

Master Thesis

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Optimism or Caution: The Influence of Managerial Beliefs on Leisure Innovation

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Abstract

The goal of this research was to study the relationship between performance feedback relative to aspirations, innovation propensity and the possible moderating effect of beliefs about the effectiveness of innovation. The relevance of the study lies in the application of a leisure organizations context. 210 annual reports from 105 leisure firms in 2022 and 2023 were manually coded and scores were divided by the length of the originating documents for comparability. The sample consisted of theme parks, zoos, casinos, cinemas, bowling and music venues, sports leisure, arcades and museums. Scores were analysed via multiple regression analysis. Results supported existing theory, indicating that performance feedback relative to aspirations positively influences innovation propensity, including when performance aspirations are met or exceeded. Contrarily to the hypothesis, the moderator beliefs about the effectiveness of innovation causes higher innovation propensity when performance feedback relative to aspirations is low and beliefs high. When beliefs are low, the same situation results in lower innovation propensity. This indicates that the inclusion of this industry specific context does not lead to strongly different results compared to existing theory. The study adds depth to existing research on managerial decision-making and beliefs. Practical implications include understanding organizational decision-making processes in leisure.

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1. Introduction

The leisure industry is growing, marked by rising visitor numbers and increasing competition (Centraal Bureau voor de Statistiek, 2022). From 1998 to 2018, the amount of theme parks in The Netherlands alone has more than doubled (Centraal Bureau voor de Statistiek, 2022). The rise in competition increasingly requires leisure organizations to reconsider their strategies and respond accordingly to performance feedback, performance relative to aspirations (Cyert & March, 1963). While some smaller scale organizations maintain a relatively conservative approach, others realize that the need to innovate has become more prevalent. Innovative leisure providers have proven to be popular in attracting visitors (Wei et al., 2018). Similarly to this, firms have successfully developed innovative strategies to recover from the COVID-19 pandemic (Wu & He, 2022). This shows that even though the industry is changing, leisure organizations are willing and trying to adapt. Furthermore, it raises the question of how Leisure firm performance feedback relative to aspirations and innovation is related.

1.1 Practical relevance

Leisure managers encounter unique challenges, including seasonal demand, high investment costs as well as fluctuating staff and maintenance requirements (Leask, 2016). When margins are not sufficient, these firms may fail to invest in expansions or renewal, resulting in organizational decline. If poor managerial decisions are made, performance can fall short. A well-known example from The Netherlands is the case of ‘Land van Ooit’ (Van Esch, 2021). Here, mismanagement and insufficient innovativeness ended in the bankruptcy of two theme parks. To counter these difficulties, some theme park organizations have moved towards franchising and holding companies. A recent example in the Netherlands would be the takeover of theme park ‘Drouwenerzand’ by management of theme park ‘De Waarbeek’ (Loopings, 2024). Here, several theme parks are united under one organization to raise more capital and redistribute costs. This paper proposes another way of dealing with the difficulties of the industry: optimizing innovative organizational responses to performance feedback relative to aspirations, taking into consideration the context of the industry.

The relevance of this topic lies in the business case of Leisure organizations. There have been plenty of examples of firms innovating their business model, but with mixed results (Kaak, 2018). On the one hand, managers are pushed to come up with new ideas to entertain guests (Wei et al., 2018). While on the other hand, these are big investments. When these actions fall

short in terms of performance, these firms may struggle financially. Therefore, without considering the relationship between performance feedback relative to aspirations and innovative responses, undesirable managerial decisions may be made. Innovation, or innovation propensity, as it is articulated for this study, is defined as the inclination to perform innovative activities with a strategic goal (Greve, 2003; Kuusela et al., 2016; Saraf et al., 2021). Here, innovative activities may be further defined as an idea, custom or physical object, that is perceived as new by its adopters (Rogers, 1995). This study does not necessarily expand into types of innovation. Instead, to capture innovative activities and future plans as a whole, this study examines the propensity for organizations to innovate. The relationship between performance feedback relative to aspirations and organizational responses, such as innovation, is affected by managerial beliefs (Cao et al., 2023; Keil et al., 2022; Kuusela et al., 2016; Mone et al., 1998). Beliefs about the effectiveness of innovation can be defined as cognitive attitudes about innovativeness as a suitable response to performance feedback relative to aspirations (Cao et al., 2023; Mone et al., 1998; Saraf et al., 2021). Performance feedback is defined as organizational performance, relative to aspirations, used to guide organizational behaviour (Cyert & March, 1963, pp. 120-123). The practical relevance of this study lies in reducing uncertainty over outcomes. It does this by shining a light on the implications beliefs about the effectiveness of innovation have on the relationship between performance feedback relative to aspirations and innovation propensity.

1.2 Theoretical relevance

Despite the industry's growth, scholarly attention towards these organizations remains limited (Cornelis, 2010). However, there is extensive research on the topic of performance feedback relative to aspirations and an organizational response like innovativeness. An example of a topic where such research is applied, is organizational decline. According to research, underperforming organizations tend to either go into a conservative defensive state or a state of increased innovativeness (Mone et al., 1998). This research states that increased innovation takes place in smaller organizational sizes, dynamic organizational contexts and when firm leadership has positive beliefs about the effectiveness of its actions (Mone et al., 1998). These managerial beliefs are defined as the cognitive attitudes about the effectiveness of organizational action (Cao et al., 2023). Because beliefs influence the direction of managerial action (Greve, 2003), they may also indirectly influence the performance of the firm via deviating from current strategies (Greve, 2010). However, for organizations to be susceptible to adjusting or defending its strategy when underperforming, it has to be responsive (Joseph &

Gaba, 2014). For this, performance feedback relative to aspirations is generally required to be consistent and not ambiguous (Joseph & Gaba, 2014). To avoid these unclear signals, organizations can ground beliefs in evidence (Cao et al., 2023). Beliefs that are supported by data, enable decision makers to be significantly more effective (Cao et al., 2023). The reason for this is that a belief based on a proven strategy, reduces uncertainty and allows for a smoother and more thorough implementation (Cao et al., 2023). An example is the ability to steer organizational strategy in the right direction when underperforming (Cao et al., 2023; Mone et al., 1998). In this sense, beliefs about the effectiveness of innovation guide managers when faced with difficult decisions (Keil et al., 2022). And while organizations may search for a solution that meets aspiration levels, beliefs may still motivate organizational members to strive for better (Keil et al., 2022). This study will attempt to frame itself in this literature as a further specification of the effect of beliefs on the relationship between performance feedback relative to aspirations and organizational innovation.

The gap in current literature mostly focuses on the context of leisure firms. Research has established that managerial beliefs affect organizational actions (Cao et al., 2023; Greve, 2003; Keil et al., 2022; Mone et al., 1998). More specifically, beliefs affect the cognitive element of decision-making when it comes to innovation (Mone et al., 1998). While performance feedback relative to aspirations drives managerial decision-making, decision outcomes seem to differ based on managerial beliefs (Keil et al., 2022; Mone et al., 1998). Details of this relationship are less established. Literature points towards a range of contextual factors, that together with beliefs, influence the direction of innovative actions (Keil et al., 2022; Mone et al., 1999). This is where theory can start to conflict. For example, where Joseph & Gaba (2014) argue that ambiguous performance feedback relative to aspirations creates reluctance to innovate, Keil et al. (2022) argue that fast-changing environments strengthen innovation propensity. A possible explanation for such differences can be found in research by Greve (2003) and Kuusela et al. (2016). These studies find that their results may not be applicable in industries with higher customer interaction as well as shorter innovation cycles (Greve, 2003; Keil et al., 2022; Kuusela et al., 2016). Furthermore, similar studies disclose that their findings apply to slow-moving, stable, often manufacturing, environments (Cao et al., 2023; Greve, 2003). The industry of leisure organizations is characterised by a relatively dynamic and fast changing competitive market, highly experiential customer interactions and seasonality (Centraal bureau voor de statistiek, 2022; Kaak, 2018; Leask, 2016). In other words, while current literature is applicable to more stable, production related contexts, the leisure

industry provides a more dynamic and service-oriented context. Findings already indicate that these differences may influence either interpretation of performance feedback relative to aspirations or beliefs about the effectiveness of innovation (Keil et al., 2022; Mone et al., 1998). This is where this study hopes to add useful insights by focusing on leisure organizations. It also intends to shed light on the effect these previously mentioned contextual differences have. Theoretical implications also include generating knowledge about the management of the dynamic competitive landscape of such firms. On top of that, this study attempts to support the development of good practices in belief-based decision-making by organizational leaders when responding to their environment. Therefore, this research is indirectly addressing the business case of strategic thinking in the leisure sector.

1.3 Research question

The objective of this study is to guide managers of leisure organizations faced with innovation issues. Another objective is to generate knowledge about how leisure organizations innovate based on performance feedback relative to aspirations and what the role of beliefs are in this relationship. Managers currently face difficulty in responding to performance feedback relative to aspirations. Innovations typically require significant investments containing a factor of risk (Kaak, 2018). The cognitive beliefs about the effectiveness of innovation as a response to performance feedback relative to aspirations can improve the quality of organizational innovativeness, in a general context (Cao et al., 2023; Keil et al., 2022; Kuusela et al., 2016). These beliefs have, however, not been tested in the context of the leisure industry. Adding to this, recent literature stresses the need for research on the influence of contextual factors, such as industry context, on the relationship between performance feedback relative to aspirations and innovativeness (Keil et al., 2022; Kotiloglu et al., 2019; Maslach, 2014; Nason et al., 2017). The goal of incorporating industry context is to enhance predictive accuracy as well as managerial contributions (Kotiloglu et al. 2019). To reach the objectives set above, the practical need and theoretical gap lead to the following research question:

“How does performance feedback relative to aspirations influence innovation propensity and how is this relationship moderated by managerial beliefs about the effectiveness of innovation in the context of leisure organizations?”

1.4 Contributions

This research forms an application of existing concepts and implements these in a relatively underexplored context. This application of an emergent field of research on beliefs and their influence on the relationship between performance feedback relative to aspirations and innovation propensity of organizations is unique in that it is conducted in the industry of leisure organizations. This expands theoretical and practical knowledge of these concepts and mechanics to a broader context. Comparisons can be drawn with other industries. At the same time, the leisure industry may be able to build upon this research in other research directions. Therefore, the main contribution of this research is the context in which it is placed.

This paper opened with an introduction including practical and theoretical relevancies, the research objective and question. It continues with a theoretical framework, consisting of current perspectives. After that, a conceptual model is developed, together with hypotheses. Finally, the methodology is discussed, containing operationalisation and analytical approaches. Then, results are discussed, and a conclusion follows. The paper ends with a discussion, including research limitations and propositions.

2. Theoretical framework

This chapter delves into current academic knowledge about organizational responses, performance feedback relative to aspirations and managerial beliefs, all specifically directed towards innovation. First, organizational responses are discussed. Then, performance feedback relative to aspirations and beliefs about the effectiveness of innovation follow. After definitions, current perspectives and knowledge gaps are identified, a conceptual model is constructed to answer the research question of this study, which then leads to hypothesis development.

2.1 Theoretical background

2.1.1 Innovation propensity

Organizational responses form a key concept in the strategic management of an organization (Greve, 2010). Responses do not only determine the future of an organization, they also reflect and affect the ability and careers of managers respectively (Greve, 2010). This explains why strategists are reluctant to respond when performance feedback relative to aspirations is ambiguous (Joseph & Gaba, 2014). The reason for this seems to be the uncertainty associated with deviating from established strategies (Greve, 2010). Specifically, this uncertainty affects innovation propensity (Saraf et al., 2021). Findings show that unclear performance feedback relative to aspirations dampens the propensity for organizations to innovate (Saraf et al., 2021). An explanation for this lies in the decision-making process (Jung et al., 2024). Risks associated with strategic change are balanced against current business performance, where risk-averseness generally prevails, being a common managerial trait (Jung et al., 2024).

Innovation propensity as an organizational response is directional (Kuusela et al., 2016; Maslach, 2014; Mone et al., 1998; Saraf et al., 2024). Organizational innovativeness can be categorised as either resource-consuming actions or resource-freeing actions (Kuusela et al., 2016). The former encapsulating large, more disruptive innovations and the latter containing smaller, incremental or efficiency-oriented innovations (Kuusela et al., 2016). Similarly, organizations can either support or resist innovative action (Maslach, 2014). Findings show that the direction of these outcomes are mostly based on performance feedback meeting aspirations, which drives the propensity to innovate in a positive manner (Keil et al., 2022; Mone et al., 1998). Other drivers include contextual factors such as industry dynamism, competitiveness, size and product/service orientation (Eggers & Suh, 2018; Keil et al., 2022; Kuusela et al., 2016; Mone et al., 1998). Findings generally show that smaller, more dynamic firms, operating in

highly competitive markets, exhibit a greater propensity to innovate (Eggers & Suh, 2018; Keil et al., 2022; Kuusela et al., 2016; Mone et al., 1998). Findings from these same studies show that, when combined, these drivers may deliver differing results. To control for this factor, research suggests testing innovation propensity in specific industries (Keil et al., 2022; Kuusela et al., 2016; Saraf et al., 2024). This study will be controlling for this by focusses on the industry of leisure organizations.

2.1.2 Performance feedback relative to aspirations

Performance feedback reflects firm results relative to aspirations, guiding strategic action such as innovative search (Cyert & March, 1963; Keil et al., 2022; Yu et al., 2018). Performance feedback relative to aspirations can be classified as either consistent or inconsistent and ambiguous (Joseph & Gaba, 2014). Consistent performance feedback relative to aspirations can be interpreted, while ambiguous feedback is challenging to interpret (Joseph & Gaba, 2014). When it comes to interpretable feedback, managers identify this performance feedback relative to aspirations in terms of failures or successes (Maslach, 2014). Conversely, when performance feedback relative to aspirations is hard to interpret, as is the case when ambiguous, decision makers tend to show reluctance in attempting to process such feedback (Joseph & Gaba, 2014). Findings show that this results in a bias towards sticking to established strategies and only innovating incrementally when uncertainty is high (Eggers & Suh, 2018; Maslach, 2014). When uncertainty is low, due to consistent performance feedback relative to aspirations, organizations become more willing to innovate disruptively (Eggers & Suh, 2018; Maslach, 2014). In other words, the clarity of performance feedback relative to aspirations influences the level of innovativeness an organization is willing to exhibit.

Besides feedback consistency, performance can also be differentiated based on direction (Greve, 2003). Findings in slow-moving, stable environments reflect the concepts of problemistic search and slack search (Chen, 2008; Greve, 2003). These means high innovation during performance shortfalls and low innovation during positive performance feedback relative to aspirations respectively (Greve, 2003). This is explained by the absence of a need to innovate when performance is already at aspiration levels. Contradictory to this, more recent findings in more general contexts show a stronger propensity to innovate when performance feedback is close to or above aspirations (Keil et al., 2022; Kuusela et al., 2016; Saraf et al., 2024). These findings show that, even though organizational aspirations are already met, organizations will continue to innovate (Keil et al., 2022; Kuusela et al., 2016; Saraf et al., 2024). A possible explanation proposed is the influence of contextual factors such as increased

competitiveness and dynamism (Saraf et al., 2024). This study proposes that these contextual factors can be tested in the context of leisure organizations, as they are embodied in this industry.

2.1.3 Beliefs about the effectiveness of innovation

There have been several theoretical frameworks explaining managerial beliefs in management literature. An example would be the original behavioural theory of the firm (Cyert & March, 1963). Here, two models are proposed: the aspiration-based model and the belief-based model. In both cases, either aspirations or beliefs influence organizational actions, such as innovation (Cyert & March, 1963). In the years since, science has progressed and researchers have argued that this may be too simplistic (Keil et al., 2022). That is why some authors have developed integrative approaches (Cao et al., 2023; Keil et al., 2022). Cao et al. (2023) propose that beliefs about response effectiveness, like innovativeness, should be considered (Cao et al., 2023). On top of that, Cao et al. (2023) propose that there are contextual factors influencing these beliefs. Factors like the competitive environment, industry dynamism and, specifically, industry context. As an overall differentiator, these could result in different influences on beliefs and of beliefs on organizational responses, like innovativeness (Cao et al., 2023)

Beliefs about the effectiveness of innovation can be defined as cognitive attitudes about the effectiveness of innovativeness as a response to performance feedback relative to aspirations (Cao et al., 2023; Mone et al., 1998; Saraf et al., 2021). Beliefs can change based on different perceptions (Maslach, 2014). Findings show that managers characterised by overconfidence will often have more optimistic beliefs about firm performance, while non-overconfident managers will often perceive performance more negatively (Maslach, 2014; Schumacher et al., 2020). Implications of this are that overconfidence causes managers to more easily ignore information, as this attitude sees no need to act (Schumacher et al., 2020). It is therefore important that decision makers are aware of their cognitive dispositions possibly affecting their information processing ability (Schumacher et al., 2020).

Another finding concerning managerial beliefs, is the influence of time (Nadkarni & Barr, 2018; Yu et al., 2018). Research has shown that industry velocity impacts cognitive interpretation. Namely, that beliefs tend to be stronger in high velocity industries (Nadkarni & Barr, 2018). Another time-related influence is the amount of time a firm has been in a certain state of performance. Beliefs about the importance of innovativeness will get stronger as more time is spent in an undesired situation (Yu et al., 2018). The propensity to innovate will grow

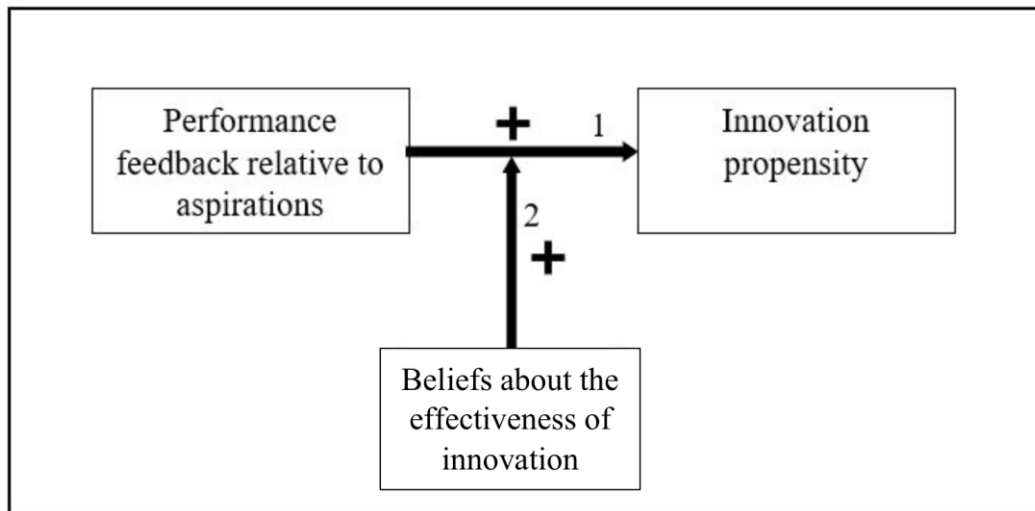
as a result of managerial beliefs of growing urgency (Yu et al., 2018). Similarly, findings of Cao et al. (2023) show a stronger belief in the effectiveness of innovation when competitive intensity is high. Such a relationship can also be attributed to a sense of urgency, to not lag behind competition (Cao et al., 2023).

Cao et al. (2023) lays out a theoretical framework that incorporates beliefs into the relationship between performance feedback relative to aspirations and organizational responses. On top of this, the influence of industry context is emphasized (Cao et al., 2023). This provides a theoretical basis for this study, as it takes a similar approach to the work of Cao et al. (2023). While Cao et al. (2023) examine response types such as R&D and corporate CSR, this study focuses on innovation propensity, which is based on similar theoretical grounds. innovativeness shares similarities with R&D and, to some extent, CSR (Cao et al., 2023). Because of Cao et al.'s (2023) contributions to the concept of managerial beliefs, this study uses their model as a basis and adapts it by incorporating innovation propensity. A similar research approach is used and a main suggestion for future research is addressed: testing the influence of industry context on beliefs influencing the relationship between performance feedback relative to aspirations and, in this study, innovation propensity.

2.2 Conceptual model and hypothesis development

The conceptual model consists of the independent variable performance feedback relative to aspirations. This variable directly influences the dependent variable innovation propensity. This relationship is positively moderated by beliefs about the effectiveness of innovation. The model by Cao et al. (2023) has been used as a basis, keeping to the same relationships, only adapting two of the variables into one. To reduce complexity and increase measurability, Cao et al.'s (2023) R&D and CSR have been housed under the more general term of innovation. This being an overarching category already identified in the literature as being intertwined with R&D and CSR (Cao et al., 2023). A graphical representation of the conceptual model can be seen below in figure 1.

Figure 1: Conceptual model



Direct effect of performance feedback relative to aspirations

In general, when performance feedback is below aspirations, firms will increase their efforts to reach aspirations (Chen, 2008). Greve (2003) narrows this down by indicating that when firm performance is close to reaching aspiration levels, it is likely that organizations will allocate more resources to innovation in order to reach aspirations. In contrast, when performance feedback is further away from aspirations, organizations will likely reduce innovative expenditures (Greve, 2003). This is in line with findings showing that large-scale novel innovation activities are often abandoned when they first fail (Eggers & Suh, 2018; Maslach, 2014). Showing that innovation is less attractive when performance feedback is far below aspirations. On the other hand, smaller-scale incremental innovation activities are still supported even after they fail at first (Eggers & Suh, 2018; Maslach, 2014). This can be explained by reduced risk compared to large innovations, as well as overconfidence when it comes to small performance gains since the gap between performance and aspirations is inherently smaller for incremental innovations (Eggers & Suh, 2018; Greve, 2003; Maslach, 2018). In other words, when performance feedback is closer to aspirations, there is a higher propensity for innovation. It must be noted that these studies are set in slower-moving environments, while the leisure industry is set in a different contextual environment, exhibiting a greater character of dynamism and customer-interaction (Centraal bureau voor de statistiek, 2022; Kaak, 2018; Leask, 2016). Kotiloglu et al. (2019) examine a more dynamic and service-oriented context which also shows an increase in innovativeness when performance feedback is close to aspirations, supporting the previous claims (Chen, 2008; Eggers & Suh, 2018; Greve, 2003; Maslach, 2018) in more dynamic environments. Moreover, they indicate that here,

performance feedback relative to aspirations also strengthens innovativeness when aspirations are already met or are exceeded. In conclusion, it indicates that performance feedback relative to aspirations can also influence innovation propensity within more dynamic and service-oriented environments such as in the case of leisure firms. This leads to the following hypothesis:

Hypothesis 1: *When performance feedback relative to aspirations is closer to or beyond aspirations, there is a positive effect on innovation propensity.*

Moderation effect of beliefs about the effectiveness of innovation

Research has indicated that beliefs influence the direction of organizational responses (Cao et al., 2023; Greve, 2003; Keil et al., 2022; Mone et al., 1998). More specifically, studies by Keil et al. (2022), Mount & Bear (2021) and Yu et al. (2018) indicate that beliefs can guide innovativeness given performance feedback relative to aspirations. As explained for H1, performance feedback relative to aspirations can increase innovation propensity. Beliefs about the effectiveness of innovation can strengthen this relationship since positive beliefs about the effectiveness of innovation increase the likeliness that innovation is initiated as an answer to performance feedback relative to aspirations (Mone et al., 1998; Saraf et al., 2021). Additionally, when little changes in performance have appeared over time, there is an increasing urgency to reach the performance aspirations. This can change beliefs about the effectiveness of innovation in a positive way, where these beliefs cause higher innovation propensity even though performance feedback relative to aspirations is unchanged (Yu et al., 2018). This consequently strengthens the relationship between performance feedback relative to aspirations and innovation propensity. It shows that different beliefs about the effectiveness of innovation influence the strength of the relationship between performance feedback relative to aspirations and innovation propensity. Such results can be found in stable and slow-moving industries (Keil et al., 2022) as well as in more dynamic and customer-oriented environments like the leisure industry (Mount & Baer, 2021; Saraf et al., 2021). While not all characteristics of the leisure industry may be represented, the existing research in more dynamic and customer-oriented contexts does pose a convincing plausibility that beliefs can have a moderating effect on the direct relationship between performance feedback relative to aspirations and innovation propensity in the leisure industry as well. Therefore, the second hypothesis follows as:

Hypothesis 2: *Managerial beliefs about the effectiveness of innovation strengthen the positive relationship between performance feedback relative to aspirations and innovation propensity.*

3. Methods

3.1 Research setting

Using content analysis, this study examined organizational annual reports from leisure firms worldwide, prioritizing publicly traded firms for data availability. The leisure industry was a new context for applying this research topic. Therefore, sampling should be relatively general. This implies that the setting was of an international scope. Predominantly publicly traded firms were examined, due to the availability of data. However, some industry leading firms publicize annual reports, even though they are not publicly traded and therefore not obliged to do so. Due to their industry leading role, some firms that do supply such data, were included. Firm size was considered as a control variable. As long as sufficient financial data, as well as relevant forward-looking and backward-looking statements were available in the form of annual reports, leisure companies were considered part of the research setting.

Population identification was conducted via industry codes. Three types of industry codes and twenty specific standard industry classification codes were used, covering at least North American and European organizations, but many other international organizations were also covered. The three types of industry codes are the NACE system (Eurostat, 2008), which is European, the SIC system (United States Securities and Exchange Commission, n.d.), which is North American and finally, the NAICS system (Executive Office of the President of the United States, 2022), which is also North American. These codes and their official descriptions are listed in table 1. The codes all largely cover similar sectors within the leisure industry, such as theme parks, zoos, casinos, museums, sports leisure and cinemas. These sectors reportedly share similar characteristics such as high level of customer interaction, seasonality and dynamism. Organizations classified under at least one of the previously mentioned industry codes were included in the research population. The final population largely overlaps, meaning that using three industry code types may be considered redundant.

Orbis was used to identify the initial population of organizations within these classifications. To exclude irrelevant organizations such as manufacturers and trivially small organizations, filters were used. These filters also made sure that sampled companies were currently operating and had a visitable location. The complete list of filters is displayed in table 2. This approach yielded a result of 12,207 firms, of which 1,366 were publicly listed.

Table 1: Industry codes with description

Industry code	Official description
NACE 93.21	Activities of amusement parks and theme parks
NACE 92.00	Gambling and betting activities
NACE 91.04	Botanical and zoological gardens and nature reserves activities
NACE 91.02	Museums activities
NACE 93.29	Other amusement and recreation activities
NACE 59.14	Motion picture projection activities
SIC 7996	Amusement parks
SIC 7999	Amusement and recreation services, not elsewhere classified
SIC 8422	Botanical and zoological gardens
SIC 8412	Museums and art galleries
SIC 7933	Bowling centers
SIC 7832	Motion picture theaters, except drive-in
NAICS 713110	Amusement and theme parks
NAICS 721120	Casino hotels
NAICS 713210	Casinos (except casino hotels)
NAICS 712130	Zoos and botanical gardens
NAICS 712110	Museums
NAICS 713950	Bowling Centers
NAICS 713120	Amusement arcades
NAICS 512131	Motion picture theaters (except drive-ins)

Table 2: Population and sample identification filters

Filter	Reasoning
Matches one of specified industry codes.	Ensuring population consists of leisure organizations.
Company should be publicly owned, unless an adequate annual report can be provided. Adequate meaning: includes year review, future prospects and financial information.	Ensures availability of adequate data.
Organizations should employ at least 50 employees and have a yearly operating revenue of at least 1 million euro.	Ensuring trivially small organizations, are excluded.
Organizations should be in operation	Ensuring inclusion of only active companies.
Organizations should provide reports from 2022 and 2023.	Ensure regency and comparability of data.
Organizations should have a physical address	Ensure all members of the population are linked to a visitable leisure establishment.

Of the population identified, a sample was formulated of 105 leisure organizations. The procedure of narrowing down to 105 organizations consisted of a manual selection based on representativeness. A large portion of the identified population was made up of varying levels of irrelevant noise. This mainly took the form of firms that had a component of leisure but largely conducted other activities. To filter for this, the most representative, well-known and established leisure firms were selected first. Another manually applied filter consisted of sifting through available data to eliminate brief reports that may not be adequately comparable to the other reports. This was mostly an issue with privately owned firms. The final number of 105 was reached after the most representative companies in the leisure industry were included and 105 was selected as an adequate sample size to not exceed due to limited resources, such as time and increasingly scarce data availability in less representative members of the research population.

Since this study employed content analysis and regression analysis, guides for these methods should be followed. Content analyses does not offer a sample size indication, except that it should be a balance between time required to analyze and explanatory power (Columbia

University Mailman School of Public Health, 2023). Linear multivariate regression analysis offers more guidance here. To ensure enough explanatory power for complex models, a minimum of 10, but preferably 30 observations per predictor variable is appropriate (Van Voorhis & Morgan, 2007). For simpler models, a general rule of thumb is a sample of 50 observations (Van Voorhis & Morgan, 2007). This study employed 6 predictor and control variables, meaning that a sample of 60 was the minimum sample size for this scenario. A final sample size of 105 firms was chosen, resulting in 17.5 organizations per predictor variable, which is above the minimum criteria of 10. For each of these 105 firms, 2 annual reports were analysed. One from 2022 and another from 2023, resulting in 210 analysed documents. The 2022 document was utilised to gather codes for performance feedback relative to aspirations and beliefs about the effectiveness of innovation. The 2023 document was used to gather innovation propensity codes. This way, a causal connection between performance feedback relative to aspirations and innovation propensity over time can be observed.

3.2 Data collection

This research bases its findings on content analysis. Data was collected from publicly available annual reports. Some differences can be observed between these reports as some focus more on sustainability, while others were mostly focused on financial information. At the same time, some did not offer much in terms of managerial statements, while others mainly consisted of these. To control for this, the number of pages, excluding appendices, of each report was used to standardize the number of codes found. The years 2022 and 2023 were chosen, as virtually all organizations have published these reports already, unlike 2024 reports which were not always available. A limitation associated with this choice was the relative proximity to the COVID-19 pandemic of the year 2022, which may influence findings.

Innovation propensity was analyzed via textual analysis. Here, expansion plans as well as growth and improvement ambitions were extracted and analyzed. The variables performance feedback relative to aspirations and beliefs about the effectiveness of innovation were measured in a similar way. Documents were analyzed for remarks about managerial beliefs. The cognitive element of this variable made data collection and interpretation difficult. Therefore, an established technique was consulted for this specific purpose. In line with current literature, beliefs and cognitive attitudes can be extracted from textual fragments (Eklund & Mannor, 2020; Zhong et al., 2020). Managerial language was analyzed via a dictionary-based approach where phrasings and words are categorized into groups representing certain variables and

loadings on those variables. On top of this, the frequency of certain statements can be used to measure the relative importance of this expression to the company in question (Eklund & Mannor, 2020; Zhong et al., 2020).

In the results section, the collected documents are analyzed quantitatively. The frequency of expressions addresses the relative importance of this expression to the company in question. These are then interpreted, and further causal relationships are then discussed in relation to theory. This way, the influence of managerial beliefs on innovation effectiveness and the moderating effect on these beliefs can be examined more in depth.

3.3 Measures

In line with recent literature, measures consist of looking for words and sentences that signify a certain state of performance, an intention to innovate or a belief about innovation (Cao et al., 2023). Coding is based on a frequency basis. For example, whenever a keyword is found to reflect positive performance feedback relative to aspirations, the score for that variable is increased by one. Whenever the same happens with negative performance feedback, one is subtracted from that score. No distinction is made between close to or far away from aspirations, only positive (at or above aspirations, +1) and negative (below aspirations, -1). The final number is what represents the level of performance feedback relative to aspirations. Innovation propensity is measured via a similar approach where positive codes represent plans to perform innovative activities, and negative codes represent a reluctance to innovate or to scale back innovation.

A method to find managerial beliefs about the effectiveness of innovation, is to look for causal connections between the innovation measures as cause and performance feedback relative to aspirations measures as effect (Cao et al., 2023). By looking for cause-and-effect relationships in the texts, beliefs about future innovation performance can be extracted. An example of this would be finding a connection between “innovation” and “competitiveness”. Keywords as given below form a list of likely identifiers of required data. Some keywords were extrapolated based on the research context of leisure firms. An example is “visitor numbers” as a measure of performance.

Table 3: Constructs and measures

Construct	Measures/keywords	Reference
Innovation propensity (Score is based on frequency relative to document size of positive, supportive of innovation codes against negative, unsupportive of innovation codes).	patents	Bellstam et al. (2020); Cao et al. (2023)
	R&D (research and development)	Bellstam et al. (2020); Cao et al. (2023)
	new product	Li et al. (2012)
	new service	Li et al. (2012)
	introduce	Li et al. (2012)
	announce	Li et al. (2012)
	launch	Li et al. (2012)
	offer	Li et al. (2012)
	debut	Li et al. (2012)
	roll out	Li et al. (2012)
	unveil	Li et al. (2012)
	Innovate	Cao et al. (2023)
	intellectual property	Cao et al. (2023)
	disruptive (technology)	Cao et al. (2023)
	develop (new technologies)	Cao et al. (2023)
	(product/service) upgrades	Cao et al. (2023)
open	extrapolation for leisure context	
Performance feedback relative to aspirations (Score is based on frequency relative to document size of positive, at or above aspirations codes against negative, below aspirations codes).	ROA (return on assets)	Bellstam et al. (2020); Cao et al. (2023)
	growth	Bellstam et al. (2020)
	(performance) shortfalls	Cao et al. (2023)
	market share	Cao et al. (2023)
	compete	Cao et al. (2023)
	success	Cao et al. (2023)
	leading position	Cao et al. (2023)
	competitive	Cao et al. (2023)
financial condition	Cao et al. (2023)	

Performance feedback relative to aspirations measures should only be interpreted if a connection to aspirations can be found. For example: “lower (visitor numbers) than budgeted this year.”	aspirations	Cyert & March (1963); Gavetti et al, (2012)
	(performance/profitability/growth) goals	Gavetti et al. (2012)
	satisfactory (performance)	Gavetti et al. (2012)
	target (performance level)	Keil et al. (2022)
	visitor numbers	extrapolation for leisure context
	aim	extrapolation
Beliefs about the effectiveness of innovation (Score is based on frequency relative to document size of positive belief codes against negative belief codes). Linkages between innovation and performance can be described in the documents as positive or negative. A higher frequency, would score more positively in that direction.	*Causal connections (negative or positive) between innovation and performance, using the same keywords as above. Causal connections may be identified by keywords such as “if... then...,” “because” “so,” and “as”.	Cao et al. (2023)

3.4 Analytical approach

This study makes use of content analysis, as described by the Columbia University Mailman School of Public Health (2023). Documents are coded via the program Atlas.ti, where codes representing the variables are grouped. This way, frequencies can be visualised as loadings on different variables. Causal connections can be grouped into positive and negative beliefs. To make data more comparable, the frequency of innovation propensity keywords and sentences are standardised based on the number of pages a document consists of. Some documents are bilingual and therefore their number of pages is halved for fair comparison. In other words, frequencies are relative to the size the document. The approach known as content analysis, allows for coding different texts into comparable data for both qualitative and quantitative

analyses (Columbia University Mailman School of Public Health, 2023). Keywords and sentences are consistently the same along the analyses process. A fairly high level of implication was allowed, as measures are taken from different contexts and may be represented differently here. The coding of the documents was done in a consistent manner, to strengthen validity (Columbia University Mailman School of Public Health, 2023). Another practice strengthening validity was manually inspecting all detected keywords and sentences to see if what was measured is what was intended to be measured (Columbia University Mailman School of Public Health, 2023). Consistent coding by using the same code book for every document, as well as maximising stability via the use of only one coder, ensures reliability (Columbia University Mailman School of Public Health, 2023). By conducting this method, findings are more easily interpreted and more likely to be validated externally.

More specifically, documents were manually analysed and coded. First, performance feedback relative to aspirations is identified by scoring whether the organization is satisfied with the level of performance relative to their aspirations or not. The same was done for innovation propensity, by looking for innovative actions or future innovative plans. Here, relative frequencies of keywords were used to determine the score on the variables. Then finally, beliefs about the effectiveness of innovation were extracted from causal linkages found between innovative actions and performance outcomes. These were then coded into a level of strength based on frequency of beliefs about the effectiveness of innovation. The results of this were imputed into SPSS via an Excel spreadsheet, where a multivariate linear regression was conducted. For hypothesis 1, this means testing the variable performance feedback relative to aspirations on innovation propensity. For hypothesis 2, this means testing the influence of the coded beliefs variable on the relationship of hypothesis 1 by computing an interaction term. To do this, a model had to be constructed where performance feedback relative to aspirations, beliefs about the effectiveness of innovation and the interaction term (performance feedback relative to aspirations x beliefs about the effectiveness of innovation) are the independent variables and innovation propensity is the dependant variable. Before interpretation, assumptions related to multivariate regression were taken into consideration.

To improve explanatory power for accurately measuring the hypotheses, four control variables were implemented. The first two control variables are related to organizational size, as some authors have suggested that smaller organization engage in innovative activities more often than others (Mone et al., 1998). The first control variable concerns the annual revenue in millions of United States dollars. The second looks at the number of employees. The third

control variable is about the specific leisure sector the firm operates in. 6 categories were established for this study, covering all sampled organizations: theme park, zoo, museum, casino, sports leisure and BCAM (bowling, cinema, arcade, music). BCAM was integrated under one category due to their relatively small individual contribution to the sample. The fourth and final control variable that was implemented, as it may serve as an alternative explanation, was the area of operation based on continent. Firms may also score as multinational when their activities are extensively diversified across continents. The latter two control variables are nominal in nature and were therefore dummified for analysis.

3.5 Ethical considerations

Only publicly available data was analysed for this research. To ensure transparency, all sources were properly cited, and analyses were conducted in an unbiased manner. Reporting of findings was done in an unselective way without misrepresentation. Research limitations were reported at the end of the document together with suggestions for future research.

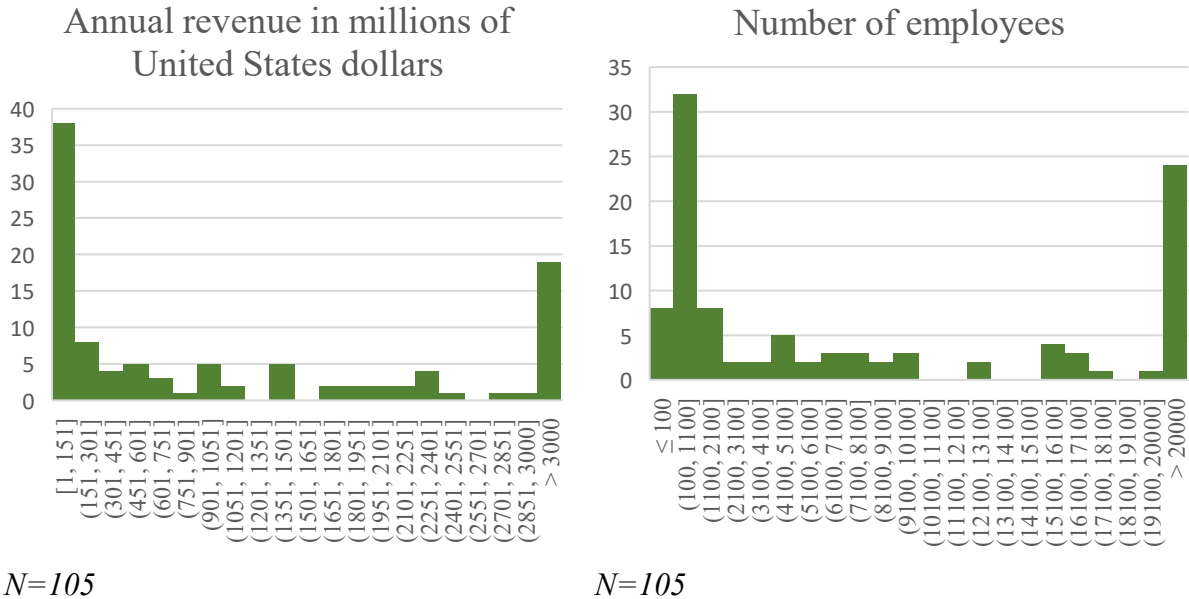
Furthermore, effort was put into adhering to the code of conduct for research integrity. This organization outlines several principles: Honesty, scrupulousness, transparency, independence and responsibility (Netherlands Code of Conduct for Research Integrity, 2018). This study addressed these considerations the following way: By refraining from making unfounded claims and reporting results sincerely, honesty was respected; By aiming to conduct academically sound research, scrupulousness was respected; By being clear about where data, claims and findings originate from, transparency was respected; By keeping from having other agenda's besides independent scientific research, independence was respected; Finally, by acknowledging limitations of this research, responsibility was respected.

4. Results

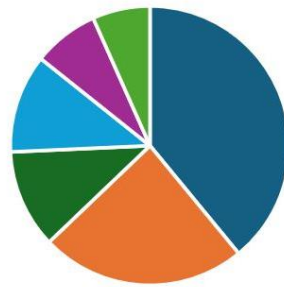
4.1 Descriptive statistics

This study utilised multivariate linear regression. This allowed for researching relationships between a dependent variable, several independent variables, including control variables, and a moderator (Hair et al. 2019). The sample consisted of 105 firms, providing a total of 210 annual reports in a global context. All reports were from the years 2022 and 2023. The independent and moderator variables were collected in the 2022 documents and the dependent variable in the 2023 documents. All scores on variables were divided by the number of pages the document consisted of. More information and examples of the coding procedure can be found in appendix 1. All control variables were collected via databases or company. Figures 2 and 3 show additional information about the sample’s annual revenue and number of employees. The average firm size in the sample in terms of annual revenue is 5,774 million United States dollars and in terms of number of employees 7,898 employees. The medians are lower, 500 and 4153 respectively. The sector and area of operation are shown in figures 4 and 5. The distribution was contingent on the sampling criteria but nevertheless largely reflects the actual distribution. Via Orbis database the population was identified as theme parks: 18.224%; casinos: 36.449%; zoos: 7.165%; museums: 2.648%; BCAM: 21.184%; sports leisure: 14.330%. The N was 1,366. Figure 2 shows the sample distribution. In figure 3, the three continents with the smallest frequencies were summarized as other, to reduce multicollinearity.

Figures 2, 3, 4 and 5: Distributions of control variables



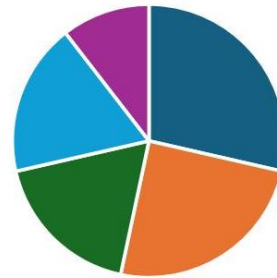
Distribution of sector



- Theme park
- BCAM (bowling, cinema, arcade, music)
- Sports leisure
- Casino
- museum
- Zoo

N=105

Distribution of area of operation



- Europe
- Asia
- Other (Oceania, Africa, South America)
- North America
- Multinational

N=105

In addition to the descriptive statistics, table 4 shows the correlation matrix of all variables, including control variables and dummies. Some interesting findings to note are the significant Pearson correlations between innovation propensity, performance feedback relative to aspirations and beliefs about the effectiveness of innovation. Additionally, the correlation between number of employees and annual revenue has an excessively high value. This correlation of 0.908 is above the threshold of 0.700 to raise concern for serious multicollinearity (Hair et al. 2019). This relatively high correlation makes sense however, given that they both relate to firm size. There are few significant correlations between the other control variables and these correlations are relatively weak

Table 4: Correlation matrix and descriptive statistics

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>1 Innovation propensity</i>														
<i>2 Performance feedback relative to aspirations</i>	0.448***													
<i>3 Beliefs about the effectiveness of innovation</i>	0.624***	0.596***												
<i>4 Annual revenue</i>	-0.015	-0.104	0.079											
<i>5 Number of employees</i>	-0.021	-0.055	0.146	0.908***										
<i>6 Sector BCAM</i>	0.060	0.067	0.029	0.159	0.128									
<i>7 Sector casino</i>	-0.113	-0.118	-0.042	0.287**	0.272**	-0.201*								
<i>8 Sector museum</i>	0.013	0.039	-0.031	-0.460***	-0.417***	-0.129	-0.201*							
<i>9 Sector sports leisure</i>	-0.039	-0.131	-0.016	0.043	-0.008	-0.103	-0.161	-0.103						
<i>10 Sector theme park</i>	0.074	0.033	0.076	0.060	0.077	-0.288**	-0.447***	-0.288**	-0.230**					
<i>11 Area Asia</i>	0.113	0.034	0.195*	0.031	0.007	-0.169*	-0.089	-0.169*	-0.135	0.435***				
<i>12 Area Europe</i>	0.027	0.144	-0.037	-0.486***	-0.465***	-0.227**	-0.205*	0.502***	-0.023	-0.117	-0.297**			
<i>13 Area multinational</i>	0.122	-0.082	0.018	0.387***	0.354***	0.142	0.028	-0.169*	-0.042	0.080	-0.221*	-0.297**		
<i>14 Area North America</i>	-0.183*	-0.220*	-0.157	0.232**	0.268**	0.141	0.146	-0.137	0.251**	-0.188*	-0.270**	-0.363***	-0.270**	
<i>Mean</i>	0.175	0.039	0.095	5.774	7.898	0.114	0.238	0.114	0.076	0.391	0.181	0.286	0.181	0.248
<i>Standard deviation</i>	0.139	0.041	0.093	2.656	2.203	0.320	0.428	0.320	0.267	0.490	0.387	0.167	0.387	0.434
<i>Min (Max)</i>	0.000 (0.694)	-0.047 (0.250)	0.000 (0.615)	0.000 (11.710)	3.220 (12.320)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)

Pearson correlations; $n=105$; *** $p<0.001$; ** $p<0.010$; * $p<0.050$

Excluded are reference category dummy sector 'zoo' and reference category dummy area of operation 'other' (South America, Africa, Oceania).

In table 4, some univariate statistics are displayed. Notably, innovation propensity shows both a relatively high mean and a relatively high standard deviation. This shows that generally, organizations have a relatively high propensity to innovate, but that it does clearly differ between organizations. The minimum and maximum value of performance feedback relative to aspirations shows that firms generally achieve more positive performance feedback relative to aspirations than negative feedback. The mean is however relatively low. This may be due to 2022 COVID-19 recovery resulting in improved performance feedback relative to aspirations, but still not many examples exceeding targets. Beliefs about the effectiveness of innovation has a minimum value of 0. This implies that no firms in the sample believe that innovation negatively impacts firm performance.

Before the regression results are examined, several assumptions are to be accounted for (Hair et al. 2019). These are: linearity, homoscedasticity, normality and independence of error terms (Hair et al. 2019). On top of that, multicollinearity should be assessed as it influences the interpretability of the coefficients (Hair et al. 2019). All assumptions are sufficiently met after some remedies were accepted and others rejected. A more detailed description of the assumption checking process is follows in the next paragraph.

Linearity was tested via a visual observation of the P-P plot in appendix 2. The plot shows a largely linear relationship with only a limited deviation from the diagonal line. Therefore, the assumption of linearity is met. Homoscedasticity or constant variance of error terms is tested for via a visual inspection of a residual value and expected value plot in appendix 2. Overall, the plot is equally distributed around 0 indicating homoscedasticity. There are however some outliers that indicate a slight funnel shape, which would indicate possible heteroscedasticity. All data was manually collected and outliers, even though relatively small, can therefore be justified. A remedy was computed by transforming innovation propensity into its inverse. While this reduced the funnel shape, it did distort the equal distribution around 0. This combined with interpretation difficulties associated with this remedy (Hair et al. 2019), it was decided not to continue with this transformed variable. It should be noted that due to this, regression results may be interpreted with a limited level of caution as the risk of a type 1 error could be enlarged (Hair et al. 2019).

Normality was assessed via a visual inspection of a histogram, a statistical test of the normality of the residuals and kurtosis and skewness values, of which all can be found in appendix 2. The visual inspection as well as the statistical Shapiro-Wilk test did not lead to

concern as both indicated a normal distribution. The control variables annual revenue and number of employees were however significantly leptokurtic and somewhat skewed, scoring above the critical values of |7| and |2| respectively (Hair et al. 2019). These were remedied by natural logarithmic transformations which yielded improved results in normality as well as regression coefficients. Beliefs about the effectiveness of innovation was also somewhat leptokurtic. Several remedies were attempted, as shown in appendix 2, and while normality was eventually achieved, the variable was now difficult to interpret and significantly suppressed regression coefficients. That is why the original variable was retained and only the most problematic examples were transformed to preserve interpretability (Hair et al. 2019).

Independence of error terms was assessed via a Durbin-Watson test. This test resulted in a value of 2.018 indicating that the assumption is met. Finally, multicollinearity is assessed via VIF statistics. Multicollinearity is deemed problematic if the VIF statistic is above 10 (Hair et al. 2019). Two dummy control variables part of area of operation scored above 10 and therefore it was decided to combine the smallest areas South America, Oceania and Africa together, which resulted in a significantly low VIF. All other values are low enough and only a small number of variables scored above 5 with all variables staying below a VIF of 7.

4.2 Hypotheses testing

Table 5 shows four regression models for testing both hypotheses. On top of the dependent variable innovation propensity, model 1 only includes control variables, model 2 also includes the independent variable performance feedback relative to aspirations, model three adds the moderator as independent variable and the fourth and final model includes the interaction effect of the moderator. To assess the models, the R squared as well as the F-values significance and beta coefficients were utilized. Finally, an interaction plot was used to visualize the effect of the moderator

Table 5: Effects of variables on innovation propensity

	<i>Model 1: control variables</i>				<i>Model 2: with independent variable</i>				<i>Model 3: with moderator</i>				<i>Model 4: with interaction effect</i>			
	<i>B</i>	β	<i>SE</i>	<i>p</i>	<i>B</i>	β	<i>SE</i>	<i>P</i>	<i>B</i>	β	<i>SE</i>	<i>p</i>	<i>B</i>	β	<i>SE</i>	<i>p</i>
<i>Performance feedback relative to aspirations</i>					1.602*	0.477	0.321	0.001	0.414	0.123	0.350	0.239	1.270*	0.378	0.434	0.004
					**								*			
<i>Beliefs about the effectiveness of innovation</i>									0.866*	0.582	0.155	0.001	1.358*	0.912	0.217	0.001
									**				**			
<i>Performance feedback x Beliefs about innovation¹</i>													-5.168	-0.572	1.673	0.003
													**			
<i>Annual revenue</i>	-0.003	-0.053	0.013	0.838	0.003	0.048	0.012	0.836	0.009	0.176	0.010	0.383	0.006	0.106	0.010	0.587
<i>Number of employees</i>	0.002	0.026	0.015	0.918	-0.008	-0.127	0.014	0.569	-0.021	-0.336	0.012	0.089	-0.019	-0.301	0.012	0.113
<i>Sector BCAM</i>	0.041	0.094	0.076	0.593	0.032	0.074	0.068	0.634	0.006	0.015	0.059	0.913	-0.006	-0.014	0.056	0.915
<i>Sector casino</i>	-0.015	-0.047	0.068	0.823	0.011	0.035	0.061	0.854	-0.016	-0.049	0.053	0.767	0.008	0.025	0.052	0.874
<i>Sector museum</i>	-0.003	-0.006	0.069	0.968	0.013	0.030	0.062	0.832	-0.017	-0.040	0.054	0.747	-0.013	-0.029	0.052	0.806
<i>Sector sports leisure</i>	0.004	0.008	0.080	0.960	0.031	0.059	0.072	0.668	-0.026	-0.049	0.063	0.683	-0.019	-0.037	0.060	0.749
<i>Sector theme park</i>	0.007	0.024	0.058	0.906	0.007	0.024	0.058	0.906	-0.011	-0.038	0.050	0.830	-0.001	-0.004	0.048	0.982
<i>Area Asia</i>	0.102	0.284	0.055	0.066	0.102	0.284	0.055	0.066	0.054	0.152	0.048	0.262	0.011	0.030	0.048	0.825
<i>Area Europe</i>	0.054	0.177	0.051	0.287	0.054	0.177	0.051	0.287	0.009	0.161	0.044	0.264	0.008	0.027	0.044	0.853
<i>Area multinational</i>	0.121	0.339	0.055	0.030	0.121*	0.339	0.055	0.030	0.105*	0.292	0.048	0.031	0.089	0.249	0.046	0.055
<i>Area North America</i>	0.050	0.156	0.151	0.334	0.050	0.156	0.051	0.334	0.054	0.168	0.044	0.229	0.035	0.110	0.043	0.415
<i>R² (Adjusted R²)</i>		0.067 (-0.043)				0.266 (0.170)				0.455 (0.377)				0.507 (0.430)		
<i>Intercept / Constant (p)</i>		0.141 (0.120)				0.080 (0.327)				0.145* (0.045)				0.117 (0.092)		
<i>F (p)</i>		0.608 (.817)				2.780** (0.003)				5.834*** (0.001)				6.607*** (0.001)		

n=105; ****p*<0.001; ***p*<0.001; **p*<0.050

¹Variable names shortened to fit page

Excluded are reference category dummy sector 'zoo' and reference category dummy area of operation 'other' (South America, Africa, Oceania).

As shown in table 5, several variables have a significant effect on the innovation propensity of leisure firms. Results used for hypothesis testing are presented in bold and are underlined. All models except model 1 are significant. Model 1, as mentioned, is not significant and therefore the control variables alone do not explain variance in the regression ($R^2 = 0.067$, $F(11,93) = 0.608$, $p = 0.817$). Model 2 is significant and explains 26.6% of variance ($R^2 = 0.266$, $F(12,92) = 2.780$, $p = 0.003$). Model 3 is also statistically significant and explains 45.5% of variance ($R^2 = 0.445$, $F(13,91) = 5.834$, $p < 0.001$). Finally, model 4 is also significant and explains 50.7% of variance ($R^2 = 0.507$, $F(14,90) = 6.607$, $p < 0.001$).

Delving into the relationships within the models themselves, model 1 is not used for hypotheses testing and the model itself is not significant. The following hypothesis is tested in model 2: When performance feedback relative to aspirations is closer to or beyond aspirations, there is a positive effect on innovation propensity.

In model 2, where performance feedback relative to aspirations is introduced, performance feedback relative to aspirations has a significant positive influence on innovation propensity ($B = 1.602$, $\beta = 0.447$, $p < 0.001$). The significant positive relationship between performance feedback relative to aspirations and innovation propensity means that hypothesis 1 is accepted. In model 3, the moderator is introduced as a predictor variable and significantly and positively influences innovation propensity ($B = 0.866$, $\beta = 0.155$, $p < 0.001$). Interestingly, the independent variable performance feedback relative to aspirations is no longer significant ($B = 0.414$, $\beta = 0.350$, $p = 0.239$). Model 3 is not used to test the hypotheses. Via model 4, the following hypothesis is tested: Managerial beliefs about the effectiveness of innovation strengthen the positive relationship between performance feedback relative to aspirations and innovation propensity.

Finally, model 4 introduces the interaction term of the moderator beliefs about the effectiveness of innovation. The moderator has a significant crossover effect on the relationship between performance feedback relative to aspirations and innovation propensity, meaning that the moderator causes the relationship to change direction ($B = -5.168$, $\beta = 1.673$, $p = 0.003$). Performance feedback relative to aspirations also significantly influences innovation propensity, in this case positively ($B = 1.270$, $\beta = 0.434$, $p = 0.004$). Finally, beliefs about the effectiveness of innovation, the moderator, also significantly influences innovation propensity in a direct relationship ($B = 1.358$, $\beta = 0.217$, $p < 0.001$). This positive relationship means that hypothesis 1 still holds when the moderating interaction term is present. The significant

crossover relationship of the interaction term means that hypothesis 2 is rejected as hypothesis 2 states a positive relationship.

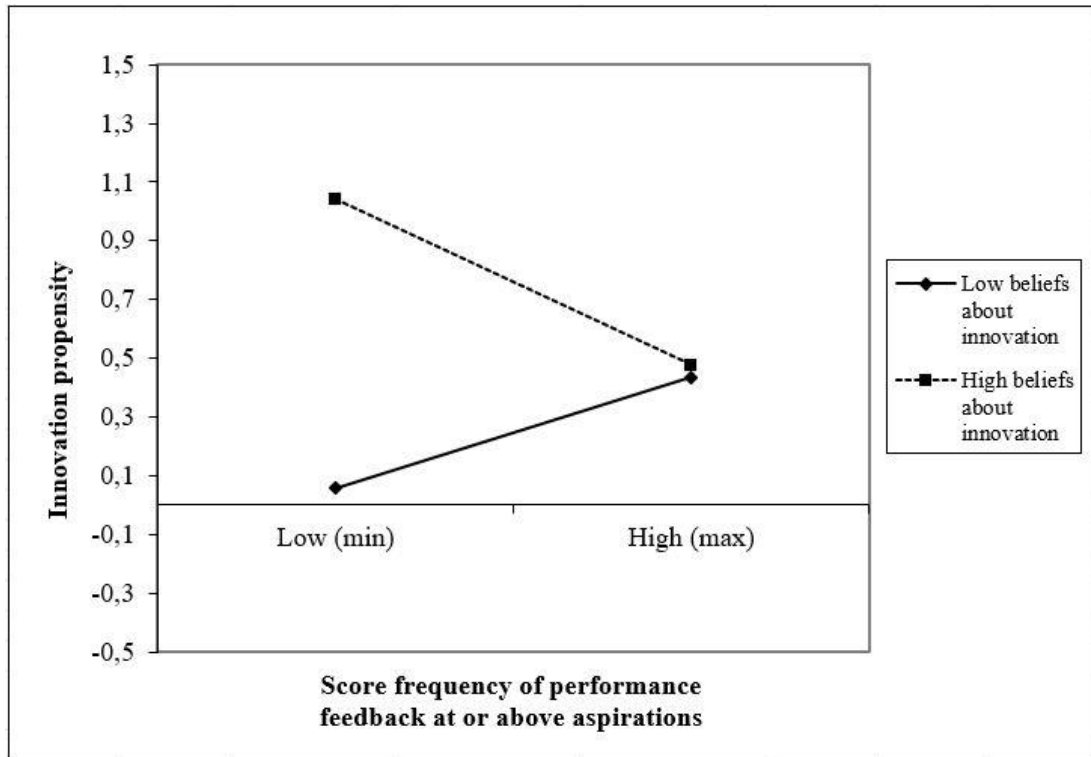
Hair et al. (2019) mentions that models with many variables may lead to overfitting. In such models, the effect size keeps increasing as the model gets larger, but for the wrong reasons. From model 1 to 3, the R squared as well as the adjusted R squared keep increasing by at least .10, indicating a significant increase in explained variance. For model 4, the increase in R squared is relatively small, 0.455 to 0.507, indicating a possibility of overfitting (Hair et al. 2019). The adjusted R squared takes the risk of overfitting into account. The adjusted R squared still increases, 0.344 to 0.430, indicating a significant growth in effect size and no need for concern in terms of overfitting.

Of the significant relationships, the moderator as interaction term shows the strongest effect. The following effect sizes can be interpreted via table 5. The first row of model 2 shows that the coefficient for innovation propensity increases by 0.514, when feedback relative to aspirations increases by 1 standard error ($p < 0.001$). The second row of model 3 shows that an increase in 1 standard error for beliefs about the effectiveness of innovation leads to an increase of 0.137 for the standardised coefficient of innovation propensity ($p < 0.001$). In model 4 row 1, if performance feedback relative to aspirations increases by 1 standard error, the innovation propensity coefficient increases by 0.551. In row 2, beliefs about the effectiveness of innovation as a direct effect increasing by 1 standard error leads to an increase in the innovation propensity coefficient of 0.295.

In model 4 of table 5, beliefs about the effectiveness of innovation x performance feedback relative to aspirations is introduced as the interaction term. When the interaction term increases by 1 standard error, the standardised coefficient for innovation propensity decreases by 3.089 ($p = 0.003$). To precisely interpret the moderator, a simple slope test was conducted for a low (-1 SD) and high (+ 1 SD) score of beliefs about the effectiveness of innovation. The marginal effects are 6.438 ($p < 0.001$) and -3.898 ($p < 0.001$) for low and high beliefs, respectively. The difference between them is statistically significant ($p < 0.001$). This means that when beliefs are low, a high frequency of performance feedback scores leads to significantly higher propensity to innovate. Conversely, when a belief score is higher, an increase in performance feedback significantly decreases innovation propensity. This is also reflected by the dotted and solid line in figure 6, respectively. Figure 6 visualizes how the relationship between performance feedback relative to aspirations and beliefs about the

effectiveness of innovation turns around when the interacting moderator increases. The y- axis as well as x-axis are based on the frequencies of the actual observed data.

Figure 6: Interaction plot



4.3 Additional analysis for testing robustness

All variables collected via content analyses were divided by the number of pages of the respective documents. This was done to ensure comparability and remove bias for larger annual reports. It does however distort the actual data. A small annual report will have much higher scores than large annual reports when the number of codes is the same. That is why conducting the same analyses with the original variables may serve as a robustness analysis to improve reliability and credibility of findings (Hair et al., 2019). The only thing changed for the following analysis were the variables innovation propensity, performance feedback relative to aspirations and beliefs about the effectiveness of innovation. All of which are now completely based on code frequency and not divided by their respective number of pages. In table 6 descriptives and Pearson correlations can be seen for this additional analysis.

Table 6: Correlation matrix and descriptive statistics of original variables not divided by number of pages

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>1 Innovation propensity</i>														
<i>2 Performance feedback relative to aspirations</i>	0.437***													
<i>3 Beliefs about the effectiveness of innovation</i>	0.795***	0.446***												
<i>4 Annual revenue</i>	0.224*	0.034	0.263**											
<i>5 Number of employees</i>	0.284**	0.066	0.327***	0.908***										
<i>6 Sector BCAM</i>	-0.003	0.126	0.093	0.159	0.128									
<i>7 Sector casino</i>	0.025	-0.133	-0.006	0.287**	0.272**	-0.201*								
<i>8 Sector museum</i>	-0.131	0.028	-0.143	-0.460***	0.417***	-0.129	-0.201*							
<i>9 Sector sports leisure</i>	-0.007	-0.127	0.053	0.043	-0.008	-0.0103	-0.161	-0.103						
<i>10 Sector theme park</i>	0.036	-0.028	0.076	0.019	0.077	-0.288**	-0.447***	-0.288**	-0.230**					
<i>11 Area Asia</i>	0.199*	0.070	0.288**	0.031	0.007	-0.169*	-0.089	-0.169*	-0.135	0.435***				
<i>12 Area Europe</i>	0.005	0.156	-0.060	-0.486***	-0.465***	-0.227**	-0.205*	0.502***	-0.023	-0.117	-0.297**			
<i>13 Area multinational</i>	0.073	-0.063	0.082	0.387***	0.354***	0.142	0.028	-0.169*	-0.042	0.080	-0.221*	-0.297**		
<i>14 Area North America</i>	-0.231**	-0.220*	-0.172*	0.232**	0.268**	0.141	0.146	-0.137	0.251**	-0.188*	-0.270**	-0.363***	-0.270**	
<i>Mean</i>	14.530	3.240	7.790	5.774	7.898	0.114	0.238	0.114	0.076	0.391	0.181	0.286	0.181	0.248
<i>Standard deviation</i>	12.225	3.381	6.637	2.656	2.203	0.320	0.428	0.320	0.267	0.490	0.387	0.167	0.387	0.434
<i>Min (Max)</i>	0.000 (77.000)	-3.000 (16.000)	0.000 (38.000)	0.000 (11.710)	3.220 (12.320)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)

Pearson correlations; $n=105$; *** $p<0.001$; ** $p<0.010$; * $p<0.050$

Excluded are reference category dummy sector 'zoo' and reference category dummy area of operation 'other' (South America, Africa, Oceania).

The Pearson correlations are similar to the first analysis of the variables divided by number of pages. The difference is a slightly larger number of significant correlations between control variables and variables in the conceptual model. While mean, minimum and maximum values as well as standard deviations have changed, they express the same pattern as the previous analysis. Here too it can be seen that generally, organizations have relatively high innovation propensity compared to other variables.

Like the standardized analysis, multiple regression assumptions were checked according to Hair et al. (2019). Linearity was assessed via observation of the P-P plot in appendix 2. The plot shows a mostly linear relationship with a limited deviation from the diagonal line. It is slightly less linear than the main analysis. The assumption of linearity is still largely met. In the same appendix, a plot is observed to determine homoscedasticity or constant variance of error. The plot is somewhat equally and randomly distributed around 0 but does show more heteroscedasticity than the main analysis. Therefore, an inverse transformation was attempted, but appendix 2 shows that this did not lead to an improved result. Results should therefore be interpreted with caution (Hair et al. 2019).

Next, normality was assessed. The Histogram and Shapiro-Wilk indicate a relatively normal distribution, where the Shapiro-Wilk is less significant than in the previous analysis. The kurtosis and skewness statistics show a mostly normal distribution, more so than the distribution in the main analysis. There are some skewness statistics that are slightly over the critical value of $|2|$ (Hair et al. 2019). These offenders are however so slight, 0.166 over, that the loss in interpretation would not outweigh the improvement in normality. More details can be found in appendix 2. Like the main analysis, a Durbin-Watson test assesses the independence of error terms. A value of 2.021 shows that the assumption is met. Multicollinearity was the last assumption assessed. Most of the VIF statistics were below 5 and all statistics were under 7. Multicollinearity is deemed problematic if the VIF statistic is above 10 (Hair et al. 2019). Just like the main analysis, three dummy control variables part of area of operation were combined to keep their multicollinearity sufficiently low.

Table 7: Effects of original variables not divided by the number of pages on innovation propensity

	Model 1: control variables				Model 2: with independent variable				Model 3: with moderator				Model 4: with interaction effect			
	B	β	SE	p	B	β	SE	p	B	β	SE	p	B	β	SE	p
<i>Performance feedback relative to aspirations</i>					<u>1.315*</u>	<u>0.364</u>	<u>0.345</u>	<u>0.001</u>	0.312	0.086	0.272	0.254	0.001	0.000	0.401	0.997
<i>Beliefs about the effectiveness of innovation</i>					**				1.366*	0.742	0.148	0.001	1.179*	0.640	0.231	0.001
<i>Performance feedback x Beliefs about innovation¹</i>													<u>0.033</u>	<u>0.164</u>	<u>0.031</u>	<u>0.295</u>
<i>Annual revenue</i>	-0.959	-0.208	1.072	0.373	-1.001	-0.217	1.002	0.321	0.045	0.010	0.733	0.951	0.064	0.014	0.733	0.930
<i>Number of employees</i>	3.450**	0.622	1.236	0.006	2.774*	0.500	1.169	0.020	0.341	0.061	0.885	0.701	0.464	0.084	0.892	0.605
<i>Sector BCAM</i>	-2.575	-0.067	6.050	0.671	-1.232	-0.032	5.663	0.828	-5.620	-0.147	4.122	0.176	-5.562	-0.145	4.120	0.180
<i>Sector casino</i>	-4.730	-0.166	5.462	0.389	0.056	0.002	5.255	0.992	-2.101	-0.074	3.806	0.582	-2.215	-0.078	3.806	0.562
<i>Sector museum</i>	-6.791	-0.178	5.534	0.223	-4.120	-0.108	5.217	0.432	-3.590	-0.094	3.772	0.344	-3.568	-0.093	3.770	0.346
<i>Sector sports leisure</i>	-0.722	-0.016	6.383	0.910	3.524	0.077	6.067	0.563	-3.883	-0.085	4.459	0.386	-3.807	-0.083	4.457	0.395
<i>Sector theme park</i>	-7.021	-0.282	5.171	0.178	-3.010	-0.121	4.944	0.544	-2.396	-0.096	3.575	0.504	-2.496	-0.100	3.574	0.487
<i>Area Asia</i>	8.599	0.271	4.874	0.081	8.542	0.270	4.554	0.064	-0.962	-0.030	3.449	0.781	-0.627	-0.020	3.462	0.857
<i>Area Europe</i>	5.564	0.207	4.522	0.222	5.061	0.188	4.227	0.234	0.656	0.024	3.093	0.832	1.307	0.049	3.152	0.679
<i>Area multinational</i>	0.172	0.005	4.847	0.972	3.005	0.095	4.589	0.514	-0.321	-0.010	0.733	0.951	-0.497	-0.016	3.339	0.882
<i>Area North America</i>	-5.843	-0.207	4.466	0.194	-2.383	-0.085	4.271	0.578	-1.427	-0.051	3.089	0.645	-1.598	-0.057	3.091	0.606
<i>R² (Adjusted R²)</i>		0.236 (0.146)				0.340 (0.254)				0.659 (0.610)				0.663 (0.611)		
<i>Intercept / Constant (p)</i>		-3.913 (0.588)				-7.300 (0.284)				3.106*** (0.001)				3.205 (0.525)		
<i>F (p)</i>		2.614** (0.006)				3.956*** (0.001)				13.529*** (0.001)				12.657*** (0.001)		

$n=105$; *** $p<0.001$; ** $p<0.001$; * $p<0.050$

¹Variable names shortened to fit page

Excluded are reference category dummy sector 'zoo' and reference category dummy area of operation 'other' (South America, Africa, Oceania).

Table 7 shows the regression coefficients. More detailed statistical outputs can be found in appendix 2. Unlike the main analysis, model 1 is significant ($R^2 = 0.236$, $F(11,93) = 2.614$, $p = 0.006$). Similarly to the main analysis, model 2, 3 and 4 are also significant ($R^2 = 0.340$, $F(12,92) = 3.956$, $p < 0.001$), ($R^2 = 0.659$, $F(13,91) = 13.529$, $p < 0.001$), ($R^2 = 0.663$, $F(14,90) = 12.657$, $p < 0.001$). Compared to the original analysis, The R square is somewhat higher indicating a higher percentage of predicted variance. This in turn indicates better model fit (Hair et al. 2019).

The regression coefficients noticeably differ from the original main analysis. Model 1 indicates that number of employees significantly and positively influences innovation propensity ($B = 3.450$, $\beta = 0.622$, $p = 0.006$). Model 2 shows a significant positive relationship for performance feedback relative to aspirations ($B = 1.315$, $\beta = 0.364$, $p < 0.001$). This indicates that hypothesis 1 is accepted. Model 3 adds the moderator as a direct relationship with the dependent variable. The model only shows beliefs about the effectiveness of innovation as a significant positive relationship ($B = 1.366$, $\beta = 0.742$, $p < 0.001$). Model 4 again only shows one significant relationship, despite the interaction term that was added. Beliefs about the effectiveness of innovation is significant and takes the form of a positive relationship ($B = 1.179$, $\beta = 0.640$, $p < 0.001$). The insignificance of the interaction term means a rejection of hypothesis 2. These results imply a less interpretable model compared to the original analyses.

In short, compared to the original analyses, the additional analysis improves in explained variance, possibly due to the improvement of some assumptions. At the same time, other assumptions worsened. The resulting regression model is less interpretable and does not display a significant moderating term. At the same time, hypothesis 1 is still supported. This indicates that the analysis is partly robust. While hypothesis 1 is robust and supported, the moderation of hypothesis 2 is less robust. A factor to consider is the original argumentation behind dividing the frequencies by the number of pages. It made sure data was fairer to compare with each other, leading to more internally valid data. Implications of this were the suppression of large scores and the enlargement of smaller scores. More information about the influence on the data of adjusting to the number of pages can be found in appendix 1.

5. Discussion and conclusion

The goal of this research was to examine the relationship between performance feedback relative to aspirations and innovation propensity and the moderation effect of beliefs about the effectiveness of innovation in the context of leisure firms. The research is grounded in the rapidly growing leisure sector and its high levels of dynamism and customer interaction. The leisure industry inhabits many such characteristics that have recently pointed towards a departure from classic theories (Kotiloglu, 2019; Mount & Baer, 2021; Saraf et al., 2021). This combined with literature suggesting incorporating industry context in innovation propensity and performance feedback research, lead to the formation of this study in the context of the leisure industry. The results shows that the direct relationship as well as the moderator is significant, however not in the direction of hypothesis 2. Hypothesis 1 was accepted and while hypothesis 2 proposed a positive reinforcement, it instead took the form of a crossover influence on the relationship of hypothesis 1. In the end, the results ended up being more in line with older research in manufacturing contexts (Chen, 2008; Greve, 2003).

More specifically, this study looked to answer the research question: “how does performance feedback relative to aspirations influence innovation propensity and how is this relationship moderated by managerial beliefs about the effectiveness of innovation in the context of leisure organizations?” To answer this question, two hypotheses were utilised: when performance feedback relative to aspirations is closer to or beyond aspirations, there is a positive effect on innovation propensity. And secondly: managerial beliefs about the effectiveness of innovation strengthen the positive relationship between performance feedback relative to aspirations and innovation propensity.

Existing findings looked at slower moving manufacturing firms or more general samples (Cao et al. 2013; Chen, 2008; Greve, 2003). These studies confirmed a somewhat stable theoretical base around performance feedback and organizational responses. Some researchers found that there can be deviations from this basis, forming the discussion around contextual influences (Kotiloglu et al., 2019). While this study attempted to show the possible influences of such a context and characteristics such as organizational size, dynamism, managerial beliefs and attitudes about innovation (Mone et al., 1998), findings only partly point towards a significant difference compared to this existing literature. Managerial beliefs about innovation was supported in this study, while others, though only represented by control variables, mostly did not yield significant results.

5.1 Theoretical contributions

This study contributes to theoretical development in several ways. Existing research laid the groundwork for the influence of performance feedback relative to aspirations on innovation (Cyert & March, 1963; Greve, 2003). Later authors developed the role of beliefs further and established the possible existence of a moderator (Cao et al. 2023). This research took it one step further by implementing the largely existing framework in a novel context to see if it would lead to significantly different findings.

The findings from this study reinforce the established positive impact performance feedback relative to aspirations has on innovation propensity. Results show that when leisure firms more frequently report performing at or above aspirations, their propensity to innovate increases. This is partly in line with other research that found performing closer to aspirations does indeed increase innovative behaviour (Eggers & Suh, 2018; Greve, 2003; Maslach, 2018). However, these studies also found that innovative behaviour would decrease after exceeding aspirations. Contrarily, this study found that performance feedback continues to positively influence innovation propensity as leisure organisations more frequently report performing at or above aspirations. This is more in line with Kotiloglu et al. (2019), who found that some organizations continue to innovate even after targets are met, suggesting that these firms attempt a more proactive approach to stay ahead of competition. This research, which employed a meta-analytical approach of 113 empirical studies, was also the basis for hypothesis 1.

For hypothesis 2, established research differentiates between two forms of innovative behaviour: problemistic search and slack search (Chen, 2008; Greve, 2003). The former is about high intensity investments and search for innovative solutions to performance shortfalls. The latter is about a state of satisfaction where innovation has low priority as it is deemed unnecessary during times of prosperity and positive performance feedback. Cao et al. (2023) find similar results for their R&D intensity, where if beliefs are strong, R&D investments increase as an attempt to increase performance when performance falls short. While this study hypothesised differently, the results turned out more in line with the previously mentioned findings:

Within the leisure sector, when beliefs about the effectiveness of innovation were weak, Innovation propensity would increase as a higher frequency was observed for performance feedback at or above aspirations. Though this effect is relatively small, it could be indicative of slack search as established in theory (Chen, 2008; Eggers & Suh, 2018; Greve, 2003; Maslach,

2018). Slack search entails increased innovation when close to aspirations but only a limited increase when exceeding expectations. While this studies' results in the leisure industry cannot reflect the same depth due to the absence of a continuous scale, it does reflect the limited increase in innovation propensity.

When beliefs about the effectiveness of innovation were strong, innovation propensity would be significantly lower when performance feedback at or above aspirations had a higher frequency score. This is an example of problemistic search (Chen, 2008; Greve, 2003). Hypothesis 2 stated a strengthening of the relationship via the moderator, similar to the research of Mone et al. (1998). The actual observed relationship does not strengthen, but changes direction, as is the case in established research within slower moving manufacturing and general contexts (Cao et al. 2013; Chen, 2008; Greve, 2003). A possible explanation for these findings is that the hypotheses expanded on existing findings and therefore may have overreached the influence industry context has, at least in the case of leisure firms. While the acceptance of hypothesis 1 shows that this sector does indeed make a significant difference, the rejection of the more ambitious hypothesis 2 marks a confirmation of the existing theoretical knowledge.

In short, the acceptance of hypothesis 1 provides a further theoretical basis for literature in leisure and similar industries. For hypothesis 2, leisure firms with low beliefs are less likely to perform performance shortfall recovery via innovation and therefore mostly innovate when already close to aspirations. Leisure firms with strong beliefs are more likely to perform innovation to increase performance and will therefore significantly increase innovation when reporting a low score on performance feedback relative to aspirations. While this does not support hypothesis 2, it does support the more established literature on the relationships between performance feedback, beliefs and organizational responses (Chen, 2008; Greve, 2003). It shows that these findings are also applicable in the context of leisure firms. Consequently, this study provides support for the problemistic search and slack search concepts (Greve, 2003) in specifically dynamic and customer-oriented sectors, such as the leisure industry.

5.2 Practical contributions

There are several ways in which this study adds to practical knowledge. Leisure firms have been established as dynamic and rapidly growing while being characterised by a high level of customer orientation (Centraal bureau voor de statistiek, 2022; Kaak, 2018; Leask, 2016). Managers of these organizations know this and may wonder what implications these

characterisations have on interpreting literature for evidence-based decision-making. This study attempts to support such processes by directly incorporating this sector and providing leisure managers with empirical evidence for decision-making in their context. Specifically, the significant moderation effect could explain certain behaviours in managerial decision-making. This moderation shows that decision-makers with strong beliefs about the effectiveness of innovation are more likely to innovate when fewer performance targets are met or exceeded, aiming to reach those aspirations. At the same time, the findings show that leisure industry decision makers are characterised by slack search. This causes these decision-makers to refrain from innovation when more performance targets and aspirations are already met or exceeded.

In addition to these strategic implications, the findings offer managers an introspective tool for more effective decision-making. Recognizing how their own beliefs influence responses to performance feedback allows for a better understanding of the motivation behind strategic choices. It could stimulate a long-term approach with active search for innovative potential. This is different from the observed slack search where innovation is seen as merely a reactive measure. Managers can profit from this study and its related theoretical frameworks by understanding what implications holding weaker beliefs have on proactive growth strategies involving innovation. This way, a more balanced approach may be developed where innovation becomes a structural part of the organization and not just a response to the environment influenced by the beliefs of managers. These implications based on the industry context of leisure firms may also be applicable to other industries with similar characteristics.

5.3 Limitations and future research

Some limitations can be mentioned for this study. First, the method utilised allows for the analysis of only organizations that publish annual reports. This meant that mostly publicly traded firms were included. The sample constructed for this study aimed at representing all substantial leisure firms, including larger private firms. When observing the population via Orbis database, many of the smaller firms that did not provide enough data to be included, are too small to be comparable to the rest of the sample in terms of organizational structure. Nevertheless, sourcing data from public sources resulted in a loss of representativeness for private firms. More specifically, consulting Orbis database shows that only 18% of data used in this study was gathered from private firms, while the actual population consists of 88% private firms. Even though most leisure industry leaders are publicly owned, the disparity could still limit this study's representativeness for private organizations. When it comes to

representativeness for other industries, similar characteristics should be adhered, such as high level of dynamism, high customer interaction and seasonality.

Another limitation is the interpretation of codes. Utmost effort is put into consistency, transparency and replicability for the content analysis conducted. The interpretation of a code is however always to some extent open to interpretation. Similarly to interpreting interviews, this may have a slight effect on what results in a replication of the study could look like. Finally, a notable limitation is the scale of the research. While the sample size is deemed large enough for regression, a larger more concise sample could improve the interpretability of results. Due to the limited availability of data, several sectors within the leisure industry needed to be combined. By using other methods, more specific sectors may also be studied.

The above-mentioned limitations lead to several avenues for future research. By incorporating a method that is more robust for normality assumptions, such as partial least squares, more reliable results may be generated. The research conducted in this study is of a quantitative nature and does not allow for an extensive level of depth or exploration. Given that the context of leisure firms is relatively novel, a partially exploratory qualitative approach could enable the development of new insights instead of, for the most part, testing an existing framework. A qualitative approach could also reveal more avenues for researching privately owned firms, representing this study's research population more closely. Alternatively, a stricter quantitative survey approach, could improve consistency further. Such an approach also allows for requesting specific data, where this study only interpreted existing data sources, annual reports. Another possible direction for future research could look at other response types in the context of leisure firms. For example, Cao et al (2023) looked at corporate social responsibility as a response that is influenced by performance feedback relative to aspirations and a moderator based on beliefs. While their research population was more general, industry specific studies may enhance literature further on different response types in specific industry contexts.

5.4 Conclusion

The research question of this study was:

“How does performance feedback relative to aspirations influence innovation propensity and how is this relationship moderated by managerial beliefs about the effectiveness of innovation in the context of leisure organizations?”

The concrete answer to this question is that within the leisure industry, performance feedback relative to aspirations does indeed influence innovation propensity and it does that in a positive manner. Firms that perform better according to their aspirations, are more likely to show innovative behaviour. This relationship is indeed moderated by beliefs about the effectiveness of innovation. When beliefs about the effectiveness of innovation are low, the propensity to innovate decreases when performance feedback relative to aspirations has a low frequency score. When beliefs about the effectiveness of innovation are high, the propensity to innovate increases when performance feedback relative to aspirations has a low frequency score. When performance feedback relative to aspirations is positive, the effects on innovation propensity are turned around. While the moderation effect is not completely alike to the hypothesised relationships, a clear connection to existing literature can be drawn when it comes to the concepts of problemistic search and slack search (Greve, 2003).

The incorporation of the leisure industry was a novel attribute of this study and followed up on existing suggestions for future research to conduct research in specific industry contexts. Due to the dynamic and customer-oriented nature of the leisure industry, the contextual influence of this sector was hypothesized to reinforce innovation propensity across increasing performance feedback relative to aspirations. Via moderation, beliefs about the effectiveness of innovation would strengthen the same relationship. This would have represented the leisure industry as more proactive and forward-looking industry, compared to less dynamic manufacturing contexts. However, results only partially support this, and the influence of a specific industry seems to be slightly less of an influential contextual factor than anticipated.

6. References

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7. Appendix

7.1 Example of coding procedure

For all three variables measured using content analyses, frequency and direction played an important role. This means that a positive belief about innovation would increase its frequency, and a negative belief would decrease its frequency. Codes were gathered via searching annual reports for certain keywords and variations of those keywords established in literature. In the end, all frequencies were divided by the number of pages of the document from which the scores were gathered from. This page count excluded appendices, as these varied significantly in size between firms while not housing many codes. Below are some examples of codes identified in the 210 annual reports analysed for this study.

The following section aims to enhance transparency by explaining the influence of dividing scores by the number of pages further. The maximum score for performance feedback relative to aspirations was 16.000 and was found in a report consisting of 216 pages. This resulted in an adjusted score of 0.074, which is still relatively a very high score, but no longer the highest (16.000, 216, 0.074). The minimum for this variable was (-3.000, 64, -0.047), which is still the lowest score, but the difference to the second lowest score has become smaller. For beliefs about the effectiveness of innovation, the minimum score was (0.000, 126, 0.000) and the maximum score was (38.000, 154, 0.247) which is above average, but further away from the previous leading position. For innovation propensity, the minimum score was (0.000, 65, 0.000) and the maximum score was (77.000, 172, 0.448) which is still relatively high, but no longer the highest. It can be concluded that the adjusting to number of pages suppresses large outliers and enlarges small scores.

Table 8: Examples of coding procedure

Code	Keyword	Quote
Innovation propensity	open	<i>“On June 6, 2024, we will open Fantasy Springs, our largest development since Tokyo DisneySea. This new Themed Port will recreate the world of Walt Disney Animation Studios movies Frozen, Peter Pan, and Tangled, which are loved by people of all ages.”</i>
	develop	<i>“Our investments to increase capacity, whether through uniquely themed accommodation, second gates or rides and</i>

		<i>entertainment, will continue to be driven towards resorts we have assessed to have sizeable growth headroom. In addition to our existing resorts, we also continue to <u>develop</u> ambitious projects in China, including LEGOLAND Shanghai, which is planned to open in 2025.”</i>
	launch	<i>“We will continue our endeavour to transform entertainment into memorable experiences by exploring and <u>launching</u> new and exciting attractions and events for all ages.”</i>
	<u>negative code:</u> research and development	<i>“The <u>research and development</u> expenses decreased by approximately HK\$247.7 million from approximately HK\$262.6 million for the year ended 31 March 2023 to approximately HK\$14.9 million for the year ended 31 March 2024.”</i>
Performance feedback relative to aspirations	satisfied	<i>“In recognition of the significant outperformance of Main Event against agreed financial KPIs and strategic, safety, employee engagement and guest <u>satisfaction</u> objectives during the year, the Board of the US based holding company of Main Event awarded stretch bonus payments to Chris Morris and Darin Harper for FY22. The Ardent Leisure Board supported these stretch bonus payments.”</i>
	visitor numbers	<i>“Although clearly impacted by the return to overseas travel during the year, our <u>visitor numbers</u> for 2022 were in line with our expectations.”</i>
	target	<i>“The Group has exceeded its <u>target</u> to realise total gross proceeds of \$250 million from the sale of non-core property assets following the sale of The Miller Hotel.”</i>
	<u>negative code:</u> visitor numbers	<i>“<u>Visitor numbers</u> for 2022 were 1,848,634 – an increase of 15% on 2021 when the zoo had been closed for just over three months at the start of the year during the final COVID-19 lockdown. While an improvement on the previous year, <u>visitor numbers</u> were not quite at the levels expected.”</i>
Beliefs about the	target + optimization	<i>“Our 2023 capital plan <u>targets</u> substantial guest-facing enhancements at all three of our parks, delivering a</i>

effectiveness of innovation	(extrapolation indicating a belief for this instance)	<i>marketable attraction at each property and setting the stage for longer-term master planning and optimization at every park.”</i>
	offer + competitive	<i>“Frequent changes in standards, technologies, products and service offerings, as well as in customer demands and preferences and regulations, will require us to continually introduce and successfully implement new and innovative technologies, marketing strategies, product offerings and enhancements to remain competitive and effectively stimulate customer demand, acceptance and engagement.”</i>
	introduce + growth	<i>“The Company will continue to deeply explore new changes and trends in consumption demand, expand commodity boundaries, continue to strengthen brand introduction and commodity supply for online business, innovate and improve service content, expand new marketing models and new resources, and continue to enhance the attractiveness of our online platform, so as to achieve continuous and stable growth of online business.”</i>
	negative code: develop + Market share	<i>“Chinese game companies face greater challenges when going overseas. The cost of developing and operating overseas markets has increased. It is difficult to continue to increase the market share in markets that have already been developed, the cost of buying volume is rising, and the epidemic is still affecting the whole world.”</i>

7.2 Statistical output SPSS

Table 9: Descriptive statistics, including skewness and kurtosis values for all ordinal variables and their possible remedies for assumption violations.

Statistics

	Innovation propensity	Std. Innovation Propensity = C/N	Performance feedback relative to aspirations	Std. Performance feedback relative to aspirations	Beliefs about the effectiveness of innovation	Std. Beliefs about the effectiveness of innovation	Annual revenue in millions of USD	Number of employees	kurtosis_test_beliefs	sqrt_kurtosis_test_beliefs	inverse_kurtosis_test_beliefs	ln_test_annual_revenue	squared_test_beliefs	sqrt_test_annual_revenue	inverse_test_annual_revenue	squared_test_annual_revenue	ln_test_employees	sqrt_test_employees	inverse_test_employees	squared_test_employees	Homoscedasticity Test Innovation Propensity
N	Valid	105	105	105	105	105	105	105	104	105	104	105	105	105	105	105	105	105	105	105	104
	Missing	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Mean	14,53	,1746969 49504995	3,24	,0387098 58317944	7,79	,0954562 50613528	4287,68	14911,55	-1,1416	,2852	17,9731	5,7738	,0177	37,9649	,0573	25124282 4,5143	7,8980	87,0999	,0026	119968513 3,7619	11,2177
Median	11,00	,1304347 82608696	2,00	,0312500 00000000	6,00	,0693069 30693069	500,00	4153,00	-1,1561	,2633	14,3254	6,2146	,0048	22,3607	,0020	250000,0 000	8,3316	64,4438	,0002	17247409,0 000	7,5833
Mode	8	,1333333 33333333	1	,0000000 00000000	3	,0500000 00000000 a	2 ^a	50 ^a	-1,30 ^a	,22 ^a	14,00 ^a	,69 ^a	,00 ^a	1,41 ^a	,11 ^a	4,00 ^a	3,91 ^a	7,07 ^a	,00 ^a	2500,00 ^a	7,50
Std. Deviation	12,225	,1386033 93948736	3,381	,0412954 89203784	6,637	,0931167 04877362	15332,89 5	31412,22 9	,31991	,11931	14,79776	2,65588	,04932	53,60701	,16497	16345356 97,53537	2,20329	85,99769	,00566	599697004 0,34359	16,37835
Variance	149,444	,019	11,433	,002	44,052	,009	23509768 2,952	98672815 0,307	,102	,014	218,974	7,054	,002	2873,712	,027	26717069 46517453 800,000	4,854	7395,602	,000	359636496 647785960 00,000	268,250
Skewness	2,166	1,681	1,391	1,894	2,067	3,284	6,202	4,735	,231	1,502	2,590	-,251	5,719	3,526	4,315	7,893	-,194	1,851	3,936	7,191	4,998
Std. Error of Skewness	,236	,236	,236	,236	,236	,236	,236	,236	,237	,236	,237	,236	,236	,236	,236	,236	,236	,236	,236	,236	,237
Kurtosis	6,695	2,853	2,375	6,463	5,430	13,790	41,630	26,793	,658	4,150	8,553	-,562	35,661	15,616	20,419	65,392	-1,054	4,932	19,681	53,726	28,388
Std. Error of Kurtosis	,467	,467	,467	,467	,467	,467	,467	,467	,469	,467	,469	,467	,467	,467	,467	,467	,467	,467	,467	,467	,469
Minimum	0	,0000000 00000000	-3	-,0468750 00000000	0	,0000000 00000000	1	25	-1,93	,00	1,63	,00	,00	1,00	,00	1,00	3,22	5,00	,00	625,00	1,44
Maximum	77	,6944444 44444444	16	,2500000 00000000	38	,6153846 15384615	121572	225000	-,21	,78	85,00	11,71	,38	348,67	1,00	14779751 184,00	12,32	474,34	,04	50625000 000,00	124,00

Table 10: Tests of normality of residuals of regression model

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,103	105	,008	,921	105	<,001

a. Lilliefors Significance Correction

Table 11: Model summary with Durbin-Watson test for assessing independence of error terms

Model Summary^e

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,259 ^a	,067	-,043	,141565936852500	,067	,608	11	93	,817	
2	,516 ^b	,266	,170	,126245112049990	,199	24,942	1	92	<,001	
3	,674 ^c	,455	,377	,109429650326896	,188	31,447	1	91	<,001	
4	,712 ^d	,507	,430	,104629764589544	,052	9,541	1	90	,003	2,018

a. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue

b. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations

c. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations, Std. Beliefs about the effectiveness of innovation

d. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations, Std. Beliefs about the effectiveness of innovation, std_interaction

e. Dependent Variable: Std. Innovation Propensity = C/N

Table 12: Correlations of the regression

Correlations

	Std. Innovation Propensity = C/N	BCAM	Casino	Museum	SportsLeisure	ThemePark	Asia	Europe	multinational	NorthAmerica	ln_test_annualrevenue	ln_test_numberofemployees	Std. Performance feedback relative to aspirations	Std. Beliefs about the effectiveness of innovation	std_interaction	
Pearson Correlation	Std. Innovation Propensity = C/N	1,000	,060	-,113	,013	-,039	,074	,113	,027	,122	-,183	-,015	-,021	,448	,624	,434
	BCAM	,060	1,000	-,201	-,129	-,103	-,288	-,169	-,227	,142	,141	,159	,128	,076	,029	,005
	Casino	-,113	-,201	1,000	-,201	-,161	-,447	-,089	-,205	,028	,146	,287	,272	-,118	-,042	,061
	Museum	,013	-,129	-,201	1,000	-,103	-,288	-,169	,502	-,169	-,137	-,460	-,417	,039	-,031	-,045
	SportsLeisure	-,039	-,103	-,161	-,103	1,000	-,230	-,135	-,023	-,042	,251	,043	-,008	-,131	-,016	-,071
	ThemePark	,074	-,288	-,447	-,288	-,230	1,000	,435	-,117	,080	-,188	,060	,077	,033	,076	,010
	Asia	,113	-,169	-,089	-,169	-,135	,435	1,000	-,297	-,221	-,270	,031	,007	,034	,195	,043
	Europe	,027	-,227	-,205	,502	-,023	-,117	-,297	1,000	-,297	-,363	-,486	-,465	,144	-,037	-,052
	multinational	,122	,142	,028	-,169	-,042	,080	-,221	-,297	1,000	-,270	,387	,354	-,082	,018	,015
	NorthAmerica	-,183	,141	,146	-,137	,251	-,188	-,270	-,363	-,270	1,000	,232	,268	-,220	-,157	-,136
	ln_test_annualrevenue	-,015	,159	,287	-,460	,043	,060	,031	-,486	,387	,232	1,000	,908	-,104	,079	,013
	ln_test_numberofemployees	-,021	,128	,272	-,417	-,008	,077	,007	-,465	,354	,268	,908	1,000	-,055	,146	,089
	Std. Performance feedback relative to aspirations	,448	,076	-,118	,039	-,131	,033	,034	,144	-,082	-,220	-,104	-,055	1,000	,596	,766
	Std. Beliefs about the effectiveness of innovation	,624	,029	-,042	-,031	-,016	,076	,195	-,037	,018	-,157	,079	,146	,596	1,000	,820
	std_interaction	,434	,005	,061	-,045	-,071	,010	,043	-,052	,015	-,136	,013	,089	,766	,820	1,000
Sig. (1-tailed)	Std. Innovation Propensity = C/N	.	,271	,126	,449	,345	,226	,125	,391	,108	,031	,440	,417	<,001	<,001	<,001
	BCAM	,271	.	,020	,095	,148	,001	,043	,010	,074	,076	,053	,097	,220	,385	,480
	Casino	,126	,020	.	,020	,051	,000	,185	,018	,390	,069	,002	,002	,116	,335	,269
	Museum	,449	,095	,020	.	,148	,001	,043	,000	,043	,082	,000	,000	,348	,376	,322

	SportsLeisure	,345	,148	,051	,148	.	,009	,085	,409	,336	,005	,332	,468	,092	,437	,236
	ThemePark	,226	,001	,000	,001	,009	.	,000	,117	,208	,028	,271	,217	,370	,221	,461
	Asia	,125	,043	,185	,043	,085	,000	.	,001	,012	,003	,377	,471	,364	,023	,333
	Europe	,391	,010	,018	,000	,409	,117	,001	.	,001	,000	,000	,000	,071	,353	,299
	multinational	,108	,074	,390	,043	,336	,208	,012	,001	.	,003	,000	,000	,202	,427	,441
	NorthAmerica	,031	,076	,069	,082	,005	,028	,003	,000	,003	.	,009	,003	,012	,054	,083
	ln_test_annualrevenue	,440	,053	,002	,000	,332	,271	,377	,000	,000	,009	.	,000	,146	,211	,449
	ln_test_numerofemployees	,417	,097	,002	,000	,468	,217	,471	,000	,000	,003	,000	.	,287	,068	,182
	Std. Performance feedback relative to aspirations	,000	,220	,116	,348	,092	,370	,364	,071	,202	,012	,146	,287	.	,000	,000
	Std. Beliefs about the effectiveness of innovation	,000	,385	,335	,376	,437	,221	,023	,353	,427	,054	,211	,068	,000	.	,000
	std_interaction	,000	,480	,269	,322	,236	,461	,333	,299	,441	,083	,449	,182	,000	,000	.
N	Std. Innovation Propensity = C/N	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	BCAM	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Casino	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Museum	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	SportsLeisure	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ThemePark	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Asia	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Europe	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	multinational	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	NorthAmerica	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ln_test_annualrevenue	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ln_test_numerofemployees	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Std. Performance feedback relative to aspirations	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Std. Beliefs about the effectiveness of innovation	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	std_interaction	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105

Figure 7: Histogram of regression used to assess normality

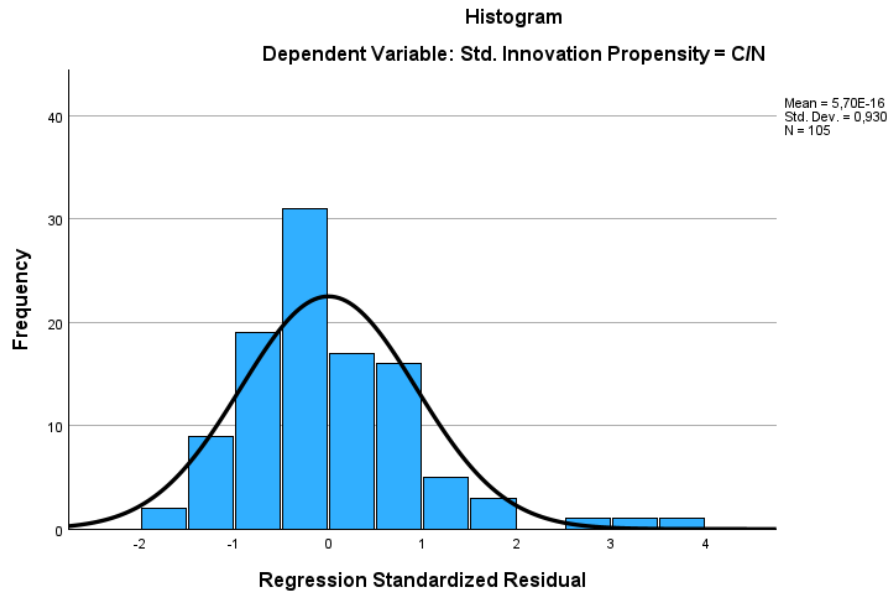


Figure 8: P-P plot of regression used to assess homoscedasticity

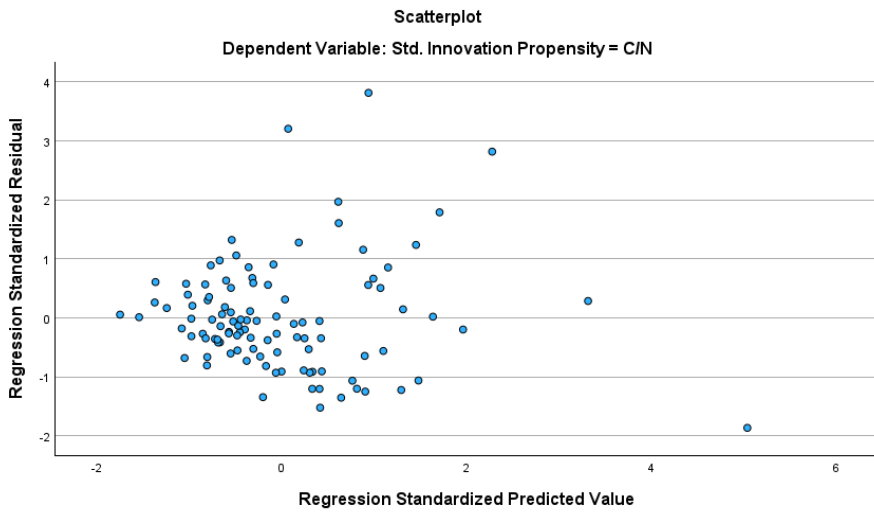


figure 9: scatterplot of regression used to assess linearity

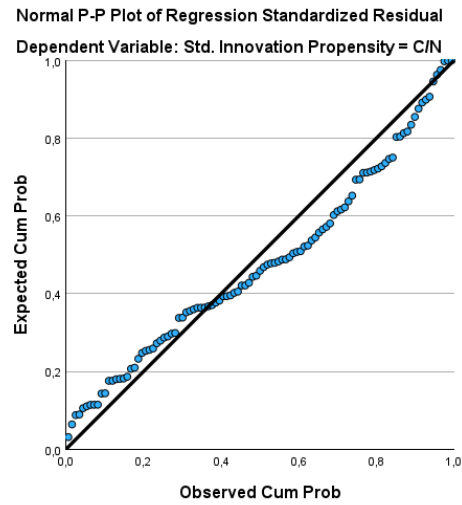


Figure 10: P-P plot if homoscedasticity is attempted to be improved via inverse transformation of dependent variable.

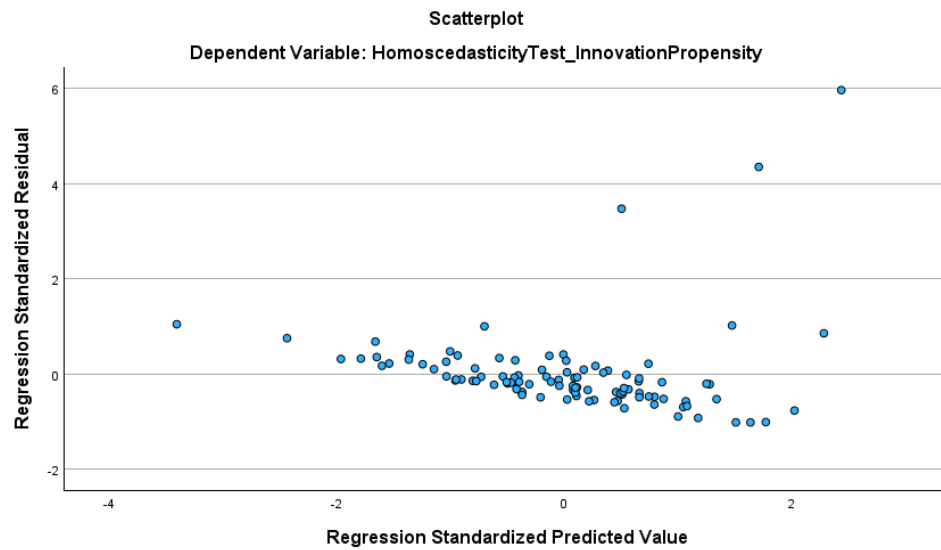


Table 13: ANOVA table for assessing regression model significance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,134	11	,012	,608	,817 ^b
	Residual	1,864	93	,020		
	Total	1,998	104			
2	Regression	,532	12	,044	2,780	,003 ^c
	Residual	1,466	92	,016		
	Total	1,998	104			
3	Regression	,908	13	,070	5,834	<,001 ^d
	Residual	1,090	91	,012		
	Total	1,998	104			
4	Regression	1,013	14	,072	6,607	<,001 ^e
	Residual	,985	90	,011		
	Total	1,998	104			

a. Dependent Variable: Std. Innovation Propensity = C/N

b. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue

c. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations

d. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations, Std. Beliefs about the effectiveness of innovation

e. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations, Std. Beliefs about the effectiveness of innovation, std_interaction

Table 14: Regression coefficients without combining Oceania, Africa and South America, note high VIF

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	,120	,116		1,031	,305		
	BCAM	,049	,079	,113	,619	,537	,305	3,282
	Casino	-,014	,073	-,042	-,189	,850	,203	4,931
	Museum	,001	,071	,002	,013	,989	,376	2,658
	SportsLeisure	,007	,083	,013	,078	,938	,398	2,511
	ThemePark	-9,830E-5	,068	,000	-,001	,999	,175	5,712
	Africa	,077	,142	,093	,541	,590	,348	2,877
	Asia	,101	,119	,282	,851	,397	,093	10,729
	Europe	,069	,114	,227	,608	,545	,073	13,650
	multinational	,097	,118	,270	,823	,413	,095	10,571
	NorthAmerica	,017	,117	,053	,145	,885	,076	13,214
	Oceania	,008	,126	,013	,062	,950	,226	4,427
	ln_test_annualrevenue	-,001	,014	-,011	-,041	,968	,135	7,385
	ln_test_numberofemployees	-,001	,016	-,015	-,056	,956	,148	6,734
2	(Constant)	,121	,104		1,168	,246		
	BCAM	,036	,071	,083	,511	,611	,304	3,287
	Casino	,022	,065	,069	,342	,733	,200	4,993
	Museum	,018	,064	,042	,288	,774	,375	2,666
	SportsLeisure	,040	,075	,077	,539	,592	,395	2,532

	ThemePark	,014	,061	,049	,229	,820	,175	5,725
	Africa	-,083	,131	-,100	-,633	,528	,326	3,064
	Asia	,044	,106	,122	,412	,681	,092	10,857
	Europe	-,003	,103	-,010	-,031	,975	,072	13,935
	multinational	,065	,105	,181	,616	,539	,094	10,611
	NorthAmerica	-,008	,105	-,026	-,078	,938	,075	13,245
	Oceania	-,065	,114	-,110	-,574	,567	,222	4,503
	ln_test_annualrevenue	,000	,013	-,002	-,010	,992	,135	7,385
	ln_test_numberofemployees	-,005	,015	-,081	-,347	,729	,148	6,757
	Std. Performance feedback relative to aspirations	1,651	,335	,492	4,934	<,001	,817	1,224
3	(Constant)	,173	,090		1,921	,058		
	BCAM	-,007	,061	-,016	-,114	,910	,300	3,338
	Casino	-,018	,057	-,055	-,317	,752	,197	5,073
	Museum	-,023	,055	-,053	-,415	,679	,369	2,713
	SportsLeisure	-,030	,065	-,058	-,459	,647	,381	2,626
	ThemePark	-,017	,053	-,062	-,330	,742	,173	5,788
	Africa	-,106	,113	-,128	-,943	,348	,326	3,068
	Asia	,021	,092	,060	,234	,815	,092	10,877
	Europe	,015	,089	,048	,166	,869	,072	13,953
	multinational	,075	,091	,209	,828	,410	,094	10,616
	NorthAmerica	,023	,090	,073	,256	,798	,075	13,295
	Oceania	-,009	,098	-,015	-,091	,928	,220	4,550

	ln_test_annualrevenue	,007	,011	,128	,603	,548	,134	7,473
	ln_test_numberofemployees	-,019	,013	-,295	-1,438	,154	,143	6,992
	Std. Performance feedback relative to aspirations	,458	,357	,137	1,285	,202	,533	1,875
	Std. Beliefs about the effectiveness of innovation	,894	,157	,600	5,674	<,001	,538	1,858
4	(Constant)	,148	,087		1,707	,091		
	BCAM	-,001	,059	-,001	-,011	,992	,299	3,343
	Casino	,019	,056	,057	,331	,741	,187	5,353
	Museum	-,007	,054	-,017	-,134	,894	,365	2,742
	SportsLeisure	-,010	,063	-,020	-,161	,872	,376	2,658
	ThemePark	,006	,051	,022	,123	,902	,168	5,945
	Africa	-,056	,110	-,067	-,508	,613	,317	3,151
	Asia	-,035	,091	-,099	-,392	,696	,087	11,436
	Europe	-,037	,087	-,122	-,427	,670	,069	14,592
	multinational	,044	,088	,123	,503	,616	,093	10,779
	NorthAmerica	-,011	,088	-,035	-,127	,899	,074	13,551
	Oceania	-,056	,096	-,094	-,581	,563	,213	4,687
	ln_test_annualrevenue	,004	,011	,068	,331	,742	,132	7,553
	ln_test_numberofemployees	-,017	,012	-,266	-1,347	,182	,143	7,011
	Std. Performance feedback relative to aspirations	1,319	,457	,393	2,883	,005	,301	3,327
	Std. Beliefs about the effectiveness of innovation	1,359	,223	,913	6,098	<,001	,249	4,015
	std_interaction	-5,237	1,839	-,580	-2,847	,005	,135	7,434

Table 15: Correlatons without transforming any variables (not chosen)

Correlations

	Std. Innovation Propensity = C/N	BCAM	Casino	Museum	SportsLeisure	ThemePark	Asia	Europe	multinational	NorthAmerica	Annual revenu in millions of usd	Number of employees	Std. Performance feedback relative to aspirations	Std. Beliefs about the effectiveness of innovation	std_interaction
Pearson Correlation	Std. Innovation Propensity = 1,000 C/N	,060	-,113	,013	-,039	,074	,113	,027	,122	-,183	-,103	-,099	,448	,624	,434
	BCAM	1,000	-,201	-,129	-,103	-,288	-,169	-,227	,142	,141	-,023	-,021	,076	,029	,005
	Casino	-,113	1,000	-,201	-,161	-,447	-,089	-,205	,028	,146	-,040	,010	-,118	-,042	,061
	Museum	,013	-,129	1,000	-,103	-,288	-,169	,502	-,169	-,137	-,055	-,086	,039	-,031	-,045
	SportsLeisure	-,039	-,103	-,161	1,000	-,230	-,135	-,023	-,042	,251	-,052	-,056	-,131	-,016	-,071
	ThemePark	,074	-,288	-,447	-,288	1,000	,435	-,117	,080	-,188	,152	,154	,033	,076	,010
	Asia	,113	-,169	-,089	-,169	-,135	1,000	-,297	-,221	-,270	-,069	-,052	,034	,195	,043
	Europe	,027	-,227	-,205	,502	-,117	-,297	1,000	-,297	-,363	-,139	-,217	,144	-,037	-,052
	multinational	,122	,142	,028	-,169	-,042	,080	-,221	1,000	-,270	,390	,367	-,082	,018	,015
	NorthAmerica	-,183	,141	,146	-,137	,251	-,188	-,270	-,363	1,000	-,081	,040	-,220	-,157	-,136
	Annual revenu in millions of usd	-,103	-,023	-,040	-,055	-,052	,152	-,069	-,139	,390	1,000	,896	-,141	-,085	-,069
	Number of employees	-,099	-,021	,010	-,086	-,056	,154	-,052	-,217	,367	,040	1,000	-,138	-,042	-,051
	Std. Performance feedback relative to aspirations	,448	,076	-,118	,039	-,131	,033	,034	-,082	-,220	-,141	-,138	1,000	,596	,766
	Std. Beliefs about the effectiveness of innovation	,624	,029	-,042	-,031	-,016	,076	,195	-,037	,018	-,157	-,085	-,042	1,000	,820
	std_interaction	,434	,005	,061	-,045	-,071	,010	-,052	,015	-,136	-,069	-,051	,766	,820	1,000
Sig. (1-tailed)	Std. Innovation Propensity = C/N	,271	,126	,449	,345	,226	,125	,391	,108	,031	,148	,158	<,001	<,001	<,001
	BCAM	,271	,020	,095	,148	,001	,043	,010	,074	,076	,406	,416	,220	,385	,480
	Casino	,126	,020	,020	,051	,000	,185	,018	,390	,069	,342	,461	,116	,335	,269
	Museum	,449	,095	,020	,148	,001	,043	,000	,043	,082	,289	,191	,348	,376	,322
	SportsLeisure	,345	,148	,051	,148	,009	,085	,409	,336	,005	,300	,286	,092	,437	,236
	ThemePark	,226	,001	,000	,001	,009	,000	,117	,208	,028	,060	,058	,370	,221	,461

	Asia	,125	,043	,185	,043	,085	,000	.	,001	,012	,003	,241	,298	,364	,023	,333
	Europe	,391	,010	,018	,000	,409	,117	,001	.	,001	,000	,079	,013	,071	,353	,299
	multinational	,108	,074	,390	,043	,336	,208	,012	,001	.	,003	,000	,000	,202	,427	,441
	NorthAmerica	,031	,076	,069	,082	,005	,028	,003	,000	,003	.	,206	,344	,012	,054	,083
	Annual revenue in millions of usd	,148	,406	,342	,289	,300	,060	,241	,079	,000	,206	.	,000	,076	,195	,243
	Number of employees	,158	,416	,461	,191	,286	,058	,298	,013	,000	,344	,000	.	,080	,336	,303
	Std. Performance feedback relative to aspirations	,000	,220	,116	,348	,092	,370	,364	,071	,202	,012	,076	,080	.	,000	,000
	Std. Beliefs about the effectiveness of innovation	,000	,385	,335	,376	,437	,221	,023	,353	,427	,054	,195	,336	,000	.	,000
	std_interaction	,000	,480	,269	,322	,236	,461	,333	,299	,441	,083	,243	,303	,000	,000	.
N	Std. Innovation Propensity = C/N	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	BCAM	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Casino	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Museum	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	SportsLeisure	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ThemePark	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Asia	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Europe	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	multinational	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	NorthAmerica	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Annual revenue in millions of usd	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Number of employees	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Std. Performance feedback relative to aspirations	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Std. Beliefs about the effectiveness of innovation	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	std_interaction	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105

Table 16: Regression coefficients with beliefs about the effectiveness of innovation, annual revenue and number of employees transformed (not chosen)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,135	,091		1,488	,140		
	BCAM	,038	,076	,089	,505	,615	,328	3,047
	Casino	-,017	,069	-,054	-,252	,801	,225	4,443
	Museum	-,002	,069	-,006	-,036	,972	,393	2,546
	SportsLeisure	,002	,080	,003	,020	,984	,424	2,359
	ThemePark	-,001	,065	-,004	-,019	,985	,193	5,174
	Asia	,073	,061	,204	1,183	,240	,344	2,905
	Europe	,041	,057	,136	,726	,470	,292	3,424
	multinational	,071	,061	,198	1,162	,248	,349	2,864
	NorthAmerica	-,005	,056	-,014	-,081	,936	,335	2,984
	ln_test_annualrevenue	-,004	,014	-,082	-,314	,754	,149	6,708
	ln_test_numberofemployees	,004	,016	,060	,240	,811	,163	6,125
2	(Constant)	,076	,082		,935	,352		
	BCAM	,031	,068	,072	,456	,650	,328	3,049
	Casino	,010	,062	,030	,159	,874	,223	4,479
	Museum	,013	,062	,031	,213	,832	,392	2,553

	SportsLeisure	,029	,072	,056	,405	,687	,421	2,374
	ThemePark	,009	,058	,031	,153	,879	,193	5,180
	Asia	,099	,055	,278	1,797	,076	,341	2,933
	Europe	,053	,051	,174	1,039	,301	,291	3,431
	multinational	,119	,055	,335	2,160	,033	,338	2,959
	NorthAmerica	,051	,051	,160	1,000	,320	,319	3,137
	ln_test_annualrevenue	,001	,012	,029	,123	,903	,148	6,771
	ln_test_numberofemployees	-,007	,014	-,104	-,459	,648	,160	6,260
	Std. Performance feedback relative to aspirations	1,587	,323	,475	4,919	<,001	,874	1,145
3	(Constant)	,569	,104		5,464	<,001		
	BCAM	-,017	,057	-,039	-,295	,769	,322	3,103
	Casino	-,014	,052	-,042	-,261	,794	,222	4,502
	Museum	-,015	,052	-,034	-,278	,781	,389	2,571
	SportsLeisure	-,043	,061	-,084	-,709	,480	,406	2,461
	ThemePark	-,011	,049	-,038	-,219	,827	,192	5,201
	Asia	,016	,048	,045	,332	,740	,315	3,174
	Europe	,004	,043	,012	,087	,931	,282	3,547
	multinational	,087	,047	,245	1,873	,064	,334	2,994
	NorthAmerica	,023	,043	,071	,528	,599	,315	3,172
	ln_test_annualrevenue	,006	,010	,109	,554	,581	,147	6,799
	ln_test_numberofemployees	-,018	,012	-,288	-1,505	,136	,156	6,411

	Std. Performance feedback relative to aspirations	,395	,330	,118	1,194	,236	,585	1,709
	kurtosis_ln_test_std_beliefs	,271	,043	,626	6,283	<,001	,576	1,735
4	(Constant)	,569	,106		5,389	<,001		
	BCAM	-,017	,058	-,039	-,294	,769	,322	3,108
	Casino	-,013	,053	-,041	-,253	,801	,217	4,611
	Museum	-,014	,053	-,034	-,274	,785	,387	2,584
	SportsLeisure	-,043	,062	-,084	-,700	,486	,404	2,477
	ThemePark	-,011	,049	-,037	-,215	,830	,191	5,228
	Asia	,016	,049	,044	,320	,750	,305	3,283
	Europe	,003	,045	,011	,076	,940	,262	3,822
	multinational	,087	,047	,245	1,856	,067	,332	3,010
	NorthAmerica	,023	,044	,071	,515	,608	,308	3,248
	ln_test_annualrevenue	,006	,010	,109	,541	,590	,144	6,951
	ln_test_numberofemployees	-,018	,012	-,288	-1,480	,142	,153	6,528
	Std. Performance feedback relative to aspirations	,403	,445	,120	,905	,368	,326	3,063
	kurtosis_ln_test_std_beliefs	,271	,046	,627	5,864	<,001	,506	1,976
	std_interaction	-,034	1,240	-,004	-,027	,978	,303	3,299

a. Dependent Variable: Std. Innovation Propensity = C/N

Table 17: Regression coefficients with annual revenue and number of employees transformed (chosen)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,141	,090		1,569	,120		
	BCAM	,041	,076	,094	,536	,593	,328	3,047
	Casino	-,015	,068	-,047	-,224	,823	,225	4,452
	Museum	-,003	,069	-,006	-,040	,968	,392	2,549
	SportsLeisure	,004	,080	,008	,050	,960	,424	2,359
	ThemePark	-,005	,065	-,016	-,072	,943	,191	5,234
	Asia	,077	,061	,214	1,253	,213	,345	2,896
	Europe	,043	,057	,141	,762	,448	,291	3,432
	multinational	,073	,061	,204	1,204	,232	,349	2,864
	NorthAmerica	-,008	,056	-,026	-,146	,885	,327	3,057
	ln_test_annualrevenue	-,003	,013	-,053	-,205	,838	,151	6,607
	ln_test_numberofemployees	,002	,015	,026	,104	,918	,165	6,047
2	(Constant)	,080	,081		,986	,327		
	BCAM	,032	,068	,074	,477	,634	,328	3,049
	Casino	,011	,061	,035	,185	,854	,223	4,486
	Museum	,013	,062	,030	,213	,832	,391	2,556
	SportsLeisure	,031	,072	,059	,431	,668	,422	2,372

	ThemePark	,007	,058	,024	,118	,906	,191	5,242
	Asia	,102	,055	,284	1,860	,066	,342	2,920
	Europe	,054	,051	,177	1,071	,287	,291	3,438
	multinational	,121	,055	,339	2,206	,030	,338	2,955
	NorthAmerica	,050	,051	,156	,970	,334	,310	3,222
	ln_test_annualrevenue	,003	,012	,048	,208	,836	,150	6,658
	ln_test_numberofemployees	-,008	,014	-,127	-,571	,569	,162	6,163
	Std. Performance feedback relative to aspirations	1,602	,321	,477	4,994	<,001	,873	1,145
3	(Constant)	,145	,071		2,031	,045		
	BCAM	,006	,059	,015	,110	,913	,326	3,068
	Casino	-,016	,053	-,049	-,297	,767	,221	4,523
	Museum	-,017	,054	-,040	-,323	,747	,387	2,583
	SportsLeisure	-,026	,063	-,049	-,409	,683	,411	2,435
	ThemePark	-,011	,050	-,038	-,215	,830	,190	5,263
	Asia	,054	,048	,152	1,128	,262	,332	3,013
	Europe	,049	,044	,161	1,124	,264	,291	3,440
	multinational	,105	,048	,292	2,192	,031	,337	2,967
	NorthAmerica	,054	,044	,168	1,212	,229	,310	3,223
	ln_test_annualrevenue	,009	,010	,176	,876	,383	,148	6,745
	ln_test_numberofemployees	-,021	,012	-,336	-1,718	,089	,156	6,396

	Std. Performance feedback relative to aspirations	,414	,350	,123	1,185	,239	,553	1,810
	Std. Beliefs about the effectiveness of innovation	,866	,155	,582	5,608	<,001	,556	1,798
4	(Constant)	,117	,069		1,703	,092		
	BCAM	-,006	,056	-,014	-,107	,915	,324	3,084
	Casino	,008	,052	,025	,159	,874	,216	4,628
	Museum	-,013	,052	-,029	-,246	,806	,387	2,585
	SportsLeisure	-,019	,060	-,037	-,320	,749	,410	2,438
	ThemePark	-,001	,048	-,004	-,023	,982	,189	5,285
	Asia	,011	,048	,030	,222	,825	,303	3,297
	Europe	,008	,044	,027	,186	,853	,264	3,787
	multinational	,089	,046	,249	1,944	,055	,333	3,002
	NorthAmerica	,035	,043	,110	,818	,415	,304	3,288
	ln_test_annualrevenue	,006	,010	,106	,546	,587	,146	6,840
	ln_test_numberofemployees	-,019	,012	-,301	-1,602	,113	,156	6,421
	Std. Performance feedback relative to aspirations	1,270	,434	,378	2,925	,004	,328	3,052
	Std. Beliefs about the effectiveness of innovation	1,358	,217	,912	6,254	<,001	,258	3,883
	std_interaction	-5,168	1,673	-,572	-3,089	,003	,160	6,264

a. Dependent Variable: Std. Innovation Propensity = C/N

Table 18: ANOVA table indicating significance of regression

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,134	11	,012	,608	,817 ^b
	Residual	1,864	93	,020		
	Total	1,998	104			
2	Regression	,532	12	,044	2,780	,003 ^c
	Residual	1,466	92	,016		
	Total	1,998	104			
3	Regression	,908	13	,070	5,834	<,001 ^d
	Residual	1,090	91	,012		
	Total	1,998	104			
4	Regression	1,013	14	,072	6,607	<,001 ^e
	Residual	,985	90	,011		
	Total	1,998	104			

a. Dependent Variable: Std. Innovation Propensity = C/N

b. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue

c. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations

d. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations, Std. Beliefs about the effectiveness of innovation

e. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Std. Performance feedback relative to aspirations, Std. Beliefs about the effectiveness of innovation, std_interaction

Table 19: Correlation matrix for additional analysis

Correlations

	Innovation propensity	BCAM	Casino	Museum	SportsLeisure	ThemePark	Asia	Europe	multinational	NorthAmerica	ln_test_annualrevenue	ln_test_numberofemployees	Performance feedback relative to aspirations	Beliefs about the effectiveness of innovation	interaction	
Pearson Correlation	Innovation propensity	1,000	-,003	,025	-,131	-,007	,036	,199	,005	,073	-,199	,224	,284	,437	,795	,688
	BCAM	-,003	1,000	-,201	-,129	-,103	-,288	-,169	-,227	,142	,141	,159	,128	,126	,093	,137
	Casino	,025	-,201	1,000	-,201	-,161	-,447	-,089	-,205	,028	,146	,287	,272	-,133	-,006	-,057
	Museum	-,131	-,129	-,201	1,000	-,103	-,288	-,169	,502	-,169	-,137	-,460	-,417	,028	-,143	-,093
	SportsLeisure	-,007	-,103	-,161	-,103	1,000	-,230	-,135	-,023	-,042	,251	,043	-,008	-,127	,053	-,032
	ThemePark	,036	-,288	-,447	-,288	-,230	1,000	,435	-,117	,080	-,188	,060	,077	-,028	,019	-,010
	Asia	,199	-,169	-,089	-,169	-,135	,435	1,000	-,297	-,221	-,270	,031	,007	,070	,266	,174
	Europe	,005	-,227	-,205	,502	-,023	-,117	-,297	1,000	-,297	-,363	-,486	-,465	,156	-,060	-,039
	multinational	,073	,142	,028	-,169	-,042	,080	-,221	-,297	1,000	-,270	,387	,354	-,063	,082	,045
	NorthAmerica	-,199	,141	,146	-,137	,251	-,188	-,270	-,363	-,270	1,000	,232	,268	-,231	-,172	-,176
	ln_test_annualrevenue	,224	,159	,287	-,460	,043	,060	,031	-,486	,387	,232	1,000	,908	,034	,263	,132
	ln_test_numberofemployees	,284	,128	,272	-,417	-,008	,077	,007	-,465	,354	,268	,908	1,000	,066	,327	,179
	Performance feedback relative to aspirations	,437	,126	-,133	,028	-,127	-,028	,070	,156	-,063	-,231	,034	,066	1,000	,446	,750
	Beliefs about the effectiveness of innovation	,795	,093	-,006	-,143	,053	,019	,266	-,060	,082	-,172	,263	,327	,446	1,000	,792
	interaction	,688	,137	-,057	-,093	-,032	-,010	,174	-,039	,045	-,176	,132	,179	,750	,792	1,000
Sig. (1-tailed)	Innovation propensity	.	,486	,400	,091	,473	,360	,021	,479	,230	,021	,011	,002	<,001	<,001	<,001
	BCAM	,486	.	,020	,095	,148	,001	,043	,010	,074	,076	,053	,097	,100	,173	,081
	Casino	,400	,020	.	,020	,051	,000	,185	,018	,390	,069	,002	,002	,089	,476	,280
	Museum	,091	,095	,020	.	,148	,001	,043	,000	,043	,082	,000	,000	,389	,073	,173
	SportsLeisure	,473	,148	,051	,148	.	,009	,085	,409	,336	,005	,332	,468	,098	,297	,372
	ThemePark	,360	,001	,000	,001	,009	.	,000	,117	,208	,028	,271	,217	,390	,422	,460

	Asia	,021	,043	,185	,043	,085	,000	.	,001	,012	,003	,377	,471	,240	,003	,038
	Europe	,479	,010	,018	,000	,409	,117	,001	.	,001	,000	,000	,000	,056	,273	,345
	multinational	,230	,074	,390	,043	,336	,208	,012	,001	.	,003	,000	,000	,263	,202	,324
	NorthAmerica	,021	,076	,069	,082	,005	,028	,003	,000	,003	.	,009	,003	,009	,039	,036
	ln_test_annualrevenue	,011	,053	,002	,000	,332	,271	,377	,000	,000	,009	.	,000	,366	,003	,089
	ln_test_numberofemployees	,002	,097	,002	,000	,468	,217	,471	,000	,000	,003	,000	.	,251	,000	,034
	Performance feedback relative to aspirations	,000	,100	,089	,389	,098	,390	,240	,056	,263	,009	,366	,251	.	,000	,000
	Beliefs about the effectiveness of innovation interaction	,000	,173	,476	,073	,297	,422	,003	,273	,202	,039	,003	,000	,000	.	,000
	interaction	,000	,081	,280	,173	,372	,460	,038	,345	,324	,036	,089	,034	,000	,000	.
N	Innovation propensity	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	BCAM	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Casino	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Museum	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	SportsLeisure	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ThemePark	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Asia	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Europe	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	multinational	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	NorthAmerica	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ln_test_annualrevenue	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	ln_test_numberofemployees	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Performance feedback relative to aspirations	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	Beliefs about the effectiveness of innovation interaction	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	interaction	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105

Table 20: Descriptive statistics for additional analysis

Statistics

		Innovation propensity	Performance feedback relative to aspirations	Beliefs about the effectiveness of innovation	ln_test_annualrevenue	ln_test_numberofemployees
N	Valid	105	105	105	105	105
	Missing	0	0	0	0	0
Mean		14,53	3,24	7,79	5,7738	7,8980
Median		11,00	2,00	6,00	6,2146	8,3316
Mode		8	1	3	,69 ^a	3,91 ^a
Std. Deviation		12,225	3,381	6,637	2,65588	2,20329
Variance		149,444	11,433	44,052	7,054	4,854
Skewness		2,166	1,391	2,067	-,251	-,194
Std. Error of Skewness		,236	,236	,236	,236	,236
Kurtosis		6,695	2,375	5,430	-,562	-1,054
Std. Error of Kurtosis		,467	,467	,467	,467	,467
Minimum		0	-3	0	,00	3,22
Maximum		77	16	38	11,71	12,32

Table 21: Tests of normality of residuals of regression model for additional analysis

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,093	105	,025	,959	105	,002

a. Lilliefors Significance Correction

Table 22: ANOVA table for additional analysis to asses regression model significance for additional analysis

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3670,167	11	333,652	2,614	,006 ^b
	Residual	11871,966	93	127,656		
	Total	15542,133	104			
2	Regression	5289,944	12	440,829	3,956	<,001 ^c
	Residual	10252,189	92	111,437		
	Total	15542,133	104			
3	Regression	10242,438	13	787,880	13,529	<,001 ^d
	Residual	5299,695	91	58,238		
	Total	15542,133	104			
4	Regression	10307,026	14	736,216	12,657	<,001 ^e
	Residual	5235,107	90	58,168		
	Total	15542,133	104			

a. Dependent Variable: Innovation propensity

b. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue

c. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Performance feedback relative to aspirations

d. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Performance feedback relative to aspirations, Beliefs about the effectiveness of innovation

e. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Performance feedback relative to aspirations, Beliefs about the effectiveness of innovation, interaction

Table 23: Model summary with Durbin-Watson test for assessing independence of error terms for additional analysis

Model Summary^e

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,486 ^a	,236	,146	11,298	,236	2,614	11	93	,006	
2	,583 ^b	,340	,254	10,556	,104	14,535	1	92	<,001	
3	,812 ^c	,659	,610	7,631	,319	85,038	1	91	<,001	
4	,814 ^d	,663	,611	7,627	,004	1,110	1	90	,295	2,021

a. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue

b. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Performance feedback relative to aspirations

c. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Performance feedback relative to aspirations, Beliefs about the effectiveness of innovation

d. Predictors: (Constant), ln_test_numberofemployees, Asia, SportsLeisure, BCAM, multinational, Casino, Museum, NorthAmerica, Europe, ThemePark, ln_test_annualrevenue, Performance feedback relative to aspirations, Beliefs about the effectiveness of innovation, interaction

e. Dependent Variable: Innovation propensity

Figure 11: Histogram for assessing normality for additional analysis

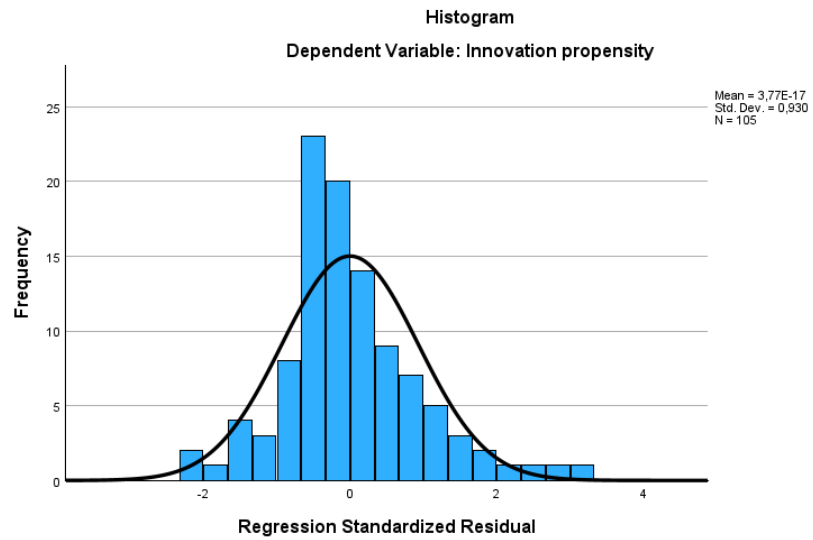


Figure 12: P-P plot for assessing linearity for additional analysis

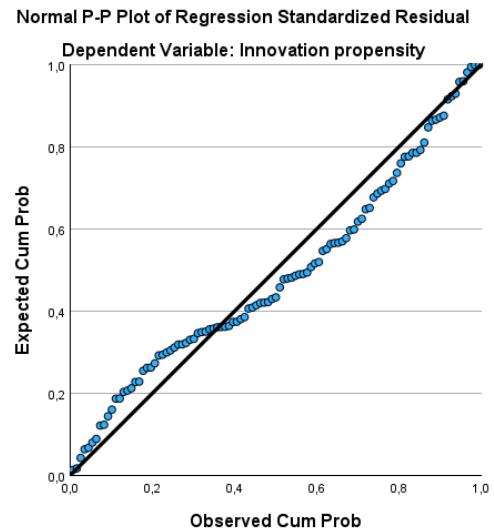


Figure 13: Scatterplot for assessing homoscedasticity for additional analysis

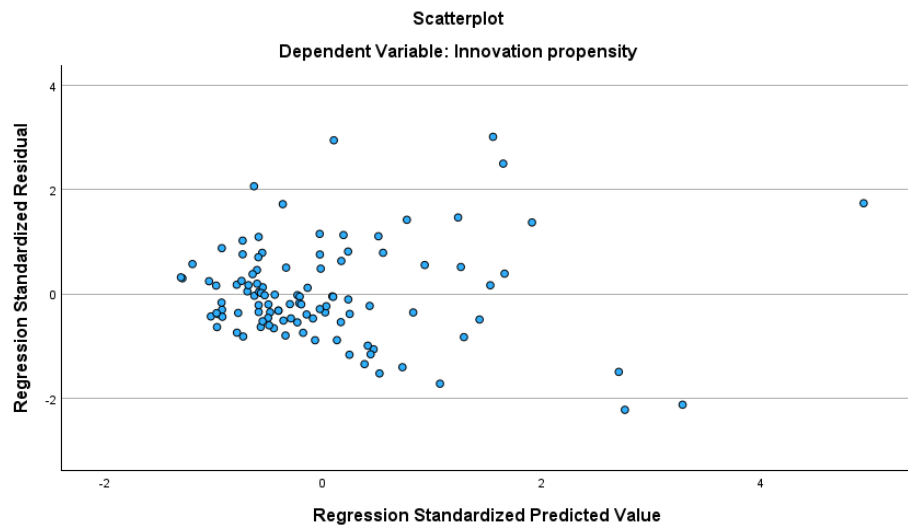


Figure 14: P-P plot if attempt is made to improve homoscedasticity for additional analysis, unsuccessful

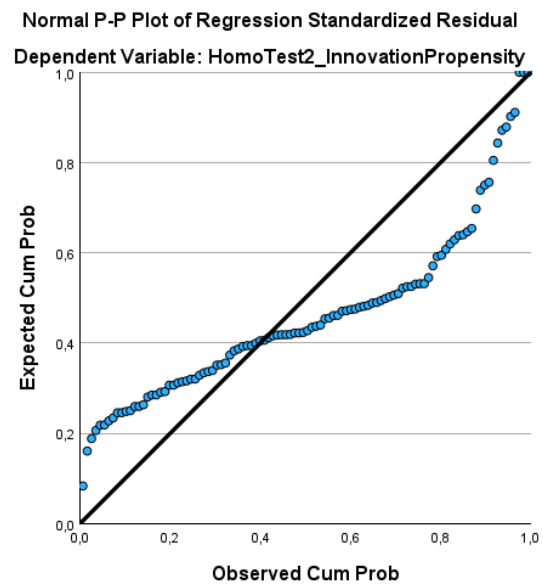


Figure 15: Scatterplot if attempt is made to improve homoscedasticity for additional analysis, unsuccessful

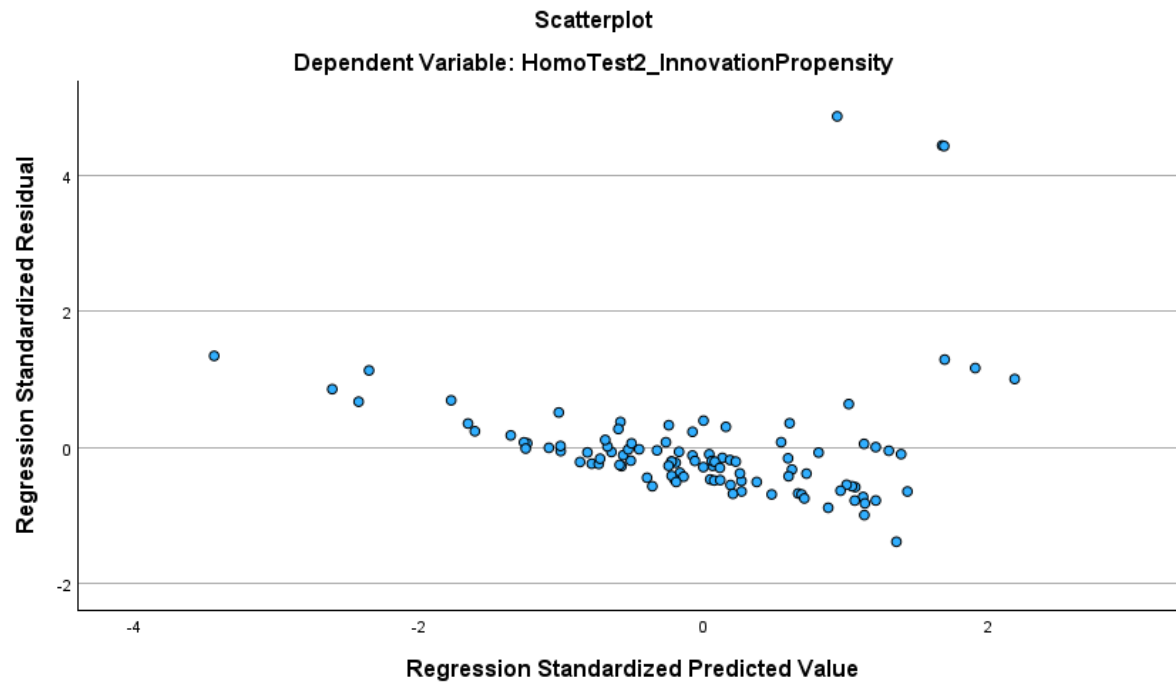


Table 24: Regression coefficients for additional analysis

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3,913	7,190		-,544	,588		
	BCAM	-2,575	6,050	-,067	-,426	,671	,328	3,047
	Casino	-4,730	5,462	-,166	-,866	,389	,225	4,452
	Museum	-6,791	5,534	-,178	-1,227	,223	,392	2,549
	SportsLeisure	-,722	6,383	-,016	-,113	,910	,424	2,359
	ThemePark	-7,021	5,171	-,282	-1,358	,178	,191	5,234
	Asia	8,599	4,874	,272	1,764	,081	,345	2,896
	Europe	5,564	4,522	,207	1,231	,222	,291	3,432
	multinational	,172	4,847	,005	,036	,972	,349	2,864
	NorthAmerica	-5,843	4,466	-,207	-1,308	,194	,327	3,057
	ln_test_annualrevenue	-,959	1,072	-,208	-,895	,373	,151	6,607
	ln_test_numberofemployees	3,450	1,236	,622	2,790	,006	,165	6,047
2	(Constant)	-7,300	6,776		-1,077	,284		
	BCAM	-1,232	5,663	-,032	-,218	,828	,327	3,059
	Casino	,056	5,255	,002	,011	,992	,212	4,721
	Museum	-4,120	5,217	-,108	-,790	,432	,385	2,596
	SportsLeisure	3,524	6,067	,077	,581	,563	,410	2,441

	ThemePark	-3,010	4,944	-,121	-,609	,544	,182	5,482
	Asia	8,542	4,554	,270	1,876	,064	,345	2,896
	Europe	5,061	4,227	,188	1,197	,234	,291	3,435
	multinational	3,005	4,589	,095	,655	,514	,340	2,941
	NorthAmerica	-2,383	4,271	-,085	-,558	,578	,312	3,202
	ln_test_annualrevenue	-1,001	1,002	-,217	-,999	,321	,151	6,608
	ln_test_numberofemployees	2,774	1,169	,500	2,374	,020	,162	6,189
	Performance feedback relative to aspirations	1,315	,345	,364	3,813	<,001	,787	1,270
3	(Constant)	3,106	5,027		,618	,538		
	BCAM	-5,620	4,122	-,147	-1,364	,176	,323	3,100
	Casino	-2,101	3,806	-,074	-,552	,582	,211	4,739
	Museum	-3,590	3,772	-,094	-,952	,344	,385	2,597
	SportsLeisure	-3,883	4,459	-,085	-,871	,386	,396	2,523
	ThemePark	-2,396	3,575	-,096	-,670	,504	,182	5,484
	Asia	-,962	3,449	-,030	-,279	,781	,315	3,179
	Europe	,656	3,093	,024	,212	,832	,284	3,519
	multinational	-,321	3,337	-,010	-,096	,924	,336	2,976
	NorthAmerica	-1,427	3,089	-,051	-,462	,645	,312	3,205
	ln_test_annualrevenue	,045	,733	,010	,062	,951	,148	6,770
	ln_test_numberofemployees	,341	,885	,061	,385	,701	,147	6,793

	Performance feedback relative to aspirations	,312	,272	,086	1,148	,254	,662	1,512
	Beliefs about the effectiveness of innovation	1,366	,148	,742	9,222	<,001	,579	1,727
4	(Constant)	3,205	5,025		,638	,525		
	BCAM	-5,562	4,120	-,145	-1,350	,180	,322	3,101
	Casino	-2,215	3,806	-,078	-,582	,562	,211	4,743
	Museum	-3,568	3,770	-,093	-,946	,346	,385	2,597
	SportsLeisure	-3,807	4,457	-,083	-,854	,395	,396	2,523
	ThemePark	-2,496	3,574	-,100	-,698	,487	,182	5,488
	Asia	-,627	3,462	-,020	-,181	,857	,312	3,206
	Europe	1,307	3,152	,049	,415	,679	,273	3,660
	multinational	-,497	3,339	-,016	-,149	,882	,335	2,983
	NorthAmerica	-1,598	3,091	-,057	-,517	,606	,311	3,214
	ln_test_annualrevenue	,064	,733	,014	,088	,930	,148	6,774
	ln_test_numberofemployees	,464	,892	,084	,520	,605	,145	6,911
	Performance feedback relative to aspirations	,001	,401	,000	,003	,997	,304	3,292
	Beliefs about the effectiveness of innovation	1,179	,231	,640	5,094	<,001	,237	4,220
	interaction	,033	,031	,164	1,054	,295	,155	6,460

a. Dependent Variable: Innovation propensity