The role of transformational leadership and innovation adoption in restaurant performance

O papel da liderança transformacional e adoção da inovação no desempenho do restaurante

Sara Joana Gadotti dos Anjos ២

University of Vale do Itajaí, Postgraduate program in Tourism and Hospitality, Brazil, sara@univali.br

Vitor Roslindo Kuhn ២

University of Vale do Itajaí, Postgraduate program in Tourism and Hospitality, Brazil, vitorkuhnchef@gmail.com

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Abstract

Resumo

The objective was to analyse the innovation influenced by transformational leadership in restaurant industry performance. The online questionnaire was applied via Amazon Mechanical Turk. Data collection reached 254 restaurant sector professionals, and their responses were analysed using descriptive statistics, correlation, and multiple regression. The results indicated that the innovation dimensions (menu, experiential, promotion, and technology) correlate positively and highly with transformational leadership. Innovations' impact and predictive power on restaurant performance were assessed, with leadership level as a weighting. The innovations related to the menu have the highest positive impact, followed by the innovations in promotion and experience. However, the innovation in technology had no significant impact. The result of the study provides theoretical and empirical contributions to the restaurant industry, generating propositions of innovative actions and highlighting the importance of transformational leadership. In the end, innovation is a critical part of any strategy to strengthen competitiveness and must be actively managed by leadership, stimulating the generation of new ideas and their conversion into marketable solutions.

Keywords: Innovation adoption, transformational leadership, restaurant performance, menu innovations, innovativeness.

O objetivo foi analisar a inovação influenciada pela liderança transformacional no desempenho do setor de restaurantes. A aplicação de questionário online foi via Amazon Mechanical Turk. A coleta de dados alcancou 254 profissionais do setor de restaurantes e suas respostas foram analisadas com estatística descritiva, correlação e regressão múltipla. Os resultados indicaram que as dimensões de inovação (menu, experiencial, promoção e tecnologia) possuem correlação positiva e alta com a lideranca transformacional. Foi avaliado o impacto e poder preditivo das inovações no desempenho do restaurante, tendo o nível de liderança como ponderador. A inovação relacionada ao menu possui o maior impacto positivo, seguida das inovações em promoção e experiencial. No entanto, a inovação em tecnologia não teve impacto significativo. O resultado do estudo fornece contribuição teórica e empírica para o setor de restaurante, gerando proposição de ações inovadoras e destacando a importância de uma liderança transformacional. Ao final, a inovação é uma parte crítica de gualquer estratégia para fortalecer a competitividade, deve ser ativamente gerenciada pela liderança, estimulando a geração de novas ideias e sua conversão em soluções comercializáveis.

Palavras-chave: Adoção de inovação, liderança transformacional, desempenho do restaurante, inovações no menu, carácter inovador.

1. Introduction

Innovation is crucial for the growth and success of industries and service providers, as it allows them to differentiate themselves from competitors and offer prospects for economic growth (Carvalho & Carvalho, 2014). Ideas, knowledge, commitment, and the ability to innovate are what set companies apart (Sousa et al., 2019). The innovation process depends on effective management, organisation, planning, and providing the necessary conditions, time, and resources for innovation (Ottenbacher & Harrington, 2010).

In the context of the restaurant industry, innovation plays a significant role in enhancing a tourist destination's competitiveness. It promotes the destination, creates memorable experiences, and contributes to travel motivations (Horng & Tsai, 2012). Restaurants, therefore, serve as unique competitive advantages and innovative promotional strategies for tourism-related organisations, strengthening economic and development networks (Allan, 2016). The restaurant industry is highly competitive, characterised by small businesses, low barriers to entry, and conscientious consumers who are sensitive to economic and social trends (Assaf et al., 2011). The COVID-19 pandemic has further emphasised these characteristics. Economic conditions became uncertain, and the fear of an economic recession haunted many countries (Lahindah et al., 2020), leading to the closure of many restaurants and bankruptcy filings (Abrasel, 2021; Estadão Conteúdo, 2021) as the pandemic had devastating effects on the tourism and hospitality industries (Ugurlu, Akay, & Demirel, 2023; Erul et al., 2023; Unguren & Arslan, 2022). This time of crisis leads entrepreneurs to exercise their best competencies in the management of the enterprise. Faced with complex problems, creativity and innovation can lead to overcoming them, making a difference and improving the business situation (Abrasel, 2021). Therefore, innovation, characterised by creativity, problem-solving, and fresh perspectives, is a pivotal aspect of this sector (Işık et al., 2022).

Industry innovation has been shown to positively impact business performance, sustainable competitiveness, customer satisfaction, and behavioural loyalty (So et al., 2022). Previous studies have examined marketing innovation and its relationship to competitiveness (Olazo, 2022), as well as the impact of technological and service innovation on restaurant performance

(Chattopadhyay & Shah, 2014; Supriadi et al., 2022) and overall innovativeness on business success (Tan et al., 2019). The role of innovation becomes evident in the context of starred restaurants, where it stimulates creation, enhances the quality of products and services, and contributes to a unique dining experience (Meneguel et al., 2019). This innovative approach influences tourist satisfaction and drives the entire industry (Gómez-Rico et al., 2022), impacting brand perception, behavioural intentions, and destination image (Ding et al., 2022). It is therefore critical to emphasise that innovation goes beyond digital transformation and must be actively managed to stimulate the generation of new ideas and their conversion into customer solutions and marketable products (Vargas-Sánchez & López-Guzman, 2015). Leadership plays a crucial role in this process, which should be centred around power sharing and joint control rather than traditional notions of power and control (Nicolaides, 2006). Leadership that fosters trust in employees instils confidence for change and encourages commitment beyond self-interest (Indrayani & Wahyudi, 2020).

Transformational leaders are recognised as change agents, visionaries who trust people, value-driven leaders, oriented towards lifelong learning, and able to deal with complexity, ambiguity, and uncertainty (Jovičić Vuković et al., 2018). Transformational leadership has already been extensively tested concerning employee satisfaction and engagement in hospitality (Elkhwesky et al., 2022). In addition, its impact has also been evaluated in the restaurant context regarding food safety practices (J. E. Lee et al., 2013), employee quality of life (H. Kim et al., 2021), and customer-oriented behaviour (Mostafa, 2019). The relationships between transformational leadership and innovation are being investigated. Studies with chefs recommend that leadership supports creative processes that are collective in nature (Vargas-Sanchez & López-Guzmán, 2020). Transformational leadership has been found to positively influence employee creativity by increasing involvement in generating innovative ideas (Cheung & Wong, 2011). Leadership skills are important for promoting employee creativity, engagement, and long-term success (Mrusek et al., 2022). Thus, innovation seeks to provide differentiated solutions to problems and thus represents a break from previously provided solutions. Transformational leadership's inspirational and empowering aspects ultimately lead to commitment beyond self-interest and the subordinates involved. It represents a commitment to a vision and action that creates change agents with enhanced perceptions of self-efficacy, inspirational motivation, intellectual stimulation, and creative behaviour (Alamir et al., 2019). With this, innovation and leadership are key elements in an organisation's product and service offerings and is a process of seeking and recombining existing factors (Vargas-Sánchez & López-Guzman, 2015).

While innovation studies often explore the impact of innovation on performance, they have failed to recognise the crucial precursor role of leadership. On the other hand, restaurant innovation research has focused on specific innovations, neglecting a comprehensive perspective. Moreover, there is a notable lack of studies exploring the connection between transformational leadership, innovation adoption, and business performance in the restaurant industry. This scarcity of research reinforces the need to address these interrelationships and advance scientific knowledge in the area, justifying the identification of the research problem. Given this context, the article's objective was to analyse the innovation influenced by transformational leadership in the performance of the restaurant sector. To achieve the objective, the research began with a bibliometric approach, grounding the collection instrument based on innovation adoption (E. Kim et al., 2018), transformational leadership (H. Kim et al., 2021), and restaurant performance (Chien & Tsai, 2021). Statistical inferences of reliability, correlation, and multiple regression were used to measure and ascertain the relationships and predictions of the measures.

The research is believed to contribute to the academic field of food service and in perspective to the tourism industry. It seeks to fill gaps in the literature by delving deeper and clarifying the importance of diversified innovation adoption and the role of transformational leadership in restaurant performance and entrepreneurial activities. Moreover, this research can assist restaurant managers in developing innovative strategies and enhancing their leadership style by aiming for inspirational motivation and intellectual stimulation of employees.

2. Literature review

Foodservice plays a crucial role in tourism activity (Okumus et al., 2018); it not only contributes to the overall appeal of a destination but also serves as a gateway to local produce and unique cultural experiences (Naruetharadhol & Gebsombut, 2020). Thus, a significant portion of a tourist's budget is allocated to dining experiences. Consequently, activities associated with food consumption substantially impact the GDP of the world's economies (Naruetharadhol & Gebsombut, 2020).

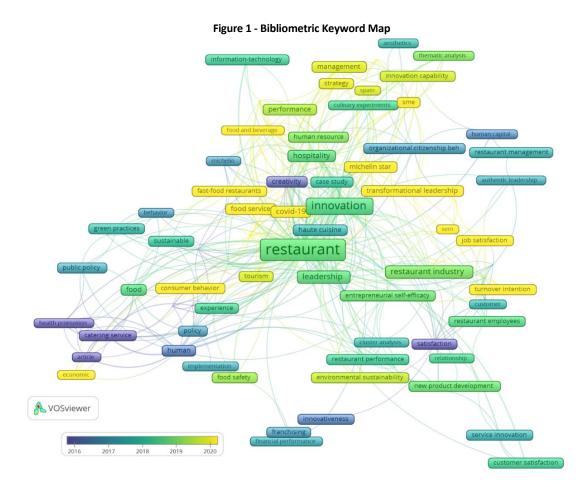
As eating out has become an integral part of people's lifestyles, researchers and innovative chefs have employed scientific methods using gastronomy to explore traditional and new flavours (Okumus et al., 2018). Thus, food tourism enables a holistic connection between food, culture, and the destination (Naruetharadhol & Gebsombut, 2020). In this context, studies have focused on investigating the factors that drive strategy and performance in the restaurant industry, with innovation as a valuable strategy.

2.1 Initial mapping in the context of the restaurant sector

To gain initial insights, a bibliometric survey was conducted using a well-established methodological approach commonly employed in management, consumer behaviour, and marketing research. This approach has seen increased adoption in studies focused on

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the Tourism Sector (Zupic & Čater, 2015). The search in the Scopus and Web of Science databases, covering the period from 2012 to July 2022, involved investigating abstracts, titles, and keywords using the terms 'restaurant AND (innovation OR leadership)'. A total of 256 peer-reviewed articles were identified after eliminating duplicates. Using VOSviewer, we created a bibliometric map of the authors' keywords, which facilitated the visualisation of interactions between the survey themes related to restaurant, innovation, and leadership. Figure 1 represents the co-occurrence of the term 'Keywords Authors' with more than three occurrences, utilising overlay visualisation techniques (Van Eck & Waltman, 2020).



Source: own elaboration

The interpretation of the image should consider the following: larger-sized terms indicate higher citation frequency, central placement reflects stronger relationships with other terms, and the colour scheme at the bottom of the image denotes the temporal concentration of citations. This result was achieved by averaging the citation years, highlighting the relevance of subjects appearing in more recent studies (Van Eck & Waltman, 2020).

Some cases worth noting are concentrated in 2020: the appearance of the specific discussion of the transformational leadership style, the use of regression-based techniques such as structural equation modelling (SEM), and the proximity of the terms management and strategy with the innovation capability approach. Among what is most frequently cited about innovation, which was already expected, is the isolated term innovation. The next terms are 'innovation capability' and 'innovativeness' (as well as 'restaurant innovativeness'), which demonstrate different approaches to interpreting and analysing the innovation content within an organisation.

2.2 Leadership

In a period of crisis, the role of a leader and their style of managing and finding solutions is crucial (H. Kim et al., 2021). Leadership styles are characterised as a pattern of the techniques used to encourage employees to implement instructions and the behaviour used by leaders in the workplace to control, interact, and communicate with their subordinates (Radwan & Radwan, 2020).

Effective leadership encompasses essential skills such as charisma, natural authority, mastery, and vision. Additionally, integrity, communication, influence, and participative decision-making play crucial roles in leadership. Leaders have the authority to make

decisions that can significantly impact their subordinates, particularly in driving innovation, enhancing organisational improvement, and boosting performance (Castañeda García et al., 2023; Elkhwesky et al., 2022; H. Kim et al., 2021).

In the restaurant context, the articles address diverse leadership styles reflected in employee behaviour, work engagement, and customer orientation. Destructive Leadership traits, commonly used by Chefs, are identified as potential to transform decaying restaurants (Lee et al., 2013; Mostafa, 2019). Authentic leadership is accountable for its actions, avoids manipulation of the follower, and possesses a balanced perspective when serving as a leader; self-awareness and behaviours are consistent with self-knowledge; it encourages trust and is committed to organisational success. There is a correlation between authentic leadership and the extra effort and perceived effectiveness of the followers (Jacques et al., 2015); the significant effect on trust in the leader and job performance (S. M. Lee et al., 2016); and the contribution of authentic leadership to have an engaged workforce and to increase restaurant job satisfaction (Sharma et al., 2021).

In the case of servant leadership, leaders pay more attention to people, that is, their followers. This is the main difference distinguishing transformational leadership from servant leadership; they put the needs, aspirations, and interests of other people before their own interests, as the main intention is to serve others first, rather than lead (Peng & Chen, 2021). Servant leadership style results in building more commitment and healthy working relationships, making employees actively participate in achieving organisational goals (Carter & Baghurst, 2014) in addition to having a negative relationship with turnover rate and a positive ethical climate among restaurant employees (Ullah et al., 2021).

Regarding transformational leadership, the leaders are driven to provide or make changes in their organisations, which may include transforming the current structure, influencing subordinates or followers to accept a new vision and possibilities, and influencing others to instil their trust in leaders. Followers use their leader as an example to follow (Alamir et al., 2019). According to the literature, transformational leadership is based on four key aspects. Firstly, charismatic influence is where the leader inspires pride and respect and motivates followers to exceed performance expectations. Secondly, individualised consideration involves the leader paying attention to the developmental needs of subordinates and assigning work projects that stimulate learning experiences. Thirdly, inspirational motivation utilises symbols and emotional appeals to encourage members' efforts and motivate them to achieve more than their interests dictate. Finally, intellectual stimulation fosters innovative thinking and problem-solving skills and encourages followers to question assumptions, reframe problems, satisfy intellectual curiosity, and unleash their imagination (Cheung & Wong, 2011; H. Kim et al., 2021). Transformational leadership fosters a mindset among leaders that seeks to generate new ideas and strategic perspectives, resulting in a highly influential leadership style that impacts organisational outcomes. It cultivates the readiness and ability to adapt to new directions, leading to improvements in intellectual capital, innovation capacity, and ultimately, high levels of work and managerial performance (Gui et al., 2022; Le & Lei, 2019; Permana et al., 2022).

In the restaurant context, transformational leadership is researched as influencing customer-oriented behaviour (Mostafa, 2019), the increase in commitment to change and quality of life at work (H. Kim et al., 2021); the power in keeping business aligned with competitive and strategic human resource practices (Ntlhanngoe & Chipunza, 2021); the relationship of leadership style with social responsibility and environmental performance in restaurant management (Tosun et al., 2022); and the effectiveness of interventions in the organisation based on spirituality and transformational leadership, measuring its influence on restaurant performance (Widjaja et al., 2020).

Transformational leadership style has also been used in hospitality and tourism sector studies, demonstrated most often in the hospitality sector, working on the positive influences on Innovative behaviour, organisational commitment, and creativity performance (Alamir et al., 2019; Gu et al., 2017; Jovičić Vuković et al., 2018). Therefore, it is known that there are varied leadership styles that, consequently, have different influences. Thus, there is pressure to implement an effective leadership style in the enterprise to remain innovative, maintain and develop structures, improve employee performance, and be aware of continuous improvements in demand (Radwan & Radwan, 2020). Transformational leadership has been closely linked to individual creativity, as it inspires subordinates to surpass their capabilities and find better ways of accomplishing tasks (Cheung & Wong, 2011). Transformational leaders engage in trust-building behaviours and foster engagement among followers, enhancing their self-efficacy and promoting higher-quality service (Lee et al., 2013). This leadership style also presents compelling arguments for its impact on performance in adopting innovation and idea generation within service and hospitality companies. Transformational leaders can be role models for innovation, influencing subordinates to reevaluate their work environment and generate innovative ideas (Jun & Lee, 2023). By creating a supportive culture that encourages experimentation and discussion of innovative approaches, transformational leadership effectively promotes the capacity for innovation (Le & Lei, 2019).

Furthermore, studies have shown that transformational leadership significantly influences incremental and radical innovation by encouraging employee knowledge-sharing (Gui et al., 2022). Ultimately, transformational leaders play a crucial role in



organisational innovation by modifying business practices and motivating employees to adapt to new trends, fostering a connection with the innovation process (Nguyen et al., 2023).

2.3 Innovation

In response to the economic crisis caused by the pandemic, the restaurant sector needs to embrace innovative changes in management and operations to adapt to the changing environment and ensure business survival (Najib et al., 2021). Examining innovation in the culinary business sector during the Covid-19 crisis is crucial as it is closely intertwined with entrepreneurship and organisational performance (Lahindah et al., 2020). Innovation serves as an effective strategy for companies to differentiate themselves by transforming resources into unique and irreplaceable values (Zhu & Huang, 2023). In the restaurant industry, innovation is vital in enhancing competitiveness (Supriadi et al., 2022), fostering development, and sustaining operations (Chattopadhyay & Shah, 2014). Additionally, chefs can contribute to innovation through value creation, learning, and applying tacit knowledge (Wu et al., 2023).

The definition of innovation relates to its driving force in capitalist society, and business leadership plays a crucial role in reshaping or reinventing service and production processes. This occurs to exploit an invention or a technological possibility commercially, either by producing a new product or by delivering an old product in a new way (Schumpeter, 1961). Therefore, it is seen as an organisational culture that encourages the generation of new ideas, products, and processes, followed by the creation of new products, services, and technologies (Chattopadhyay & Shah, 2014).

The study of restaurant innovation encompasses various aspects, including recognising culinary product innovation as a distinctive set of skills and competencies that can provide a competitive edge. This involves product formulation, implementation, evaluation, and introduction (Harrington, 2004). As research progressed, a more structured process emerged, which included idea generation, screening, conceptualisation, and training. Achieving success in restaurant innovation relies on a combination of creativity, talent, experience, and effective process management (M. Ottenbacher & Harrington, 2008). Furthermore, the literature has expanded to encompass the role of creativity in the restaurant innovation process, aiming to understand chefs' creative behaviour from a systemic perspective (Stierand et al., 2014). To foster creative and innovative behaviour in individuals, it is essential to promote acquiring new task-related skills or recombining existing knowledge. This can be accomplished through cognitive and behavioural processes such as reflection, experimentation, knowledge exchange with colleagues and superiors, and adopting an effective leadership style (Cangialosi et al., 2020). However, having an innovative idea alone is insufficient, as converting ideas into tangible products or services is crucial. While all chefs possess creative talent, successful innovations require diligent work and implementing a proven innovation process, emphasising strong management capabilities (Ottenbacher & Harrington, 2008). Culinary entrepreneurs embrace innovation in their business models from two perspectives: the 'Solo Planner', a risk-taking and highly innovative profile, betting on meeting technological and market demand, and the 'Surrounded by Networker' profile, in the incremental innovation approach, seeking to do enough to bring back customers (Harms et al., 2021).

The concepts of 'innovation capability' and 'innovativeness' can be interpreted as synonyms in some ways and focus on a firm's ability to develop and implement new ideas and products at an accelerated pace (E. Kim et al., 2018). Table 1. presents sets of definitions for these concepts.

Table 1- Definitions of Innovativeness and Innovation Capability.					
Definition of Innovativeness	Authors				
Successful implementation of creative ideas within an organisation	(Amabile et al., 1996)				
A company's ability to develop and implement new ideas and products at an accelerated pace	(Hurley & Hult, 1998)				
The creation of substantial new value for customers and the company by creatively changing one or more dimensions of the business system	(Sawhney et al., 2007)				
Broad activities of a food service company that demonstrate an ability and willingness to consider and institute unique and significantly different ideas, services, and promotions	(E. Kim et al., 2018)				
Definition of Innovation Capability	Authors				
Renewal of ongoing business processes or products and services that have stagnated within the existing business	(Slater, 1997)				
The ability of the company to seek new and better ways to implement tasks may take the form of new products, new services or processes, better management and administration systems and structures, and better marketing strategies	(Brem & Voigt, 2009)				
The ability to integrate, build and transform company resources to generate something new, improved and significantly useful, which results in the delivery of value	(Barney et al., 2011)				
The renewal of ongoing business processes or stagnant services and products within the company	(Tan et al., 2019)				

Table 1- Definitions of Innovativeness and Innovation Capability.

Source: own elaboration



The literature extensively explores the common factors shared by innovative organisations and their impact on managing innovation. Studies have identified leadership style and strategy as important managerial aspects. Intra-organisational factors include the work environment, individual activity, ideation process, and technology. The inter-organisational dimension considers external relations, knowledge networks, and regeneration (Mendoza-Silva, 2020). Similar aspects can be seen in the characteristics of encouraging learning, individual consideration, and promoting idea generation of transformational leadership (Cheung & Wong, 2011; Gui et al., 2022; H. Kim et al., 2021; Le & Lei, 2019; Permana et al., 2022). Regardless of the approach taken, innovation capacity remains a crucial component in creating a successful business in the modern world's uncertain economic and political climate (Tan et al., 2019).

The approach to innovation among restaurant studies is quite distinct. Culinary innovation is examined from the exquisite case of elBulli Restaurant. Three functions that institutionalise innovation are identified in the discourse: conceptualisation, socialisation, and control demonstrating that discourse is a driver to follow creative paths (Pilar Opazo, 2012). The culinary innovation process, classically based on tacit knowledge, can receive advantages by adding innovation process strategies from the manufacturing industry (Nagai & Silveira Torres Junior, 2021). When looking at product innovation specifically, its implementation is driven by solid and diversified partnerships with suppliers, improving the performance of independent restaurants (Cho et al., 2018). It is worth noting that the process of menu innovation is propelled by market saturation (Mifli et al., 2017).

Government support plays a positive role in the survival of small restaurant businesses, particularly through marketing and process innovations (Najib et al., 2021). Public policies promoting environmentally friendly products and waste management contribute to green innovation and increased restaurant environmental safety (Mekhum et al., 2020). Moreover, environmental innovations are linked to restaurants' competitive advantage (Bertan & Alkaya, 2020).

Finally, when analysing service innovation, its positive influence on restaurant performance is ascertained, with aspects of innovation adoption level, sustainable innovation, technology, and organisational learning as indicators (Chou et al., 2016), as well as trust and knowledge sharing, are also mediators for service innovation performance in restaurants (Ogunmokun et al., 2020).

Given these empirical contexts, deepening theoretical knowledge in the restaurant sector is crucial, as it encompasses both incremental service improvements and radical changes (Otengei & Ahebwa, 2021). The restaurant sector requires continuous improvement due to the ease of duplication, which diminishes the competitive advantage of innovation. Furthermore, a multidisciplinary and proactive approach is essential for innovation in this sector (Fernández-Pérez de la Lastra et al., 2020). The approach seen in studies involving product/menu innovation, marketing innovation, technology innovation, and experiential innovation are good examples of application (E. Kim et al., 2018; Lahindah et al., 2020; C. Lee et al., 2019).

Experiential innovation in the restaurant sector focuses on creating innovative interaction environments that foster long-term customer relationships. It emphasises employee collaboration to generate and discuss ideas, providing unique customer experiences (E. Kim et al., 2018).

In the restaurant sector, innovation is closely tied to new menu items, changes in the gastronomic atmosphere, and process improvements aligned with service and distribution methods such as home delivery, online orders, and reservations (C. Lee et al., 2019; Tan et al., 2019). Menu innovations in starred restaurants are particularly important, as they rely on the chef's performance, creativity, and entrepreneurial character for business success (Vargas-Sanchez & López-Guzmán, 2020). Product innovation success in restaurants depends on factors such as exclusivity, differentiation, and novelty. Similarly, menu innovation has been proven to be a significant source of success, allowing professionals to learn from successful examples and explore diverse sources of information for idea generation (Chattopadhyay & Shah, 2014; E. Kim et al., 2018).

In promotion (marketing) innovation, four aspects are traditionally identified: product design, new pricing strategies, new marketing concepts, and new promotional concepts (Olazo, 2022). Promotional innovation is further defined as a company's proficiency in providing diverse opportunities to effectively reach customers (E. Kim et al., 2018) and successfully penetrate new markets (Najib et al., 2021). Various types of innovations can be related, such as discount promotions, happy hours, internet marketing, online reservation systems, outdoor advertising, smartphone applications, use of social media to promote the business, and partnerships with external companies (C. Lee et al., 2019).

Finally, technological innovation significantly influences marketing in the food industry, enhancing business performance by utilising new tools and applications (E. Kim et al., 2018; Lichy et al., 2022). However, product and process innovation strongly contributes to technological innovation by changing current processes and meeting customer demands (Tian et al., 2023). Furthermore, technology is an emerging area of study in the restaurant sector, capable of enhancing customer experiences, senses, and overall satisfaction (Wong et al., 2022).



2.4 Relationships between innovation, transformational leadership and performance

Performance refers to evaluating a company's achievements and state during a specific period. It is determined by operational activities, resource utilisation (Permana et al., 2022), and the ability to achieve organisational goals (Ngo, 2023). Strong leadership is crucial in maintaining solid performance due to external pressures on businesses (Castañeda García et al., 2023). Performance measurement is vital for strategy formulation and company development. It involves subjective and objective measures tied to financial results, product quality, delivery deadlines, customer satisfaction, and stakeholder satisfaction (Fernandes, 2012). In the restaurant context, performance encompasses service quality, sales, profitability, and growth rate (Chien & Tsai, 2021). Evaluation can be done through financial indices or by questioning top management (Castro-Lucas et al., 2013). Entrepreneurs perceive good performance subjectively, aligning with asset returns and sales growth (Dess & Robinson, 1984). Subjective measures can be a viable substitute when objective performance measures are lacking.

Foodservice sector organisations should prioritise leadership that values continuous idea generation for innovative development. This emphasis on innovation increases engagement in value-creation strategies and subsequently enhances business performance (Saunila, 2014). Proactive and entrepreneurial behaviour also supports adopting new products and processes, improving business performance (Najib et al., 2021).

The effort of innovation and improvement of competencies and capabilities significantly contribute to performance (Chattopadhyay & Shah, 2014; Tan et al., 2019). From this perspective, the chef's competence is decisive in the culinary innovation process, which brings performance to the restaurant in terms of the market (Wu et al., 2023). Operating in new markets also forces the restaurant to achieve better performance (Lahindah et al., 2020), and improving the connection between promotional innovations and sustainable competitiveness will strengthen the final performance (Olazo, 2022).

Digital and technological innovations have successfully influenced small restaurants' financial performance (Supriadi et al., 2022). Product and process innovation improves performance, effectiveness, value creation, problem-solving, and competitive advantage (Tian et al., 2023).

In summary, innovation has a range of positive impacts on economic performance, including cost reduction, performance improvement, productivity increase, job satisfaction, and knowledge acquisition (Zhu & Huang, 2023). Ultimately, the capacity to regularly create and implement innovations is essential for the survival and growth of organisations (Pascual-Fernández et al., 2021).

To foster long-term innovation, companies must develop organisational capabilities. However, a disparity often exists between a company's aspirations and its actual capacity, leading to failed innovation initiatives or challenges in sustaining performance (Mendoza-Silva, 2020). To address this gap effectively, adopting transformational leadership becomes crucial, as it has a significant impact on team development, morale, and overall performance in the service industry, including financial and non-financial aspects such as customer satisfaction, repeat business, team development, and employee morale (J. E. Lee et al., 2013).

Due to its constantly changing business environment, transformational leadership assumes even greater importance in the restaurant industry. A transformational leader can mitigate negative attitudes toward new ideas and changes among employees (Permana et al., 2022). This process involves articulating a vision, setting high-performance expectations, and demonstrating helpful behaviour (Tian et al., 2023). Effective leadership is associated with improved subordinates' quality of life, team empowerment during crises, and increased commitment to job performance (H. Kim et al., 2021; J. E. Lee et al., 2013). Based on the arguments presented, two questions were formulated to help achieve the research objective:

- Does transformational leadership have a positive relationship with the innovation adopted in the restaurant?
- Does the innovation adopted, moderated by transformational leadership, have predictive power on restaurant performance?

3. Methodology

The article is theoretically based on a bibliographic research approach, employing bibliometric surveys to synthesise and understand the relationship between innovation, leadership, and their application in restaurants (Zupic & Čater, 2015). It falls under the category of field research with an exploratory objective, enabling data collection within the context of the restaurant sector (Prodanov & Freitas, 2013). A quantitative approach was chosen to achieve the research objective, facilitating the systematic collection of quantifiable data regarding the perceptions of the target population (Dencker, 1998).

3.1 Sampling and data collection

The research was conducted with a target audience of American restaurant workers, thus being defined by a non-probabilistic sampling by judgment (Barbetta, 2002). Data collection occurred via an online questionnaire distributed on Amazon Mechanical



Turk (Mturk) in August 2022. The guidelines of 10 respondents per questionnaire item were used to calculate the sample size, thus aiming to reach 290 individuals in the final sample (Hair et al., 2009).

3.2 Measures

The questionnaire was built based on the following criteria: 17 items measuring innovation, being menu (5 items), technology (4 items), experiential (4 items), and promotion (4 items) (E. Kim et al., 2018); 5 items for restaurant performance evaluation (Chien & Tsai, 2021); 7 items to ascertain the level of transformational leadership (H. Kim et al., 2021); in addition to counting some questions for identifying the respondent's profile.

3.3 Analysis procedure

After collecting the data through a virtual application, it was tabulated using Microsoft Excel 2017 and analysed with JASP software. Two descriptive measures were used: the mean, calculated as the sum of all values divided by the number of cases, and the standard deviation, which indicates the variance of the collected data and verifies its adherence to the mean (Field, 2009).

To ensure the validity and internal consistency of the measures and minimise variations in responses, a reliability analysis was performed using Cronbach's alpha and composite reliability, with a validation limit of 0,700 (Hair et al., 2009). Spearman's correlation was employed to examine the relationship between innovation and leadership. The results were presented in a correlation matrix, indicating the strength and significance of the relationship (ranging from -1 to 1) and the p-value (expected to be below 0.005). Positive or negative relationships were determined, indicating whether an increase in one variable corresponded to an improvement in another (Field, 2009).

Multiple linear regression was used to analyse certain variables' correlation and predictive power on restaurant performance. This analysis determined whether there was a positive or negative correlation between variables and assessed the influence of independent variables on the dependent variable (Field, 2009; Hair et al., 2009).

4. Results

The initial sample set reached 349 respondents, and after eliminating the incomplete questionnaires, the final sample obtained a total of 254 cases, getting a valid response rate of 72.78%. The sample is predominantly male (61.40%), aged between 20 and 30 years (48.80%), and a large portion between 31 and 40 years (32.70%). As for the restaurant positions, most respondents (64.96%) hold managerial positions, including general manager, assistant manager, and food and beverage manager. The characterisation of the respondents is detailed in Table 01.

Table 1- Demographic profile of the respondents.						
	n	%				
Gender						
Female	98	38,60%				
Male	156	61,40%				
Age Range						
20 to 30 years old	124	48,80%				
31 to 40 years old	83	32,70%				
41 to 50 years old	22	8,70%				
More than 51 years old	25	9,80%				
Professional Position in the Sector						
Management	165	64,96%				
Kitchen manager	31	12,20%				
Production sector	35	13,78%				
Service sector	23	9,06%				

Table 1- Demographic profile of the respondents.

Source: survey's data

4.1 Validity of measures

A total of 29 items were used to ascertain the adoption of innovation by the restaurant influenced by the transformational leadership style and the impact on the restaurant's performance of the company's activities. For each variable and dimension, its mean value and standard deviation were calculated, making it possible to analyse which had greater or lesser adoption strength in the restaurant.

To ensure the interpretability of the dimensions, Bartlett's sphericity test was conducted, yielding a significant result ($x^2 = .455,533$; df = 406; p < 0,001). Additionally, the Kaiser-Meyer-Olkin (KMO) measure was employed, producing a value of 0.925, which indicates high adequacy based on existing literature (Field, 2009). Convergent validity was assessed through the analysis of Standardised Loads and reliability measures. All standardised loads were significant (p < 0,001) and exceeded the threshold of 0,500 (Hair et al.,



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2009). Furthermore, all dimensions exhibited desirable levels of reliability, as evidenced by Cronbach's alpha and Composite Reliability values exceeding 0,700 (Anderson & Gerbing, 1988). Detailed results can be found in Table 2.

	кмо	Standardised	Cronbach's	Composite	Mean	Standard
imension		Loading *	alpha	Reliability		Deviation
Transformational Leadership			0,798	0,843	3,96	± 0,58
lid_01	0,887	0,806			3,87	± 0,82
lid_02	0,925	0,676			4,08	± 0,93
lid_03	0,893	0,642			3,97	± 0,84
lid_04	0,929	0,585			3,93	± 0,89
lid_05	0,909	0,603			3,89	± 0,87
lid_06	0,910	0,576			4,03	± 0,84
lid_07	0,917	0,714			3,96	± 0,81
Menu Innovation			0,730	0,743	3,94	± 0,60
i.menu_01	0,893	0,702			3,87	± 0,83
i.menu_02	0,938	0,706			3,95	± 0,92
i.menu_03	0,915	0,625			3,94	± 0,85
i.menu_04	0,921	0,554			4,04	± 0,87
i.menu_05	0,935	0,561			3,91	± 0,85
Technology Innovation			0,749	0,766	3,85	± 0,70
i.tec_01	0,916	0,632			3,89	± 0,95
i.tec_02	0,936	0,688			3,78	± 0,86
i.tec_03	0,957	0,672			3,87	± 0,97
i.tec_04	0,936	0,690			3,85	± 0,91
Experiential Innovation			0,729	0,755	3,80	± 0,68
i.exp_01	0,944	0,709			3,82	± 0,94
i.exp_02	0,915	0,634			3,83	± 0,82
i.exp_03	0,949	0,747			3,73	± 0,93
i.exp_04	0,916	0,627			3,81	± 0,93
Promotion Innovation			0,743	0,766	3,85	± 0,71
i.pro_01	0,951	0,602			3,88	± 0,89
i.pro_02	0,957	0,697			3,89	± 0,97
i.pro_03	0,945	0,652			3,75	± 0,92
i.pro_04	0,953	0,730			3,88	± 1,02
Restaurant Performance			0,703	0,749	4,04	± 0,55
des_01	0,894	0,617			4,02	± 0,79
des_02	0,943	0,619			4,09	± 0,89
des_03	0,916	0,611			3,95	± 0,82
des_04	0,914	0,624			4,09	± 0,86
des_05	0,871	0,588			4,07	± 0,73

Table 2 - Validity of dimensions and measures of mean and standard deviation.

Note: *All standardised loadings are significant at the 0,001 level, n=254. Source: survey's data

With the mean measure, it is possible to view an overall representation of each dimension that the total sample reported, while the standard deviation values will bring understanding about the variability among that representation, indicating error variance (Field, 2009). When observing the averages, the values were generally very close, with the highest value in the restaurant performance dimension. In the face of the whole period to manage the crisis caused by the pandemic, the sample questioned got around the situation, reaching a good performance by the respondents' perception. It is worth noting that the lowest standard deviation also belongs to performance, demonstrating a certain standard in the opinion of the questioned professionals.

Among the innovations adopted, the one related to menu obtained the highest mean value and the lowest standard deviation. In a way, it indicates a consistent direction that restaurants focused on developing new ideas for the menu, customisation, new flavour combinations, and improved presentations. As for technological innovations and in promotion (marketing and relationship), the highest standard deviation values occurred.

4.2 Correlation analysis

To understand the relationship between the leadership style and the type of innovation adopted in the restaurant, a strategy of correlation analysis by the Spearman method was performed. Table 3 presents the results of the correlations obtained between the Transformational Leadership style (H. Kim et al., 2021) and the four dimensions of innovation investigated in the context of the Restaurant Sector (E. Kim et al., 2018). All dimensions correlated significantly with each other (p <0.001) (Field, 2009) and did not show multicollinearity, as the correlation values did not exceed 0,900 (Tabachnick & Fidell, 2018).

Dimension	Transformational leadership	Menu innovation	Technology innovation	Experiential innovation	Promotion innovation	Restaurant performance
Transformational leadership	-					
Menu innovation	0,775*	-				
Technology innovation	0,695*	0,781*	-			
Experiential innovation	0,721*	0,766*	0,763*	-		
Promotion innovation	0,694*	0,733*	0,750*	0,797*	-	
Restaurant performance	0,695*	0,686*	0,651*	0,654*	0,654*	-

Table 3- Spearman's correlation analysis

Note: * = *p* < 0,01

Source: survey's data

The results indicate that the Transformational Leadership style is more strongly related to Menu Innovations than to Experiential Innovations, as well as being further away from Technological and Promotion Innovations, which have the lowest strength of relationship. However, all relationship coefficients are positive, signalling that the higher the level of transformational leadership, the higher the innovation adoption in the restaurant context.

Although correlation coefficients do not establish causality, they can be used to calculate the coefficient of determination (R²), which measures the variation in one measure explained by another. In this case, R² provides insights into the extent to which Transformational Leadership explains the variation in different innovation types: 60.06% for Menu innovation, 48.30% for technology innovation, 51.98% for experiential innovation, and 48.16% for promotion innovation (Field, 2009).

4.3 Multiple linear regression analysis

A multiple linear regression was carried out to measure the impact that each type of innovation adopted (independent variables) generated in the restaurant's performance (dependent variable), taking into account the weighting of this relationship by the level of Transformational Leadership that occurs in the restaurant. The forward method was chosen, and the results showed that there was a significant influence of only three types of innovation adoption on performance (F(3, 253) = 83.176, p < 0.001; R^2 adjusted = 0.494). Innovations in technology adopted by the company showed no significant impact (B = 0.049, t = 0.779, p = 0.437) (Field, 2009; Hair et al., 2009). Table 4 presents the coefficients for all significant predictors.

Predictors	Standardised coefficients Beta	t	Sig.	R ²	DR ²
(Constant)		8,611	0,001	-	-
Menu innovation	0,364	5,345	0,001	0,427	-
Promotion innovation	0,199	2,622	0,009	0,482	0,055
Experiential innovation	0,210	2,597	0,010	0,494	0,012

Table 4- Results of the multiple regression

Note: dependent variable = restaurant performance; weighted by Transformational Leadership. Source: survey's data

Innovation in menu, promotion and experiential have positive and significant predictive power on restaurant performance, considering the weighting of the transformational leadership level, with the whole model having the power to explain 49.40% of the outcome on performance.

As can be seen, the dimension with the highest predictive power is menu innovation, with a strength of 0.364 and being able to explain 42.70% of the outcome on performance. The other innovations adopted have a lower predictive power of 0.199 for promotion and 0.210 for experiential, and together, they added to the model power of explanation of 6.70% on the outcome of performance.

We checked certain assumptions to demonstrate the predictive model's good fit. As indicated by Cook's distance values, we found no cases that could influence the regression model, which were all below 1. Additionally, fewer cases with standardised residual values above 2 were less than 5% (n=12), and none exceeded 3 (Field, 2009).

We analysed the partial regression graphs and did not observe any non-linear patterns, thereby meeting the assumption of linearity for each independent variable. The constancy of residuals, indicating homoscedasticity, was demonstrated by examining the plot of residuals and predicted values. The independence of the residuals was also confirmed by examining the graphs between the residuals and the independent variables (Hair et al., 2009).



The normality of the residuals was confirmed through the histogram, which exhibited a typical normality curve, and the normal probability diagram, which displayed a linear graph with points forming a diagonal line. Autocorrelation was assessed using the Durbin-Watson test, which yielded a value close to 2 (2.05), indicating no autocorrelation in the data. We examined the VIF (Variance Inflation Factor) values to investigate multicollinearity. As expected (Field, 2009), all independent variables had values below 10.

5. Discussion

The main findings of this study were obtained through multiple linear regression analysis, which weighted transformational leadership style. The results revealed a predictive relationship between the innovations adopted (menu, promotion, and experimental) and restaurant performance, except technological innovation, which proved insignificant. Reliability was initially established for innovation (E. Kim et al., 2018), restaurant performance (Chien & Tsai, 2021), and transformational leadership measures (H. Kim et al., 2021), confirming the validity of these dimensions in the restaurant industry. In addition, strong correlations were observed between transformational leadership and menu and experiential innovation.

The results support the indication that leader ability has a direct positive relationship with innovation in the restaurant industry (C. Lee et al., 2016), supporting the prediction that leaders who are self-confident in their abilities manifest this belief in more innovative behaviours. However, leadership should focus on fostering an organisational culture characterised by openness, participation, tolerance for diversity, and acceptance of mistakes. Such a culture encourages collective creative processes (Vargas-Sanchez & López-Guzmán, 2020). Transformational leadership is associated with organisational cultures that facilitate risky activities, promote the inclination of companies to innovate through their support and strategy, and disseminate new visions and creative ideas (Nguyen et al., 2023).

By examining small cafes, the hypothesis that implementing innovative actions has predictive power over the performance of small cafes and restaurants in Australia was proven (C. Lee et al., 2016). This can be observed through the strategic adoption of innovative product development, service improvement, and marketing practices, leading to increased restaurant sales rates (Gunday et al., 2011). Furthermore, recent studies have revealed that different types of innovation have varying effects on performance indicators such as growth and profitability.

A study in the restaurant industry in Indonesia showed that innovation in promotion (marketing), product (menu), and processes has a positive influence on the final performance of organisations, and also found that entrepreneurial aspects of leadership and creativity are influencers of beloved innovation (Lahindah et al., 2020). In the context of entrepreneurs in the gastronomy industry in Germany, it was seen that the response to the crisis was successful through adopting innovation in their business models, either through incremental innovation or a disruptive innovation approach (Harms et al., 2021).

Alternatives to increase product-driven innovation are the development of partnerships, which leverage the restaurant's performance. It has also been found that diverse partnerships have a more positive effect than partnership strength on driving product innovation (Cho et al., 2018). The chef's role is critical for restaurants seeking to maintain a competitive edge, encompassing leadership, innovation, and entrepreneurship. The ability to innovate and create is vital to success, as Vargas-Sanchez and López-Guzmán (2020) point out.

Clear evidence shows how product-driven innovation, or culinary innovations, influence performance. However, restaurant entrepreneurs claim they generate new ideas by imitating competitors' promotion practices, insight, and analysis of customer experiences and feedback (C. Lee et al., 2019). To this end, the successful implementation of innovations lies in strategic management choices and effective communication among stakeholders, including suppliers and customers (Mrusek et al., 2022).

In this study, the significance of technological innovation as a predictor of restaurant performance was inconclusive, contradicting previous research findings. Technology plays a crucial role in promoting innovation in the industry by enabling greater customer involvement in various processes, which in turn leads to satisfaction and loyalty (E. Kim et al., 2018). Already in the context of food trucks, evidence suggests that technological innovation influences marketing strategies for brand development and awareness of the unique value proposition, differentiating it from direct and indirect competitors (Lichy et al., 2022). Wong *et al.* (2022) point out that the restaurant industry with technology is a new study area to explore through immersion in technologically advanced environments. It highlights how technology can awaken our senses and enhance the dining experience and customer satisfaction. It emphasises service quality and information technology research to understand the psychological sustainability of the customer. However, implementing new ideas encounters barriers to workers' resistance and the customer's acceptance. On this issue, leadership effectively focused on developing and encouraging innovation is essential. Transformational leaders need to improve employee self-efficacy in addition to team competencies; new skills possessed by employees make it possible to leverage the service level and taste of the Menu (Safrizal et al., 2020). Thus, a focus on creativity and strategic innovation management is needed,

as implementing creative ideas in practice requires diligent innovation management to minimise failure rates and maximise learning (Mrusek et al., 2022).

Ultimately, it is evident that the restaurant industry is competitive and sensitive to change. In this scenario, entrepreneurs must enhance and exercise their best skills in management, creating an environment to think about issues of process innovation, customer experience improvement, and market differentiation (E. Kim et al., 2021). With this, in the face of decision-making in times of crisis, many ideas emerge by instinct, research, and conscious planning. The use of innovation can cause overcoming, being fundamental in the strategy to strengthen competitiveness and improve the search for differentiated solutions to problems, causing a break from previous solutions (Harms et al., 2021).

In a complementary way, the business leadership brings the attribution of reformulating or recreating processes, services, and products in the middle of this cycle. The aspects of inspiration and empowerment generated by Transformational Leadership ultimately lead to the commitment to a vision and action that creates change agents with enhanced perceptions of self-efficacy, inspirational motivation, intellectual stimulation, and creative behaviour (Alamir et al., 2019; Jovičić Vuković et al., 2018). Therefore, transformation leaders are recognised as change agents and visionaries who trust people and can deal with complexity and uncertainty. Ultimately, innovation and leadership are paramount in the product and service offerings of an organisation seeking to face crisis scenarios and improve its performance.

6. Conclusions and implications

The objective of this article was to analyse the innovation influenced by transformational leadership in the performance of the restaurant sector. The path to achieve this result began with a bibliographical survey with a bibliometric approach. Using descriptive and correlation tests made it possible to measure and understand the relationship between the issues addressed. After online collection with workers from the restaurant sector, it was possible to analyse the relationship of the transformational leadership style with the adoption of innovation in the company, with leadership having a positive and strong correlation with increased levels of adoption of innovation in menu, promotion, experiential and technological. In the end, the analysis process is closed with results that demonstrate how menu, promotion and experiential innovations positively predict the outcome of restaurant performance, considering the level of transformational leadership that occurs in the company. The analysis of the results reinforces that innovation adoption is critical to any strategy to strengthen a company's competitiveness. However, it must be actively managed by leadership, stimulating the generation of new ideas and their conversion into customer solutions and marketable services.

The research has significant implications in terms of process and outcome. Theoretically, it demonstrates a strong relationship between transformational leadership and innovations adopted, although not all innovations predict performance. It is important to recognise that the restaurant innovation process may not be uniform, and future studies should carefully investigate the specific types of restaurants involved. Furthermore, this study presents a new approach by examining the interaction between leadership, innovation, and performance in the restaurant context. It reaffirms the notion that quality and innovative menu offerings and customer experience are crucial to performance in the restaurant service industry. The findings indicate that development in technological innovation should be further worked on in the industry, also seeking to increase its future investigation as a predictor of performance.

From a managerial perspective, understanding which types of innovation have predictive performance power can inform the development of competitive strategies. Moreover, understanding these relationships allows one to propose innovative actions that span multiple aspects of the firm. By implementing such actions, managers gain a clear understanding of transformational leadership at critical decision-making moments in the economic marketplace.

Some limitations can and should be reported: the study has its cross-sectional collection approach, hindering a long-term perception of cause and done; and the non-use of more complex analysis techniques, such as structural equation modelling, involving other dimensions that would help understand the relationship between leadership, innovation adoption, and restaurant performance. In future research, it is suggested to explore the perception of clients about innovations in the restaurant and the variation of performance in this context; the investigation of the leadership effect on the financial performance of the company; and the search for longitudinal investigations in the context of restaurant service, visualising the continuous impact of innovation adoption.

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Credit author statement

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