127*** (0.021)	0.127*** (0.039)	0.125*** (0.021)	0.125*** (0.038)	0.122*** (0.021)	0.122*** (0.039)	0.119*** (0.021)	0.119*** (0.038)
Controls										
Size Difference	0.007 (0.006)	0.007 (0.012)	0.005 (0.006)	0.005 (0.011)	0.006 (0.006)	0.006 (0.011)	0.005 (0.006)	0.005 (0.011)	0.006 (0.006)	0.006 (0.011)
Customer CEO Age	0.001 (0.001)	0.001 (0.002)	0.001 (0.001)	0.001 (0.002)	0.001 (0.001)	0.001 (0.002)	0.001 (0.001)	0.001 (0.002)	0.001 (0.001)	0.001 (0.002)
Supplier CEO Age	0.003** (0.001)	0.003 (0.003)	0.004*** (0.001)	0.004 (0.003)	0.004*** (0.001)	0.004 (0.003)	0.004*** (0.001)	0.004 (0.003)	0.004*** (0.001)	0.004 (0.003)
Customer CEO Tenure	-0.0005 (0.001)	-0.0005 (0.002)	-0.0001 (0.001)	-0.0001 (0.002)	-0.00004 (0.001)	-0.00004 (0.002)	-0.00002 (0.001)	-0.00002 (0.002)	-0.00001 (0.001)	-0.00001 (0.002)
Supplier CEO Tenure	-0.001 (0.002)	-0.001 (0.003)	-0.004*** (0.002)	-0.004 (0.003)	-0.004** (0.002)	-0.004 (0.003)	-0.004** (0.002)	-0.004 (0.003)	-0.004** (0.002)	-0.004 (0.003)
Customer CEO Duality	0.02 (0.021)	0.02 (0.044)	0.023 (0.021)	0.023 (0.039)	0.025 (0.021)	0.025 (0.038)	0.023 (0.021)	0.023 (0.039)	0.024 (0.021)	0.024 (0.038)
Supplier CEO Duality	-0.025 (0.020)	-0.025 (0.049)	-0.041** (0.020)	-0.041 (0.048)	-0.040** (0.020)	-0.04 (0.049)	-0.038* (0.020)	-0.038 (0.048)	-0.037* (0.020)	-0.037 (0.049)
Customer CEO Stocks Award	0.019 (0.021)	0.019 (0.027)	0.008 (0.020)	0.008 (0.026)	0.008 (0.020)	0.008 (0.026)	0.009 (0.020)	0.009 (0.026)	0.009 (0.020)	0.009 (0.026)
Supplier CEO Stocks Award	0.089** (0.042)	0.089 (0.055)	0.103** (0.043)	0.103* (0.058)	0.102** (0.043)	0.102* (0.059)	0.100** (0.042)	0.100* (0.058)	0.100** (0.043)	0.100* (0.059)
Customer CEO Salary	0.018 (0.168)	0.018 (0.205)	0.106 (0.168)	0.106 (0.210)	0.105 (0.168)	0.105 (0.209)	0.106 (0.168)	0.106 (0.208)	0.105 (0.168)	0.105 (0.207)
Supplier CEO Salary	-0.22 (0.365)	-0.22 (0.690)	-0.703* (0.378)	-0.703 (0.684)	-0.671* (0.380)	-0.671 (0.679)	-0.662* (0.377)	-0.662 (0.688)	-0.633* (0.379)	-0.633 (0.684)
Customer CEO Bonus	-0.200** (0.084)	-0.200** (0.090)	-0.247*** (0.082)	-0.247*** (0.085)	-0.260*** (0.083)	-0.260*** (0.086)	-0.244*** (0.081)	-0.244*** (0.086)	-0.257*** (0.082)	-0.257*** (0.087)
Supplier CEO Bonus	-0.473*** (0.127)	-0.473* (0.261)	-0.406*** (0.131)	-0.406 (0.261)	-0.400*** (0.130)	-0.4 (0.261)	-0.414*** (0.130)	-0.414 (0.255)	-0.408*** (0.129)	-0.408 (0.255)
Customer Firm Cash	-0.104	-0.104	-0.075	-0.075	-0.069	-0.069	-0.055	-0.055	-0.049	-0.049

(continued on next page)

Table 3 (continued)

	LOGIT High/Low Supplier's Relationship Specific Investments									
	Controls (RSE)	Controls (Clustered)	Model 1 (RSE)	Model 2 (Clustered)	Model 3 (RSE)	Model 4 (Clustered)	Model 5 (RSE)	Model 6 (Clustered)	Model 7 (RSE)	Model 8 (Clustered)
Supplier Firm Cash	(0.092) 0.974***	(0.144) 0.974***	(0.092) 0.915***	(0.141) 0.915***	(0.092) 0.921***	(0.139) 0.921***	(0.092) 0.922***	(0.138) 0.922***	(0.092) 0.927***	(0.137) 0.927***
Customer Firm ROA	(0.077) 0.003	(0.142) 0.003	(0.077) 0.066	(0.145) 0.066	(0.077) 0.065	(0.144) 0.065	(0.077) 0.058	(0.145) 0.058	(0.077) 0.058	(0.144) 0.058
Supplier Firm ROA	(0.134) 0.032	(0.175) 0.032	(0.129) -0.021	(0.167) -0.021	(0.128) -0.016	(0.165) -0.016	(0.129) -0.017	(0.165) -0.017	(0.128) -0.013	(0.163) -0.013
Customer Firm Capex	(0.116) -0.602***	(0.176) -0.602*	(0.114) -0.487***	(0.171) -0.487*	(0.114) -0.472***	(0.171) -0.472*	(0.114) -0.489***	(0.172) -0.489*	(0.114) -0.474***	(0.172) -0.474*
Supplier Firm Capex	(0.142) -0.067	(0.309) -0.067	(0.132) -0.165	(0.284) -0.165	(0.132) -0.183	(0.282) -0.183	(0.132) -0.176	(0.284) -0.176	(0.132) -0.193*	(0.282) -0.193
Customer Firm Sales Growth	(0.121) -0.024	(0.206) -0.024	(0.116) -0.039	(0.202) -0.039	(0.116) -0.034	(0.205) -0.034	(0.116) -0.039	(0.203) -0.039	(0.116) -0.034	(0.205) -0.034
Supplier Firm Sales Growth	(0.054) 0.091**	(0.063) 0.091*	(0.055) 0.084*	(0.062) 0.084	(0.055) 0.084*	(0.062) 0.084	(0.055) 0.088**	(0.062) 0.088*	(0.055) 0.088**	(0.063) 0.088*
Fluidity Difference	(0.043) -0.020***	(0.051) -0.020***	(0.044) -0.019***	(0.052) -0.019**	(0.044) -0.020***	(0.052) -0.020***	(0.044) -0.019***	(0.052) -0.019***	(0.044) -0.020***	(0.052) -0.020***
Customer Leverage	(0.003) -0.148***	(0.005) -0.148***	(0.003) -0.190***	(0.005) -0.190***	(0.003) -0.184***	(0.005) -0.184***	(0.003) -0.191***	(0.005) -0.191***	(0.003) -0.186***	(0.005) -0.186***
Supplier Leverage	(0.035) -0.027	(0.059) -0.027	(0.035) -0.001	(0.060) -0.001	(0.035) -0.001	(0.060) -0.001	(0.035) -0.002	(0.060) -0.002	(0.035) -0.002	(0.060) -0.002
Constant	(0.041) -0.118	(0.073) -0.118	(0.040) -0.156	(0.071) -0.156	(0.040) -0.191	(0.071) -0.191	(0.040) -0.122	(0.071) -0.122	(0.040) -0.156	(0.071) -0.156
Observations	(0.124) 1273	(0.223) 1273	(0.123) 1273	(0.208) 1273	(0.125) 1273	(0.211) 1273	(0.124) 1273	(0.211) 1273	(0.126) 1273	(0.215) 1273
Log Likelihood	-362.969	-362.969	-341.348	-341.348	-339.285	-339.285	-339.285	-339.285	-337.787	-337.787
Akaike Inf. Crit.	791.939	791.939	756.695	756.695	755.458	755.458	754.57	754.57	753.574	753.574
P-pseudo R2	0.449	0.449	0.482	0.482	0.484	0.484	0.485	0.485	0.487	0.487

This table reports Logit estimations with Hi_RSI as the dependent variable. We first present the Controls, first using robust standard errors and later adding the clustering errors at the supplier and customer firm level. Models 1, 3, 5, and 7 report robust standard errors, Models 2, 4, 6, and 8 report errors clustered at the supplier and customer firm level. All columns include year indicators to control for macro-economic variation. Models 3 and 4 partially support H1. Models 5 and 6 provide strong support to H2. Model 7 and 8 include all variables, which provide partial support to H1 but strong to H2. As a whole our models support our main thesis that both traits differ when accounting by the other parties' optimism and overconfidence. Significance is reported using.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

overconfident. Additionally, the main effect of customer overconfidence is positive when using robust standard errors. The interaction coefficient being nearly opposite of the main effect (-5.157 vs. 5.163) indicates that any positive effect of a supplier's optimism is fully attenuated by the customer's overconfidence. Overall, this result is consistent with H1.

Models 5 and 6 interact customer optimism with supplier optimism. Consistent with H2, when both the customer and supplier are optimistic, the supplier is more likely to be have High RSI. Models 7 and 8 present results with both interactions included. The inclusion of both interactions does not change conclusions. Overall, Table 3 provides support for both H1 and H2, indicating that supplier CEOs are aware of their counterpart's personality traits and how they may affect future operations. Optimistic suppliers believe that optimistic customers will work with them in the future to provide positive results. However, overconfident customers are more likely to focus on their own abilities and less likely to work through problems to find mutually beneficial solutions. Further, our robustness test (see appendix) provides support to claim that optimist suppliers punish customers that are low in optimism.

Our results show optimism is particularly important when it is extreme. To facilitate interpretation, we use an approach that is consistent with work on logit models by analyzing each level separately to test for moderation (Lee et al., 2016) by complementing the plots with Johnson-Neyman intervals.

Fig. 1 plots the effect of supplier optimism on High RSI for when a customer is not overconfident and shows the positive relation demonstrated in the multivariate results. Fig. 2 plots the relation between Supplier Optimism and High RSI for different values of Customer Optimism. When customers are one standard deviation of optimism above the mean, the relation between Supplier Optimism and High RSI is strongly significant.

5. Conclusion

This paper builds on research that investigates managerial personality traits. We draw attention to the difference between optimism and overconfidence, as they are often conflated in the literature. We define several key distinctions between the two and use supply-chain interactions as a setting in which we have different expectations and conclusions.

A supplier's Overconfidence positively correlates to the high relationship-specific investments. The supplier's optimism only correlates with RSI when a customer is not overconfident and a customer's optimism strengthens the relationship. An optimistic supplier is willing to invest in a relationship with an optimistic customer, but customer overconfidence is a deterrent.

Prior literature usually focuses on the customer side (one-sided) when accounting for overconfidence, without addressing the bilateral nature of a supplier-customer relationship (e.g., Phua et al., 2018). When the optimism of the supplier is added, we found that customers that are not overconfident CEOs are rewarded if the supplier's firm is led by an optimistic CEO. Further research is need it to clarify contexts where there is a dichotomy with extant (one-sided) literature suggesting that overconfidence outweigh the possible social costs (e.g., Kennedy et al., 2011; Phua et al., 2018). While we acknowledge that our study is limited by the fact that firms that tend to focus on highly RSI may tend to hire managers that possess specific characteristics. We expect that this is only one setting in

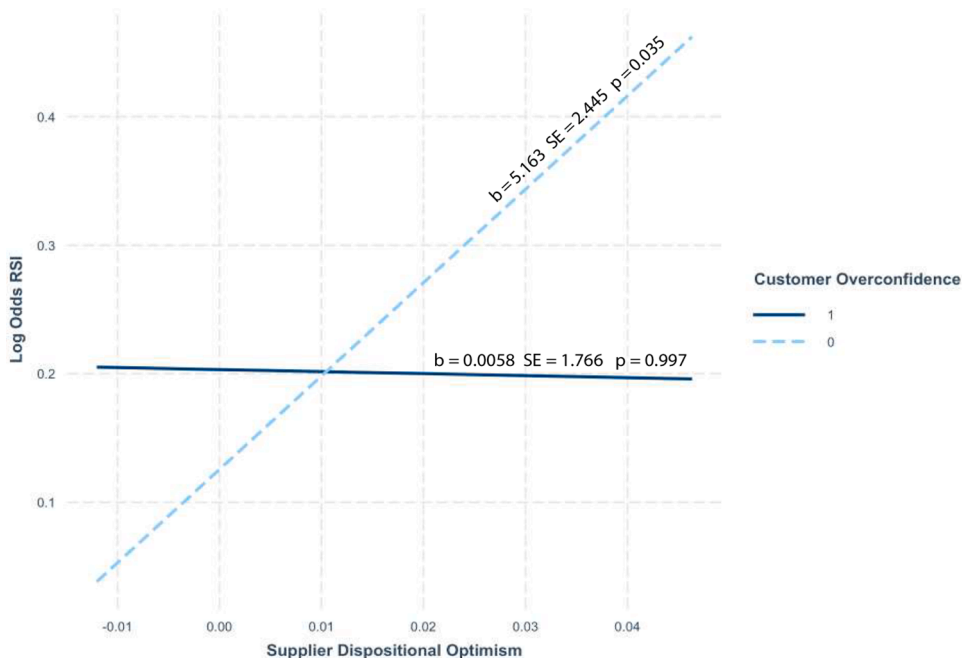


Fig. 1. Interaction between supplier's optimism and customer's overconfidence.

In Fig. 1, the interval analysis provides strong support to our hypothesis 1; the notion that optimistic CEO are more likely to engage in high levels of RSI when the customer CEO is not overconfident (Interval-Slope 5.163, SE = 1.766, $p = 0.035$). Similarly

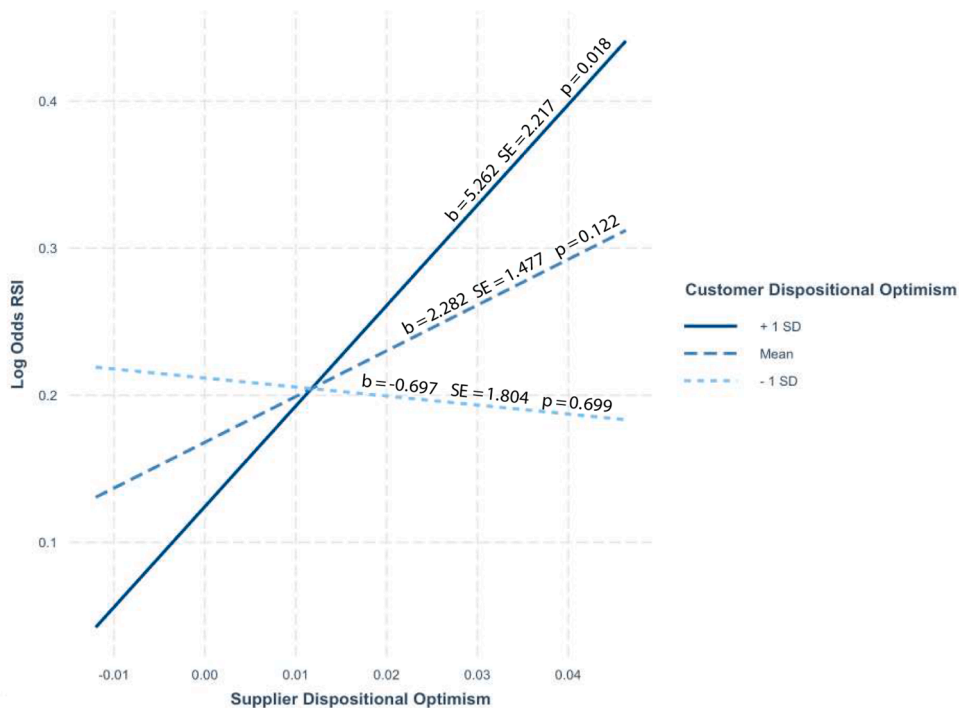


Fig. 2. Interaction between supplier's optimism and customer's optimism.

In Fig. 2 provides strong support to hypothesis 2 stating that optimist suppliers reward optimistic customers by increasing their likelihood of engaging in high levels of RSI (Interval-Slope = 5.262, SE = 2.217, $p = 0.018$).

which the interaction matters enlighten others to pursue clarification.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Authors have no interest to declare.

Data availability

The authors do not have permission to share data.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.frl.2023.104785](https://doi.org/10.1016/j.frl.2023.104785).

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