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About the Journal

The journal is published by Great Lakes Institute of Management, Gurgaon, India. The aim of the journal is to attract articles that address issues the industry is currently facing. A special focus is on articles that provide innovative solutions to these issues. The journal articles not only are of interest to academics, but also, with their focus on relevance, should be of interest to policy makers, think tanks, government, corporate and multilateral institutions, professionals, and industry leaders. Manuscripts undergo a double-blind peer review process, and the journal follows all international journal publication norms. The journal is published with an open-access format so that it reaches the maximum readers. Journal Publishing Services for publication are powered by Sage Spectrum.

Aims and Scope

GLIMS Journal of Management Review and Transformation aims to publish scientific, empirical research on the theory, practice, and contemporary perspectives of management focusing on the problems, interest, and concerns of managers. It aims to explore interesting questions and phenomena in management, develop and/or test theory, replicate prior studies, and review and synthesize existing research.

Within its scope are all aspects of management related, but not limited, to strategy, entrepreneurship, innovation, information technology, digital business, analytics, artificial intelligence, machine learning, and policy and organizations, as well as all functional areas of business, such as organizational behavior, human resource management, accounting, finance, marketing, operations, data and analytics, and technology transformation.

This journal intends to publish a variety of articles including quantitative and qualitative empirical research articles and conceptual articles that provide novel perspectives on recent business phenomena. To achieve our aim of writing about business transformation, the journal will also include case studies and book review articles. It would also publish abstracts of PhDs that are relevant and in-line with the journal's objectives.

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Editorial

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Dear Readers,

Welcome to the latest edition of the *GLIMS Journal of Management Review and Transformation*. Our ongoing mission is to present you with cutting-edge insights and perspectives from the contemporary world of management. We hope to inspire you to engage in the critical and creative exploration of the challenges and opportunities faced by today's organisations.

In this issue, we are pleased to offer a diverse collection of articles covering a wide spectrum of topics, ranging from leadership and economics to innovation and organisational culture. Our contributing authors bring their unique perspectives and expertise from both academic and industry backgrounds to address these pressing issues.

A prominent theme that resonates throughout this issue is the critical importance of adaptability and resilience in the face of uncertainty and change. Be it in the context of global pandemics, shifting market dynamics or the emergence of new technologies and business models, organisations that can swiftly pivot and dynamically evolve are the ones most likely to prosper in the long term.

Another recurring theme is the necessity for leaders to nurture a growth mindset and foster a culture of continuous learning and development. In an era where skills and knowledge can quickly become obsolete, the ability to learn rapidly and adapt to new challenges is more vital than ever.

The articles featured in this issue aim to provide valuable insights and inspire our readers as they navigate the complex and ever-evolving field of management. We trust that you will find this issue informative and thought-provoking, and we encourage you to share your feedback and ideas with us. As always, we welcome submissions from scholars, practitioners and thought leaders who share our passion for advancing the field of management and driving positive change in organisations.

We extend our gratitude for your continued support and eagerly anticipate your contributions.

Warm regards,

Dr. Akhter Mohiuddin Rather
*Editor, GLIMS Journal of MRT,
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The Past, Present and Future of Artificial Intelligence

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Abstract

Artificial Intelligence (AI) is touching everyone's lives in today's world. The term 'Artificial Intelligence' was coined by John McCarthy in 1956 at the Dartmouth Conference. From its birth till now, AI has emerged as a diverse and flourishing research domain. This article explores the events leading to the birth of AI domain and its establishment (i.e., past), and traces the more recent achievements of AI and its current major themes (i.e., present). Based on these historical trajectories and novel influences, the article attempts to explore the future of AI. The future of AI domain is extremely promising with major possibilities including big data, cognitive science and artificial life.

Keywords

Artificial intelligence, big data, expert systems, cognitive computing, artificial life

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Introduction

Artificial intelligence (AI) has emerged as a popular and established domain in research, academics and business. This field emerged from research on early computers and found relevant business applications in emerging software and digital technologies. This led to increased demand for trained professionals, and to fulfil this demand AI proliferated into academics.

Today, there is widespread research and business applications of AI. This has led to AI becoming a buzzword in common conversations as well as corporate boardrooms. Of course, AI has come a long way. Nevertheless, how far have we

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progressed? This article tries to envisage the future of AI, based on the past and present trends in AI research.

The Past

The roots of foundational work leading up to the emergence of AI as a domain can be traced back to the early philosophers and mathematicians. Turing (1950) was the first paper to discuss the possibility of AI. John McCarthy coined the term ‘Artificial Intelligence’ during the Dartmouth Conference in 1956, and the field of AI as a domain was established.

The Conception

One of the earliest streams of research, directly leading to the birth of AI, was the neural net stream of AI research. McCulloch and Pitts (1943) were the first to trigger the field of neural net research. The different research streams on Cybernetics (Wiener, 1948), Information Theory (Shannon, 1948) and Theory of Computation (Turing, 1936) came together to envisage the possibility of an artificial brain.

In a parallel development, Alan Turing and other researchers were interested in understanding the process and limits of computability. These attempts led to the development of the Turing Machine by Alan Turing (1936; 1950), the Lambda Calculus by Church (1936), and the Production System by Post (1943).

The Birth

Marvin Minsky, John McCarthy, Claude Shannon, and Nathan Rochester organised the Dartmouth Conference of 1956 (Crevier, 1993; McCorduck, 2004; Newquist, 1994; Russell & Norvig, 2003). The conference proposal mentions: ‘every aspect of learning or any other feature of intelligence can be so precisely described that a machine can be made to simulate it’ (McCarthy et al., 1955). Ray Solomonoff, Oliver Selfridge, Trenchard More, Arthur Samuel, Allen Newell and Herbert A. Simon, participated in the conference and went on to contribute towards early research on AI (McCorduck, 2004). Newell and Simon presented the first working program (i.e., ‘Logic Theorist’) and McCarthy coined AI as a domain (McCorduck, 2004). The 1956 Dartmouth conference is widely accepted as the time and place for creating AI as a domain. Crevier (1993, p. 49) writes, ‘the conference is generally recognized as the official birthdate of the new science’.

The Baby Steps

The AI domain has evolved with researchers focusing on varied aspects and resulting in multiple themes. These varied AI themes arose out of different philosophical assumptions about AI as well as other historical influences. Some of these early developments in various AI themes are highlighted briefly below.

Neural Nets

One of the themes is the neural networks stream of research, which also played a key role in the emergence of AI. Marvin Minsky developed the first artificial neural network called SNARC in 1951. The SNARC was able to simulate a mouse running in a maze.

Among the earliest artificial neural nets developed was perceptron by Rosenblatt (1958), which stimulated interest from many researchers. The enthusiasm for research on perceptrons was negatively impacted by Minsky and Papert's (1969) conjecture that perceptrons had inherent limitations which would continue to exist even in future developments. While their hypothesis was later proven incorrect, this did not help stimulate research on perceptrons. The research on Parallel Distributing Processing (PDP; McClelland et al., 1986; Rumelhart et al., 1986) again stimulated research on neural nets in the 1980s.

Machine Learning

Arthur Samuel (1959) developed the checker-playing program as one of the early machine-learning initiatives. He developed a program that was capable of 'learning', and thus contributed to the evolution of 'machine learning' as one of the important themes within AI domain.

Problem Solving Simulation

One of the early interests among AI researchers was to attempt and prove that machines can be programmed to solve abstract problems requiring intelligent reasoning, similar to the ability of human minds. The 'logical theorist' displayed at the Dartmouth Conference (1956) was the earliest program in this stream of research. The logical theorist used a means-ends framework to analyse and choose the appropriate means to approach towards the desired ends. Simon and Newell (1959) developed 'general problem solver' and Gelernter developed 'geometry theorem-prover', which were among the early systems developed in this research stream.

Natural Language Processing (NLP)

One of the important streams of AI research is concerned with understanding language. Winograd (1972) developed the SHRDLU, which was one of the earliest programs in this stream of research. The SHRDLU was capable of understanding English language commands and moving objects accordingly. This stream of research remains an important and flourishing field of research.

Expert Systems

Some AI researchers were ambitious and tried to solve real world problems, rather than develop programs having ability to deal with abstract problems. This needed 'knowledge' related to the specific real-world domain, in addition to solving capabilities. This gave rise to 'expert systems' (also called knowledge-based systems) stream of AI research. Joshua Lederberg, Edward Feigenbaum, and Bruce Buchanan developed 'Dendral' in 1965, which was developed as the first expert system developed to leverage knowledge of organic chemistry for identifying molecular structure from mass spectrometers (Lindsay et al., 1980). This was followed by other expert systems such as Mycin (Davis et al., 1977) which helped in medical diagnosis.

The Present

Today, the AI research has progressed greatly in a variety of themes. After discussing the history, birth and early developments in the AI domain, some of the recent developments as well as major research themes are discussed in this section to provide an informed perspective.

Recent Developments

The AI domain has progressed over a period. There have been some significant milestone events in this journey, which contributed as success stories of AI and keep inspiring the interest of researchers in this domain. Some of these are discussed below.

Expert Systems

Expert Systems have become a major force in driving AI applications in businesses. One of the commercially successful expert systems was XCON (McDermott, 1980), which contributed by saving a lot of money for DEC (Digital Equipment Corporation). The expert systems contributed greatly to making AI a popular buzzword across the world.

Deep Blue

In 1997, the World Chess Champion Gary Kasparov was defeated in Chess by the AI program 'Deep Blue'. This marked an important stepping stone and made headlines across the world, as AI had now successfully defeated human intelligence. The Deep Blue was developed by IBM and was inspirational for future researchers.

Robbin's Conjecture

E.V. Huntington developed three axioms to characterise a Boolean Algebra in 1933. Herbert Robbins proposed a substitution for the third axiom. This Robbin's conjecture was considered one of the unsolved problems in mathematics, till an AI program called EQP (Equational Prover) solved this (McCune, 1997). This was another win for AI over human intelligence.

Watson at Jeopardy

An AI program called Watson contested against two successful human champions in the 2011 famous TV Show called Jeopardy. Watson was able to defeat both the Human opponents by using its NLP algorithms for answering the trivia questions as part of Jeopardy. This was one more instance of AI beating humans at our own game.

Game AI

The computer gaming industry is one of the largest users of AI. The industry needs to rely heavily on AI capabilities for programming the behaviours of their virtual characters and digital environment. The ability of these AI characters and games to successfully engage humans in a challenging environment is considered a success story for the application of AI.

Major AI Research Themes

Given the emergence of AI from an amalgamation of various overlapping and parallel streams of research, as well as the distinct focus areas of researchers, the AI domain covers multiple research streams. Each of these research streams boast of a thriving research community including dedicated journals and conferences. Some of these are discussed below.

Knowledge Representation

AI programs need to be able to take some input, process it, and provide some output. This needs the AI to use some approach for representing the input as well as the process outcome in some form of knowledge representation, so that the appropriate output can be delivered. This central argument highlights the focus on knowledge representation as an important theme in the AI domain.

Expert Systems

One of the early subfields of AI domain is the expert systems stream of research. Researchers in this area of knowledge are interested in aspects related to process of reasoning, representation of knowledge and knowledge engineering. They aspire to apply these AI processes to solve real-life problems.

Planning

Assigning sequences of action in most efficient and effective manner remains a prominent area of AI research called planning. This enables optimisation of the planning process. This is found to be very useful for a variety of applications ranging from manufacturing plant operations to space exploration.

Heuristic Search

This stream of AI research uses different heuristics to find satisfactory solutions, rather than optimal solutions. These programs use rules of thumb, called heuristics, to find a solution that satisfies the given constraints. These are useful for data mining, games, web searching and other applications.

Natural Language Processing

NLP subfield of AI domain includes the generation as well as understanding of natural language. This traces its history to the early evolution of AI domain, and continues to flourish. This finds applications including voice recognition, machine translation, automatic summarisation and many other processes.

Machine Vision

The Machine Vision subfield of AI domain deals with the recognition and analysis of visual images. This is enabling applications of AI in traffic surveillance, military surveillance, space imaging, product inspection, and many emerging applications.

Machine Learning

The AI subfield of Machine Learning focuses on the ability of machines to learn. This is among one of the earliest subfields of AI domain. This is evolving and

progressing to include supervised learning, unsupervised learning, autonomous agents and developmental robotics.

Artificial Agents

This stream of AI research encompasses the AI programs which operate in an environment and respond to inputs in a manner that their earlier actions may influence their subsequent inputs, environment, and actions (Franklin & Graesser, 1997). These artificial autonomous agents range from programs operating on data and/or the internet, visual characters visible on monitor screens, voice characters talking to humans and robots taking actions in real world.

Intelligent Tutoring Systems

The AI subfield dealing with programs that can tutor or teach humans interactively is called Intelligent Tutoring Systems. The existing approaches in this stream of research include tutoring in mathematics and short textual paragraphs. The key challenge in this field is the ability of the Intelligent Tutoring System to gain adequate knowledge of a human domain of knowledge. This remains a domain with a promising future.

Robotics

Robotics owes its origins to mechanical engineering researchers trying to develop mechanisms to perform actions such as grasping and lifting objects. Today, AI domain has brought more intelligent control systems—to capture a variety of inputs, better processing abilities, and more complex outputs—to develop better robots. Robotics is now an important stream of research in the AI domain.

The Future

The above sections discuss the developments from the birth of the AI domain to its important developments and themes. We discuss the future of AI based on some of the trends. This section highlights the direction of future progress of AI domain.

AI and Big Data

The world is increasingly growing digital, and more and more data is now captured. With the increase in the quantity of data, speed of capturing, and variations in types of data—commonly known as Big Data—the data scientists are increasingly turning to AI. It is becoming humanly impossible for statisticians to deal with analysing the Big Data. AI provides the ability of analysing large amounts of rapidly increasing complex data for identifying relevant patterns. This is an increasingly dominant application of AI in future.

Agent-based AI

Most of the AI programs employed in today's world are increasingly found to be some form of autonomous AI agents. The agent-based AI (Varela et al., 1991) is

increasingly finding applications across the world. The recent proliferation of various generative AI programs (e.g., ChatGPT) is evidence of its great potential. This holds promise for the future of the AI domain.

Soft Computing

Soft computing is the stream of AI research that deals with a range of computational techniques focusing on humanly difficult computations involving uncertainty, ambiguity, and other challenges. These include fuzzy logic, neural nets, evolutionary computing and artificial immune systems. The increasing use of hybrid soft computing programs along with the increasing volatility, uncertainty, complexity, and ambiguity in the real world highlight the increasingly need for applications of soft computing in the AI systems of the future.

Cognitive Computing

Cognitive computing includes diverse perspectives including self-aware systems, autonomic computing, artificial general intelligence, cognitive robotics and development robotics.

Self-aware systems are the subfield of AI domain that focuses computer systems being aware of themselves. Brachman (2004) explains:

A truly cognitive system would be able to...explain what it was doing and why it was doing it. It would be reflective enough to know when it was heading down a blind alley or when it needed to ask for information that it simply couldn't get to by further reasoning. And using these capabilities, a cognitive system would be robust in the face of surprises. It would be able to cope much more maturely with unanticipated circumstances than any current machine can.

Autonomic computing focuses on systems capable of organising, analysing, and repairing themselves. This is one of the promising areas for the future of AI domain research.

Artificial general intelligence deals with creating artificial programs that are almost as intelligent as humans in exhibiting general intelligence, rather than a narrow functional intelligence. This is still a nascent, but extremely potent research area within the AI domain.

The cognitive robotics subfield of AI domain attempts to create robots with cognitive skills. The idea is to evolve the focus of robotics from 'how to perform certain action?' to 'which action to perform?'

Another constituent of Cognitive Computing area of AI domain is Development Robotics. This approach focuses on enabling robots to learn themselves continually, similar to humans. To achieve these ambitious goals, development robotics relies on overlap of development psychology, robotics, and machine learning. This aspires to prepare robots for a future contingency that may be unpredictable or unimaginable.

AI and Cognitive Science

Modelling of human intelligence and human cognition is a fundamental aspiration for the AI domain. The science of AI therefore continues to attempt deeper understanding of cognitive science. In this process, while AI domain borrows a lot of knowledge from cognitive science, the AI domain applications also generate data and information that needs to be compared and validated in cognitive science. This has generated immense future possibilities in the AI domain. Today cognitive science is one of the emerging and futuristic subfields of AI domain.

Artificial Life

One of the exciting frontiers of AI domain is exploring artificial life. Artificial life is currently explored in three different approaches—hard life, wet life and soft life. Hard life refers primarily to the hardware that is able to act like living beings, and includes robots. Wet life refers to the life forms created in test tubes in laboratories using biochemical processes and generally resemble small bacteria, but may include more advanced beings with progress in biotechnology. Soft life refers to software programs that emulate life like actions in their software environment. The future aspires to combine these three forms of artificial life, to perhaps produce the perfect human like living machine. This is a challenging but exciting field of future exploration.

Conclusion

The discussion above describes the history, birth, development, current state, and future possibilities of the AI domain. The field has taken great strides and made impressive progress. However, the initial aspirations of achieving human level intelligence remain unachieved. While there is an increasing realisation of the complexities and milestones for machines to achieve human intelligence, there is also an increased exploration of the opportunities and risks hidden in the future possibilities of the evolution of AI.

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Transformational Leadership and Constructive Deviance: Mediating Effects of Perceived Organisational Support and Knowledge Sharing

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Abstract

This study examines the influence of transformational leadership on constructive deviance (CD) by examining two potential mediating variables: perceived organisational support (POS) and knowledge-sharing behaviour. The findings provide vital empirical evidence supporting a strong positive impact on CD in employees. The mediatory effect of POS and knowledge-sharing behaviour on the relationship between transformational leaders and CD has also been empirically substantiated by the study. Moreover, the study sheds light on sequential mediation of the POS, knowledge sharing and POS behaviours translating transformational leader–employee interactions into CD. Some of the implications of the study suggests focussing on transformational leaders to promote positive behaviours among workforce and encouraging knowledge sharing to increase CD at work. The study will offer valuable insights for organisations seeking to promote positive deviant behaviours and create a supportive and innovative work environment.

Keywords

Constructive deviance, transformational leadership, perceived organisational support, knowledge sharing, leadership

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Introduction

Constructive deviance (CD) which is defined as ‘behaviours that deviate from organisational norms but benefit the organisation’ has received increasing attention in organisational and human resource management research (Neubert et al., 2008; Sharma & Singh, 2018). This phenomenon is significant to organisations, as it can lead to innovation, creativity, higher engagement levels and improved performance (Sharma & Singh, 2018). Therefore, understanding the factors that influence CD within organisations is important for promoting a positive and efficient work culture. One such factor that has been identified in relation to CD is leadership style (Neubert et al., 2008).

Within organisations, leadership style has a major impact on how employees behave and think. According to research, different leadership philosophies have varying impacts on aberrant conduct. For instance, it has been proposed that transformational leadership, which is characterised by its focus on inspiring and motivating followers (Neubert et al., 2008), may actually inspire CD. Other leadership philosophies, such as transactional, laissez-faire, and abusive leadership, on the other hand, can have distinct impacts on aberrant behaviour (Qi et al., 2022). Organisations must comprehend how different leadership philosophies affect CD in order to properly manage and encourage such behaviours.

Despite the growing body of research on CD and leadership (Li & Wang, 2021; Zhang et al., 2022), there are still significant gaps in the general understanding, particularly when it comes to the relationship between transformational leadership and CD. While some studies have suggested a link between the two, the mechanisms underlying this relationship remain unclear (Shabbir & Hassan, 2022). Although previous studies have pointed out the role leadership style plays in influencing deviant behaviours that are beneficial to the organisation, the specific mechanisms via which transformational leadership affects CD dominantly remain unexplored. This highlights the need for further exploration of mediating variables that may help explain how transformational leadership influences CD. Furthermore, the literature lacks an in-depth understanding of how transformational leadership can foster a sense of organisational support and promote knowledge-sharing behaviour (KSB), thus creating an environment conducive to CD.

With a focus on two potential mediating variables, perceived organisational support (POS) and KSB, this study aims to close this gap by studying the impact of transformational leadership on CD. According to Connelly and Kelloway (2003), POS measures how much employees believe their employer values and care about their contributions. The voluntary sharing of knowledge and information among employees is referred to as KSB, which is essential for innovation and organisational development (Kim & Park, 2020). How does the degree of POS influence KSB, or vice versa, and what impact does this interaction have on CD? This multifaceted association requires a comprehensive and rigorous exploration to truly advance our understanding of the dynamics of CD in organisational settings.

This study’s findings will have a significant impact on both theory and practise. From a theoretical standpoint, this study will advance the body of knowledge on CD

by elucidating the link between transformational leadership (TL) and CD. Two mediating variables that have not been considered in prior studies will also be highlighted in this study. From a practical standpoint, the findings will offer valuable insights for organisations seeking to promote positive deviant behaviours and create a supportive and innovative work environment (Lamsam & Charoensukmongkol, 2022). By identifying factors that facilitate CD, organisations can develop strategies to enhance employee engagement, creativity and overall performance (Lamsam & Charoensukmongkol, 2022).

The subsequent segment of this article introduces a review of the existing literature and hypotheses formation to guide the study. Further, the methodology section elucidates the procedures employed for data collection and analysis. This is succeeded by a section focused on the presentation of the collected data and its subsequent analysis, encompassing all obtained results alongside their corresponding interpretations. Later, subsequent sections delve into the discussion of findings, their implications, acknowledged limitations and the conclusion for the study.

Literature Review

Transformational Leadership and Employee Behaviours

According to the well-researched concept of TL (Erkutlu, 2008), followers must be inspired and motivated to put aside their own interests in order to meet the demands of the group or organisation as a whole. Although charismatic-transformational leadership is very common, several people have expressed reservations about its conceptual clarity and underdeveloped causal model (Knippenberg & Sitkin, 2013). According to research (Yahaya & Ebrahim, 2016), TL increases organisational commitment, employee satisfaction with the leader and leadership effectiveness (Dana et al., 2022). Additionally, it has been discovered that TL influences innovative work behaviour, with knowledge sharing moderating this link and job crafting behaviours mediating it (Afsar et al., 2019). Work withdrawal, organisational commitment and family-friendly programmes have all been studied in relation to TL. According to these research works (Wang & Walumbwa, 2007), TL was found to influence the correlations between these variables.

The results of previous studies consistently show that transformational leaders have a good influence on the behaviours of workers. For instance, Afsar & Umrani (2020) looked at the connection between TL and innovative work behaviour and discovered that employees' motivation to learn was positively impacted by transformational leadership. Through a mediation of employees' organizational citizenship behavior, Jiang et al. (2017) found that TL significantly improved employee sustainable performance. In another study by Carter et al. (2013), it was found that transformational leadership, employee commitment to change and job performance throughout an organisational shift have a favourable association. Li et al. (2019) investigated how empowerment, work engagement and trust in the leader all affect how innovatively individuals behave at work. The psychological empowerment of followers acted as a moderator in

correlations between transformational leadership and employee task performance and organisational citizenship behaviours, according to research by Dust et al. (2014) on the empowering impacts of transformational leaders. These studies demonstrate that by building a positive organisational culture and motivating staff to go above and beyond the call of duty, transformational leaders can improve employee performance.

Constructive Deviance at Work

CD, also known as positive deviance, involves behaviours that challenge established norms and rules to bring about positive change within an organisation (Sharma & Chillakuri, 2023). While much of the existing research on workplace deviance has focused on its negative aspects, there is a growing recognition of the potential benefits of deviant behaviour (Brown & Mitchell, 2010; Sharma & Chillakuri, 2023). For example, studies have shown that a positively deviant workforce can foster radical innovations and enhance organisational interests in turbulent environments (Liu et al., 2021). One specific benefit is increased creativity and innovation within the organisation. Research has demonstrated that employees engaged in CD may help organisations with its required human resource creativity (Abbasi et al., 2020; Dana et al., 2022). Additionally, workplace spirituality, which has been linked to CD behaviour, has been found to increase positive organisational outcomes (Garg & Saxena, 2020). Meaningful work, associated with workplace spirituality, has the potential to increase positive organisational outcomes (Garg & Saxena, 2020). Furthermore, work–family enrichment has been found to have a direct and positive relationship with CD (Khan & Rehman, 2019). As such, by encouraging and supporting constructive deviant behaviours, organisations can reap the benefits of deviance while minimising its negative consequences.

Extant research focuses on the leadership role in fostering CD. Neubert et al. (2008) found that servant leadership influences employees' creative behaviour and suggested that different leadership styles may have distinct effects on employee behaviour. Zhang et al. (2022) identified leader's moral humility as one of the predictor of CD and found that it positively affects the positively deviant behaviour of an employee through employee moral identity. This suggests that leaders who exhibit moral humility can inspire employees to engage in CD behaviour. Kim and Beehr (2017) suggested that empowering leadership encourages employees to search for innovative methods to achieve work goals, even if these methods may be considered 'incorrect' by the organisation's current practices and procedures. Liu et al. (2021) found that ethical leadership positively affects employee creative deviance, with job autonomy mediating this relationship. However, the role of transformational leadership in employees' indulgence in CD remains unexplored and warrants more scholarly attention.

Hypotheses Development

According to Brown and Treviño (2006), socialised charismatic leadership, a form of transformational leadership, has been shown to positively impact workplace deviance. The authors suggest that organisations should actively promote this leadership style among their managers and incorporate the reduction of workplace deviance into leadership training programmes (Brown & Treviño, 2006). Similarly, Vadera et al. (2013) found that transformational leadership positively influenced extra-role behaviours, which can be considered as CD (Vadera et al., 2013). Shang and Yang (2022) also identified leadership style as a key factor in employees' CD, with empowering leadership encouraging employees to engage in such behaviours. This result lends support to the idea that transformational leadership, which is frequently connected to empowering leadership, might have a favourable impact on CD (Shang & Yang, 2022). According to a study by Liu et al. (2021a,b), transformational leadership can increase the structural strain brought on by an individual's striving orientation, encouraging workers to exhibit creative deviance. Although Liu et al.'s study concentrated on creativity, creative deviance might be seen of as a type of CD. Transformational leadership increased positive deviance among workers through psychological empowerment, as Zhang et al. (2022) showed. Even though their research focused on leaders' moral humility, it backs up the notion that transformational leadership can reduce CD (Zhang et al., 2022). Based on these findings, it is hypothesised that:

H_1 : Transformational leadership positively affects employees' indulgence in CD.

According to Gagné's (2009) knowledge-sharing incentive model, transformational leadership can encourage KSB by promoting sharing norms and meeting employees' fundamental psychological needs. Research by Masa'deh et al. (2016) that found a strong link between knowledge-sharing practises and TL later confirmed this conclusion. Kim and Park (2020) discovered that KSB among employees was directly influenced by TL. Transformational leadership, according to Wu and Lee (2020), can have a major impact on team members' behaviour, particularly their desire to share expertise. The psychological resources of the workforce, such as self-efficacy and good mood, can also be positively influenced by this style of leadership, which will boost output and job satisfaction. Through information sharing, Bednall et al. (2018) found a curvilinear association between transformational leadership and innovative conduct. According to Afsar et al. (2019), the association between transformational leadership and workers' innovative work behaviour was moderated by job crafting behaviours. They also discovered that this link was regulated by information exchange, which emphasises the significance of these elements in encouraging creativity at work. Similar to this, Lei et al. (2021) found that transformational leaders are crucial

for developing staff members' knowledge and abilities and promoting information sharing. Further research by Bryant (2003) supported the claim that transformational leadership is superior for both individual and group knowledge creation and sharing. The differences between these two leadership philosophies are highlighted by the fact that transactional leadership is more successful at utilising knowledge at the organisational level. According to Son et al. (2020), transformational leadership enhanced information exchange, which enhanced the operational and financial performance of the company. According to research by Park and Kim (2018), transformational leaders can improve a variety of employee behaviours, including atmosphere for knowledge sharing inside the workplace and interpersonal trust. Based on these findings, it is hypothesised that:

H_2 : Transformational leadership positively affects employees' KSB.

Numerous studies have found a connection between employees' knowledge-sharing habits and their willingness to engage in CD. According to Malik and Malik (2021), employee engagement was greatly impacted by perceived knowledge-sharing mechanisms, which may have a favourable association with CD. According to this study, employees are more likely to engage in productively deviant behaviours that are advantageous to the company when they share their expertise. Wang (2022) also emphasised the need of enabling leaders in encouraging staff to engage in positive deviance, such as sharing of knowledge. Sharma (2021) noted that CD had a beneficial impact on worker productivity. Knowledge sharing can be viewed as a type of constructive deviant behaviour that boosts employee productivity, even though the relationship between the two was not specifically discussed. Based on these findings, it is hypothesised that:

H_3 : KSB has a positive effect on employees' indulgence in CD.

Based on the hypotheses H_1 , H_2 and H_3 , it is further hypothesised that

H_4 : Transformational leadership has a positive effect on employees' indulgence in CD through KSB.

An increasing amount of research confirms the link between CD and POS. For instance, Colbert et al. (2004) discovered a connection between workplace deviation and POS. According to organisational support theory, employees are more likely to feel obligated to aid the organisation in achieving its objectives and promoting its welfare when they believe that their company values their contributions and is concerned about their wellbeing. Employees may be deterred from engaging in unconventional behaviours that are detrimental to the company by this sense of commitment. According to Shore et al.'s (2010) research, POS was a factor in perceived insider status. They discovered that this insider position had a favourable relationship with altruistic actions and a detrimental relationship with productivity deviation. This shows that when staff members experience company support, they are more likely to exhibit constructively deviant behaviours that advance the

organisation's performance. An investigation of the connection between POS and CD was done by Kura et al. (2017). They discovered a constructive link between the two, with organisational trust serving as a partial mediating factor. This shows that when workers feel appreciated by their company, they are more inclined to engage in positive deviations because they have faith in the company. Additionally, underscoring the significance of organisational support in encouraging constructive deviant behaviours, Malik and Malik (2021) discovered that employees who were engaged and perceived a high level of organisational support were more likely to display constructive deviation. Based on these findings, it is hypothesised that:

H_5 : POS has positive effect on employees' indulgence in CD.

According to research by Lin (2007), organisational elements that affect knowledge-sharing procedures include top-level management's backing and organisational rewards. This shows that employees are more willing to share expertise when they feel appreciated by their employer. Similar to this, Choi et al. (2022) looked into how affective commitment affected employees' KSB and how POS affected it. They discovered that affective commitment, which in turn promoted more knowledge-sharing activities, was positively associated with POS. Furthermore, underscoring the significance of organisational support in fostering knowledge sharing at work, Wang et al. (2022) discovered a positive link between POS and employees' intention to share knowledge. Based on these findings, it is hypothesised that:

H_6 : POS has a positive effect on employees' KSB.

Through, H_5 and H_6 , it is further hypothesised that:

H_7 : POS has positive effect on employees' indulgence in CD through KSB.

Numerous studies have found indirect evidence that suggests there is a link between POS and TL. For instance, Epitropaki (2012) studied the connection between organisational identification and transformational leadership. They discovered that psychological contract breach played a mediating role in the indirect impact of TL on organisational identification. This implies that transformational leadership can affect how staff members feel about their organisation's support, emphasising the crucial role that this leadership style plays in fostering successful workplace outcomes. This implies that TL has the power to affect how employees view their interaction with the company, which is connected to organisational support. The effect of TL on the innovation climate—which is connected to organisational performance and employee satisfaction—was examined by Aarons and Sommerfeld (2012). Although the POS was not specifically measured in this study, it is possible that transformational leadership can foster an atmosphere that promotes both organisational objectives and employee well-being. A meta-analysis was done in a different study by Kleine et al. (2019), and they discovered that transformational leadership was linked to flourishing at work. Similar to this, Suifan et al. (2018) focused on the mediating function of POS when examining the impact of transformational

leadership on employees' creativity. They discovered that TL had a favourable effect on employees' creativity as well as their perception of organisational support. This indicates that effective transformational leadership can raise staff members' feelings of support, boosting their sense of overall pleasure and dedication to the firm. Based on these findings, it is hypothesised that:

H_8 : Transformational leadership has a positive effect on employees' POS.

Further, based on previous hypotheses H_1 – H_8 , we further propose the following three hypotheses:

H_9 : Transformational leadership has a positive effect on employees' indulgence in CD e through POS.

H_{10} : Transformational leadership has a positive effect on employees' KSB through POS.

H_{11} : Transformational leadership has a positive effect on employees' indulgence in CD through POS and KSB.

Methodology

Sample and Data Collection

The sample for this study was drawn from IT enterprises in India. Attempts were made to contact top 10 companies (by market capitalisation); however, due to lack of response, later two more enterprises from the list were further contacted. Finally, seven enterprises agreed to cooperate with the data collection. With the support of the HR team, the contact details (name and email address) of employees were obtained and we directly contacted them to participate in the survey once they were informed about the same from their respective HR department.

A total of 490 email requests (70 for each firm as most companies shared details of only selected employees and none of the companies shared a list of more than 85 employees) were sent to randomly selected employees from the list provided. After some required repeated requests, 281 completed questionnaires were received and further analysed, resulting in 269 fully completed and valid questionnaires for the study. The entire data collection process took about 3 months.

The demographic characteristics of the sample were as follows: males accounted for 73.6% of the sample; most participants were aged 25–30 years (69.5%); most were unmarried (74.3%); the majority held a graduate engineering degree (85.5%); and 66.9% had 3–5 years of work experience.

Scales Used

In this study, we used standardised scales to measure responses. Participants were asked to indicate their level of agreement with each statement on a 5-point Likert scale, ranging from 'Strongly Disagree' to 'Strongly Agree'. This allowed us to

accurately assess their attitudes and perceptions. For measuring the transformational leadership (TL), a 7-item scale by Carless et al. (2000) was used. A sample item from the scale being 'Leader treats staff as individuals, supports and encourages their development'. KSB were measured using an adapted version of the 5-item KSB scale developed by Cummings (2004), with a sample item being 'I actively participate in knowledge-sharing activities'. POS was measured using the shorter version of the Perceived Organisational Support Scale (POS-8) developed by Eisenberger et al. (1986), which contains eight statements measuring employees' views regarding the extent to which employers value their contributions and care about their well-being. A sample item from this scale is 'The organization really cares about my well-being'. CD was measured using the scale developed by Galperin (2012), which includes a total of nine items across two dimensions: five items for constructive organisational deviance and four items for constructive interpersonal deviance. A sample item from this scale is 'Reported a wrong-doing to co-workers to bring about a positive organizational change'.

Data Analysis

To evaluate the suitability of the research instrument, tests for validity and reliability were conducted. These tests are classified as outer model tests, which are requirements for PLS-SEM. An outer model analysis examines the relationship between each indicator and its corresponding latent variable.

As can be seen in Table 1, external model testing in this study includes evaluations of general reliability, convergent validity, discriminant validity, average variance extracted (AVE) and reliability using Cronbach's alpha. The weighting factor values of each construct can be used to evaluate the convergent validity of the reflective indicators. Hair et al. (2014) state that the weighting factor value needs to be bigger than 0.7. The threshold value of 0.7 was attained in this investigation, as evidenced by the weighted factor construct values, which ranged from 0.724 to 0.853. Additionally, the AVE, which is the mean value of the squared weights related to the construct, is used to test the convergent validity of the construct. The AVE has a threshold value that is often 0.50 or higher (Hair et al., 2014).

All 28 research items from the questionnaire were analysed using the Smart PLS application. All research items were found to be valid, with an AVE of at least 0.50 for each construct. Further, we conducted a reliability test to verify the quality of the survey instruments. Cronbach alpha and composite reliability were used to measure the reliability. Both measures have a threshold value of 0.7 (Hair et al., 2014). Table 1 presents the obtained results and indicates that all constructs have reliability scores greater than 0.7, meeting the required threshold for Cronbach alpha and composite reliability.

The discriminant validity of the constructs was then evaluated by contrasting the correlation of latent variables with the square root of AVE. For each construct, the square root of the AVE must be greater than the highest correlation value with other constructions. The TL, CD, KSB and POS constructs all match this requirement, as shown in Table 2, demonstrating strong discriminant validity (Hair et al., 2014).

Table 1. Reliability and Validity.

Construct	Factor Loading	Cronbach's	AVE	CR
Transformational leadership		0.891	0.656	0.901
TL1	0.813			
TL2	0.844			
TL3	0.853			
TL4	0.811			
TL5	0.837			
TL6	0.801			
TL7	0.801			
Perceived organisational support		0.907	0.646	0.922
POS1	0.827			
POS2	0.851			
POS3	0.822			
POS4	0.809			
POS5	0.846			
POS6	0.798			
POS7	0.829			
POS8	0.847			
Knowledge-sharing behaviour		0.897	0.620	0.919
KSB1	0.818			
KSB2	0.833			
KSB3	0.810			
KSB4	0.788			
KSB5	0.844			
Constructive deviance		0.813	0.616	0.849
CD1	0.724			
CD2	0.756			
CD3	0.822			
CD4	0.811			
CD5	0.781			
CD6	0.827			
CD7	0.811			
CD8	0.729			
CD9	0.771			

Table 2. Discriminant Validity.

	Constructive Deviance	Knowledge-sharing Behaviour	Perceived Organisational Support	Transformational Leadership
CD	0.784			
KSB	0.689	0.787		
POS	0.624	0.678	0.803	
TL	0.601	0.644	0.690	0.820

Note: The AVE of each construct is shown in bold, and its square root should be bigger than its highest correlation with any other construct.

Additionally, the variance inflation factor (VIF), R^2 and path coefficient values derived from Smart-PLS were included in the study's inner model testing. In order to confirm that there was no appreciable collinearity among the exogenous variables, we also did multicollinearity testing. According to the findings, the constructs under research were not multicollinear because the VIF values connecting the exogenous variables were below the cutoff value of 5.00 (Hair et al., 2014). Table 3 displays the results.

Further, a coefficient of determination test was used to determine how accurate the model's predictive value was. For endogenous constructs, the squared correlation between the actual and predicted values was determined. With values ranging from 0 to 1, the coefficient of determination represents the cumulative impact of exogenous variables on endogenous variables. Higher values suggest that our study model's predictions were more accurate (Hair et al., 2014). The CD, KSB and POS variables in our study were endogenous, and Table 4 shows their R^2 values.

Table 5 presents the results of the hypotheses testing for the proposed model. H_1 presents that TL positively impacts employees' indulgence in CD. The data support this hypothesis, as evidenced by a path coefficient of 0.297 and a significant p value of .001. H_2 is also supported as TL positively influences employees' KSB as observed through the path coefficient of 0.331 and a p value of .001. H_3 implies that KSB has a positive effect on CD. The data back this up with a substantial sample mean, standard deviation and a statistically significant p value of .000. Similarly, we found the support of all the 11 hypotheses; thus, the suggested model has found the empirical validation.

Analysis of the hypotheses testing strongly supports the influence of TL on employees' indulgence in CD, with a statistically significant path coefficient ($\beta = 0.297, p < .001$) as shown in Figure 1. They also suggest a crucial mediating role of KSB in this relationship, as evidenced by the statistically significant path coefficient between TL→KSB→CD ($\beta = 0.189, p < .001$) and a mediating role of POS evidenced by the values ($\beta = 0.407, p < .000$).

Table 3. Multicollinearity Test.

Exogenous Variable	VIF		
	CD	KSB	POS
KSB	2.056		
POS	2.664	2.121	
TL	2.229	2.101	1.000

Table 4. Coefficient Determinant Test.

Variable	R^2
Constructive deviance	0.548
Knowledge-sharing behaviour	0.512
Perceived organisational support	0.559

Table 5. Hypotheses Testing.

Path*	Path Coefficient (β)	Sample Mean	Std Deviation	T Statistics	P Value
Transformation leadership → Constructive deviance	0.297	0.294	0.145	3.023	.001
Transformation leadership → Knowledge-sharing behaviour	0.331	0.326	0.113	2.991	.001
Knowledge-sharing behaviour → Constructive deviance	0.560	0.557	0.068	5.907	.000
Transformation leadership → Knowledge-sharing behaviour → Constructive deviance	0.189	0.188	0.033	3.881	.001
Perceived organisational support → Constructive deviance	0.417	0.413	0.075	5.133	.000
Perceived organisational support → Knowledge-sharing behaviour	0.399	0.392	0.079	5.789	.000
Perceived organisational support → Knowledge-sharing behaviour → Constructive deviance	0.299	0.297	0.067	5.993	.000
Transformation leadership → Perceived organisational support	0.668	0.663	0.043	7.983	.000
Transformation leadership → Perceived organisational support → Constructive deviance	0.407	0.401	0.071	4.393	.000
Transformation leadership → Perceived organisational support → Knowledge-sharing behaviour	0.394	0.391	0.057	5.033	.000
Transformation leadership → Perceived Organisational support → Knowledge-sharing behaviour → Constructive deviance	0.193	0.191	0.049	4.023	.001

Note: *All hypotheses were supported.

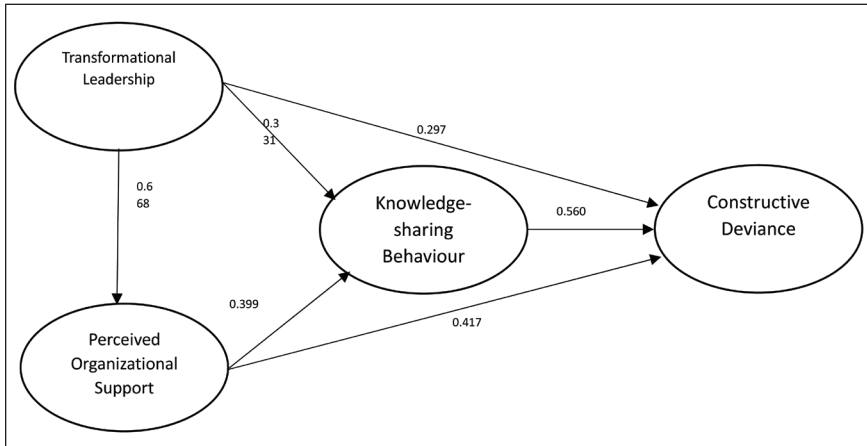


Figure 1. Path Coefficients.

Discussion

Our study findings provide vital empirical evidence supporting a strong positive impact of TL on key employee behaviours that go beyond their job requirements but may benefit the organisation in the process such as CD and knowledge sharing (but not explicitly mentioned earlier). This stands in corroboration with prior studies like Kim and Park (2020), Wu and Lee (2020) and Brown and Mitchell (2010). Through our study, it is empirically proved that TL instigates constructive deviation in employees and motivates them to share knowledge, enriching our understanding of the leader–employee dynamic. We postulate this might be due to leaders imbuing trust, generating inspiration and encouraging innovation, thereby creating a supportive environment for both constructive deviation and knowledge sharing.

Our findings also ascertain the role of POS in influencing CD and knowledge sharing among employees. This aligns with the literature that suggests transformational leaders create a sense of belonging and shared purpose, indirectly fostering POS which leads to some positive behaviours (Colbert et al., 2004; Kim & Park, 2020). Interestingly, our results demonstrate POS as a critical link between TL and employees' behaviours, adding a fresh perspective to the TL discourse.

The mediatory effect of KSB and POS on the relationship between TL and employees' indulgence in CD has also been empirically substantiated by our study. This finding enhances our comprehension of how TL can yield intended outcomes by cultivating a supportive organisational culture and promoting knowledge exchange.

Lastly, our study sheds light on sequential mediation of POS and KSB translating TL into CD. This intricate relationship expands upon the research suggesting transformational leaders can foster KSB by creating supportive environments, thus resulting in productive deviations.

Theoretical and Practical Implications

The work significantly deepens our theoretical knowledge of TL. It presents TL as a concept that encourages positive deviation and information sharing among workers, not just aligning with previous literature but also drawing new connections. The focus on POS highlights its crucial role in modulating the effect of TL on employee behaviours, illuminating an intriguing dynamic. This complicated relationship supports the hypothesis that transformational leaders encourage a sense of belonging and shared purpose, which in turn promotes POS. It also highlights their effects on knowledge sharing and CD.

The study offers organisational leaders useful insights that may be put into practise. Organisations may use transformational leaders as a powerful lever to encourage positive behaviours that go above and beyond the call of duty because they are the key drivers of constructive deviation and knowledge sharing among employees. Furthermore, the claim that TL practises lead to POS provides executives with a road map for achieving positive employee outcomes. These advantages go beyond simply encouraging better levels of employee engagement and trust; they also, and perhaps more importantly, encourage constructive divergence and the eagerness to impart knowledge. Organisations now have the chance to develop supportive environments that can result in quantifiable performance improvements. When put into practise, this knowledge can promote collaborative, inventive and dynamic workplaces while enhancing organisational effectiveness.

Limitations and Future Research

Despite careful planning and execution, some constraints are unavoidable in every study. Employees from seven Indian IT companies made up the sample size for the current study, which may limit the findings' applicability to a larger population or to situations involving various cultures. For full insights, future study may consider a wider and more varied dataset that includes additional nations or industries.

Additionally, the analyses only used self-reported data, which opens the door to common method variance. For better validity, future research could use multi-source data collecting. Although the study concentrated on TL and CD, there may be other leadership philosophies and organisational factors that are interesting to investigate. Future studies could look at various leadership styles and how they interact with people's or organisations' level factors that could affect how they share knowledge.

The study also employed a cross-sectional design. Longitudinal research may offer new perspectives on the consistency and evolution of variables.

Conclusion

With additional mediation from POS and knowledge-sharing conduct, this investigation has explored the enormous influence that TL possesses in fostering CD in

an organisational setting. Each of these components is essential to creating a setting that encourages innovation.

The propensity of employees to engage in CD was discovered to have a favourable association with TL. This demonstrates how transformational leaders can inspire staff members to push the envelope and defy expectations in a way that is advantageous to the organisation.

Furthermore, POS and KSB were found to have a substantial mediation effect. Employees become more devoted, share more information and exhibit CD when they feel that their efforts are acknowledged and supported. This demonstrates how organisational support can positively impact employees' creative behaviours.

It was discovered that knowledge sharing, a frequently ignored behaviour, is crucial to CD. Employee openness to sharing knowledge, exchanging ideas and learning from others is vital to the culture of innovation and promotes healthy deviation.

In conclusion, our research confirms the complex interactions between TL, POS, KSB and CD. The research adds to and broadens the existing body of work on organisational behaviour and leadership. They also offer a thorough framework that practitioners, in particular CEOs and HR specialists, may use to foster a culture of creativity and CD. Due to the study's limitations, caution should be used, and further research on these links in diverse circumstances is suggested.

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The Exchange Rate and Interest Rate Nexus: Evidence From the Symmetric Panel ARDL Approach

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Abstract

The exchange rate and interest rate nexus is a crucial area of research as it has significant implications for monetary policy, international trade and financial stability. This article investigates the dynamic relationship between exchange rates and interest rates in the context of the Brazil, Russia, India, China and South Africa (BRICS) countries. Employing a dataset spanning the period from February 1999 to August 2021, we employ a panel data approach to analyse the relationship between exchange rates and interest rates across the BRICS nations. The study incorporates key macroeconomic indicators such as inflation rates, GDP growth, treasury bill rate, money supply growth, call money rate to capture the complicated nature of the exchange rate and interest rate dynamics. Our empirical analysis employs various econometric techniques, including panel unit root tests, panel cointegration analysis and panel autoregression distribution models. These methodologies enable us to assess both the short-run and long-run dynamics between exchange rates and interest rates while accounting for potential heterogeneity across the BRICS countries. The findings reveal substantial heterogeneity in the exchange rate and interest rate nexus among the BRICS nations.

Keywords

Exchange rates, interest rates, BRICS, panel data analysis, monetary policy

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Introduction

The exchange rate (ER) and interest rate (IR) dynamics occupy a central place in academic debates and policy framing. Any change in either of the two leads to massive changes in the macroeconomic outlook of the country concerned. While ER changes significantly impact the country's net exports and imports, the IR changes lead to international capital flows and alterations in domestic investment and the overall economic scenario. ER changes constitute an important macroeconomic challenge for developing economies due to the fear of floating. Massive and destabilising ER fluctuations appear to be critical during times of economic crisis owing to huge associated costs and lengthy recovery processes.

Among several factors such as geopolitical risk, economic policy uncertainty, monetary and fiscal policy stances, the gyrations in the ER are also linked to IR changes. IR is among the many monetary policy instruments used to manage ER volatility. Specifically, raising the IR in a particular country appreciates its domestic currency in short run through capital inflows, however, coupled with an unfavourable effect on trade balance. In the long run, international investors would be required to convert the foreign currency-denominated investments and interest earnings into the local currency. As such, an increase in IR is likely to depreciate the ER in the long run.

The portfolio balance models (Branson, 1981; Branson & Halttunen, 1979; Branson et al., 1977) like the Mundell–Fleming model assert for an inverse relationship between IR and the ER, by assuming international capital mobility and price stickiness in the short run. On the contrary, in their incipient Redux model, Obstfeld and Rogoff (1995) anticipated the case of no expected appreciation or depreciation under uncovered IR parity. The monetary shocks merely result in a change in nominal IRs of the same magnitude in both nations, leaving the IR differential unchanged and hence no effect on ER. More recently, Betts and Devereux (2000) incorporated the pricing-to-market (PTM) strategy into their model using local currency pricing (LCP). The authors conclude that a monetary expansion under the PTM scenario would lead to a reduction of IR differential along with ER overshooting.

Despite the conflicting theoretical contours, it is widely admitted that tight monetary policy and higher IR can assist in stabilising ER fluctuations. Following the currency crisis, Goldfajn and Baig (1998) distinguished four building blocks for analysing monetary policy. First, determine whether the real ER has depreciated and has to be restored to its equilibrium level. Second, identify the relevant mechanism to adjust the real ER following any depreciation. Third, find suitable policies and circumstances that help in reverse through the appreciation. Finally, analyse the effects of increasing IRs. Expected gains from increasing IRs on the ER can be offset by increasing unemployment, output loss and financial system fragility.

A plethora of studies, both theoretical and empirical, have been conducted in different economies using different data periods and econometric methodologies. Lily et al. (2011) used autoregressive conditional heteroscedasticity and generalised autoregressive conditional heteroscedasticity models and found that there is

a substantial effect of uncovered IR changes on ER movements. Hacker et al. (2014) found that IR differential drives the ER volatility by using wavelet analysis and found a strong positive relationship in the long run and a strong negative linkage in the short run. Hnatkowska et al. (2013) examined a data set of 80 different economies in different regions, and have proven mathematically that there is a non-monotonic relationship between the IR and ER. However, Sollies and Wohar (2006) used symmetric and asymmetric approaches and found nonlinearity in IR and ER relationships. On the other hand, Abbas et al. (2012) and Saraç and Karagöz (2016) found no significant impact of IR on ER. From the previous literature, we can conclude that inconclusive evidence has been reported regarding the relationship between the IR and ER. The ER can move in any direction, and the IR can be used as a monitoring and controlling tool by the government.

In this backdrop, this study attempts to examine the impact of IR changes on the ER fluctuations in case of five emerging market economies namely, Brazil, Russia, India, China and South Africa (BRICS). Studies regarding BRICS have been largely conducted in an individual country framework, and the BRICS as a panel has not been studied promptly. Moreover, the existing evidence is inconclusive and previous studies have ignored the inclusion of important determinants of ERs. We incorporated a panel linear ARDL model for our empirical exercise on the data spanning from Feb 1999 to August 2021. In addition to the fundamental determinants such as money supply growth rate, inflation and gross domestic product (GDP) growth, the responsiveness of ER has also been calculated with respect to two different IR measures for sensitivity analysis. Moreover, other relevant estimation methods have been incorporated for robustness purposes. The article contributes to the existing literature by providing comprehensive empirical evidence on the ER and IR nexus in the context of the BRICS countries. The results offer valuable insights for policymakers, central banks and market participants by shedding light on the intricate interactions between ERs and IRs. These findings can assist in formulating effective monetary policies, managing ER volatility and fostering economic stability in the BRICS economies.

The rest of the paper is organised as follows. The second section discusses the theoretical background. A brief summary of the recent empirical literature is given in the third section, the fourth section outlines the data description and econometric methodology, and the fifth section outlines data and descriptive statistics. Results are discussed in the sixth section, robustness check in the seventh section, and the eighth section concludes.

Theoretical Background

Theoretically, economic fundamentals determine the ER. One of the most important economic factors that impact the ER is the interest differential between domestic and foreign countries. Various economic models explain the nexus between IR and ER.

The portfolio balance models (Branson & Halttunen, 1979; Branson et al., 1977; Branson, 1981) suggested an inverse relationship between IR and the ER. Portfolio reallocations will be determined by the IR changes. When the domestic

IR increases, a nation's interest-bearing assets become more attractive, inducing investors to own more assets. This will lead to an appreciation of the domestic currency. The Mundell–Fleming model predicts an inverse relationship between IR and the ER, by assuming international capital mobility and price stickiness in the short run. In this situation, a lower IR in a domestic country causes capital outflow and a balance of payment deficit, which can be rectified by an increase in net exports through depreciation in the national currency.

Obstfeld and Rogoff's (1995) in their Redux model, there is no expected appreciation or depreciation under uncovered IR parity. The monetary shocks will merely result in a change in nominal IRs of the same magnitude in both nations. Betts and Devereux (2000) significantly improved the model by incorporating PTM using LCP. They conclude that a monetary expansion under these conditions could reduce the IR differential along with ER overshooting.

On the other hand, we commence our analysis with two presumptions. The first assumption is Fisher's (1930) hypothesis; this hypothesis states that an increase in a nation's nominal IR ought to be proportional to any rise in the predicted level of inflation in that nation. The second is that the IR in one's home country rises exogenously, not due to money market disturbances. The subsequent increase in price levels as a result of decreased demand for money may, therefore, result in an increase in the ER. Accordingly, Hacker et al. (2012, 2014) mentioned that purchasing power parity theory (PPP) predicted a positive relationship between the IR and ER. This approach depends upon perfect price flexibility in the long run. The Keynesian approach also justifies the positive association between the IR and ER. The country's trade balance improves as a result of an increase in the ER. This could lead to a rise in the country's IR in the short term due to an increase in the aggregate demand for its products with sticky prices.

Dornbusch (1976) developed a model which is a combination of the two models that are complete opposites of one another. As a short-term characteristic, it consists of price stickiness in various product markets. However, the price adjustment over a long period towards its new equilibrium is one of the distinctive features of the flexible-price monetary model. Because of monetary shocks, the relationship between the IR and ER is inverse in the short run and are positively related in the long run.

Review of Literature

A plethora of studies have been conducted to examine the relationship between the ER and IR. Studies that examined the relationship between these two variables have found contradictory and/or mixed results. The differences appear due to which group of countries is analysed (emerging, developing or developed), which IR is considered (nominal or real IR; market-determined or policy controlled; short term or long maturity IR etc.), which type of ER regime is adopted.

Sanchez (2008) has explored the relationship between the IR and ER in small open economy under flexible ER. He concluded that the IRs are raised in order to avoid the contractionary effects of currency depreciation in the face of an adverse

risk premium shock. Furthermore, IRs are expected to rise in contractionary depreciation scenarios, while in expansionary depreciation circumstances, they are expected to fall. López and Raymond Bara (2008) have suggested an economic model for determining the real ER in Mexico, including long-run variables of the real IR, relative GDP per capita and the net foreign assets. In order to determine a dynamic adjustment in response to economic shock they used VAR model for impulse response functions. According to their analysis, the notion of PPP is flawed in the long run, and the real ER is linked to macroeconomic variables such as real IR, relative productivity and the stock of debt. While Tari and Abasiz (2009) argued that the causal relationship between the IR and ER is valid only for the short run. However, Uysal et al. (2008) identified a causal link between the IR and foreign ER.

Hnatkovska et al. (2013) investigate the nexus between the ER and IR and found that the relationship between them is non-monotonic. Furthermore, they found that the ER response relies on the preliminary level of IRs and the magnitude of the IR increase. Chin and Meredith (2004, 2005) found a positive association between IR differential and the log ER after using short and long maturity bond data. Utilising short-maturity bond data, they showed a negative correlation between these variables, but the results were the opposite when using long-term bond data. However, Flood and Taylor (1996) found a negative relationship when using short-term bond data, while they find a positive connection when they used medium-maturity bond data.

The study conducted by Vithessonthi (2014) in Thailand over the period 2003–2011, examined the link between the IR and ER showed that when the IR differential is high, an unexpected increase in the policy rate causes a major depreciation of Baht against the British pound and the US dollar. The researchers Granville and Mallicki (2010) believe that Russia's monetary policy focuses more on ER stability than price stability, making IRs more sensitive to ER shocks. Kayhan et al. (2013) used nonlinear and frequency domain causality tests using monthly data of Brazil, Russia, India, China & Turkey (BRIC-T). Their analysis shows long-term IR implications on China's ER. In contrast, only short-term changes in IRs can be noticed as a result of ER shocks. Using the frequency domain Granger causality test, Saraç and Karagöz (2016) investigated the connection between the IR and ER. They concluded that there was insufficient evidence to support the hypothesis that an increase in IRs would result in a reduction in the ER.

Ahmed and Mazlan (2021) used ARDL and NARDL models to study the effect of IR on ER across ASEAN economies. Their findings suggested that IR changes have a symmetric effect on ER in the short run and hold for five countries, namely, Malaysia, Cambodia, Singapore, Vietnam and Thailand, in the long run. However, IR changes have negative and asymmetric effects on ER for seven ASEAN economies, namely, Malaysia, Cambodia, Philippines, Singapore, Vietnam, Indonesia and Thailand, in the long run.

Issahaku et al. (2023) examined the relationship between the IR and ER in Ghana by using the monthly data spanning from 2007 to 2020. The results reveal a strong positive association between the variables. They also suggested that policymakers meticulously trace the IR and ER nexus to craft the policies for

macroeconomic stability in the long run. Also, Demirhan and Göksu (2023) examined the relationship between ER and macroeconomic determinants in Turkey by using symmetric and asymmetric ARDL approaches. The main findings of the study are that there exists an asymmetric cointegration, but the relationship is not symmetrical among the set of chosen variables.

Analytical Framework and Econometric Methodology

We followed an analytical model proposed by Ahmed and Mazlan (2021) to examine the relationship between the dependent variable (ER) and other explanatory variables (IR, inflation, money supply and GDP). We extended their model by including GDP in the model as an additional explanatory variable because of relevant theoretical reasoning. The following model is used to scrutinise the possible impact of IR on ER changes along with inflation (INF), money supply growth (MSG) and GDP:

$$ER = f(IR, INF, MSG, GDP)$$

Accordingly, the estimable regression equation is specified as

$$ER_{it} = \alpha_0 + \alpha_1 IR_{it} + \alpha_2 INF_{it} + \alpha_3 MSG_{it} + \alpha_4 GDP_{it} + \mu_{it} \quad (1)$$

where α_0 is a constant term. α_1 , α_2 , α_3 and α_4 are the coefficients to be estimated, 't' signifies the time and 'i' is the cross-sectional unit. *ER*, *IR*, *INF*, *MSG* and *GDP* are exchange rate, interest rate, inflation, money supply growth and gross domestic product, respectively.

Econometric Methodology

We assume the homogeneity of slope coefficients in Equation (1) would be unrealistic due to the heterogeneous nature of our panel. Instead, a dynamic heterogeneous panel model is needed. In the empirical literature, the Mean Group (MG) estimator and the Pooled Mean Group (PMG) estimator are the two popular approaches for analysing heterogeneous panels. The MG estimator involves the estimation of N time series regressions and averaging of the regression coefficients, whereas PMG employs the combination of pooling and averaging of coefficients (Blackburne & Frank, 2007).¹ The variables must be I (1) and I (0) or a mixture of these two in order to use these methods, and the model must be cointegrated for the variables to be interpreted as an error-correction mechanism. Therefore, in the following part, we will first give the stationarity tests for the variables, followed by the existence of cointegration, and finally, the panel estimator using PMG estimation.

We start the examination of the relationship between ER and other explanatory variables using symmetric panel ARDL model, developed by Pesaran and Smith

(1995) and Pesaran et al. (1999) by assuming symmetrical response of ER to changes in the various explanatory. The symmetric panel ARDL model is given as

$$\begin{aligned} \Delta ER_{it} = & \gamma_{0i} + \gamma_1 ER_{it-1} + \gamma_2 IR_{it-1} + \gamma_3 INF_{it-1} + \gamma_4 MSG_{it-1} + \\ & \gamma_5 GDP_{it-1} + \sum_{j=1}^{N1} \beta_1 \Delta ER_{it-j} + \sum_{j=0}^{N2} \beta_2 \Delta IR_{it-j} + \sum_{j=0}^{N2} \beta_3 \Delta INF_{it-j} + \\ & \sum_{j=0}^{N2} \beta_4 \Delta MSG_{it-j} + \sum_{j=0}^{N2} \beta_5 \Delta GDP_{it-j} + \mu_i + e_{it} \end{aligned} \quad (2)$$

where ER is the exchange rate for each economy i over a period of time t . IR , INF , MSG , GDP are log of IR, inflation, money supply growth and gross domestic product, respectively. μ_i is the group-specific effects. β_{0i} captures the country-specific effects, β_1 is the AR coefficient, γ_2 ; γ_3 ; γ_4 ; γ_5 are long-run coefficients and β_2 ; β_3 ; β_4 β_5 are short-run coefficients. In the error-correction specification with $ECT_{i,t-1}$ as linear error-correction term for each country and δ_i measuring the error-correction speed towards the long-run equilibrium following any short-run distortion, Equation (2) can be written as

$$\begin{aligned} \Delta ER_{it} = & \delta_i ECT_{i,t-1} + \sum_{j=1}^{N1} \beta_1 \Delta ER_{it-j} + \sum_{j=0}^{N2} \beta_2 \Delta IR_{it-j} + \\ & \sum_{j=0}^{N2} \beta_3 \Delta INF_{it-j} + \sum_{j=0}^{N2} \beta_4 \Delta MSG_{it-j} + \sum_{j=0}^{N2} \beta_5 \Delta GDP_{it-j} + \mu_i + e_{it} \end{aligned} \quad (3)$$

For robust estimation to validate the results of panel linear autoregressive distributed lag (PARDL) estimation techniques like fully modified ordinary least square (FMOLS) and dynamic ordinary least square (DOLS) are used. The FMOLS regression technique was initially developed by Pedroni (2001), which is a residual-based test and delivers efficient results for variables that are cointegrated. In situations where the sample size is small, FMOLS is regarded as a reliable estimate and it eliminates the problem of serial correlation and endogeneity among the variables (Hamit-Hagggar, 2012). However, DOLS was developed by Stock and Watson (1993). DOLS eliminates correlation among regressors and provides better results than FMOLS (Kao & Chaing, 2001). This study used both FMOLS and DOLS to confirm the consistency of the outcome. According to Hamit-Hagggar (2012), the most suitable technique for panels with heterogeneous cointegration is FMOLS, which has the advantage of correcting serial correlation and endogeneity bias (Ozcan, 2013). The DOLS has the same asymptotic distribution as of FMOLS estimation derived by Pedroni (1996).

Data and Descriptive Statistics

The balanced panel includes observations of five emergent market economies, namely, Brazil, Russia, India, China and South Africa (BRICS), from 1999 (M02)

with the highest and lowest mean growth across BRICS is ER and GDP, respectively. The greatest variation as defined by standard deviation relative to mean is shown by ER across BRICS. We further find that the variables have only positive skewness in the distribution and excess kurtosis is positive for all the variables, meaning that the distribution is leptokurtic and the distribution is skewed more towards the right (positively skewed distribution).

Results and Discussion

Our analysis starts by examining the time series plots of the variables (ER, CMR, GDP, INF MSG and TBR) as displayed in Figures 1–6. These figures help us understand the series' visual properties such as trend, drift and structural breaks. Figure 1 illustrates the time-series plots of ER variables for all the BRICS economies. Similarly, other figures show the time plots of the rest of the variables across BRICS economies.

Unit Root Analysis

We proceeded with the panel unit root testing to ascertain the stationarity properties. We applied several unit root tests like Levin et al. (2002)'s LLC test and Pesaran

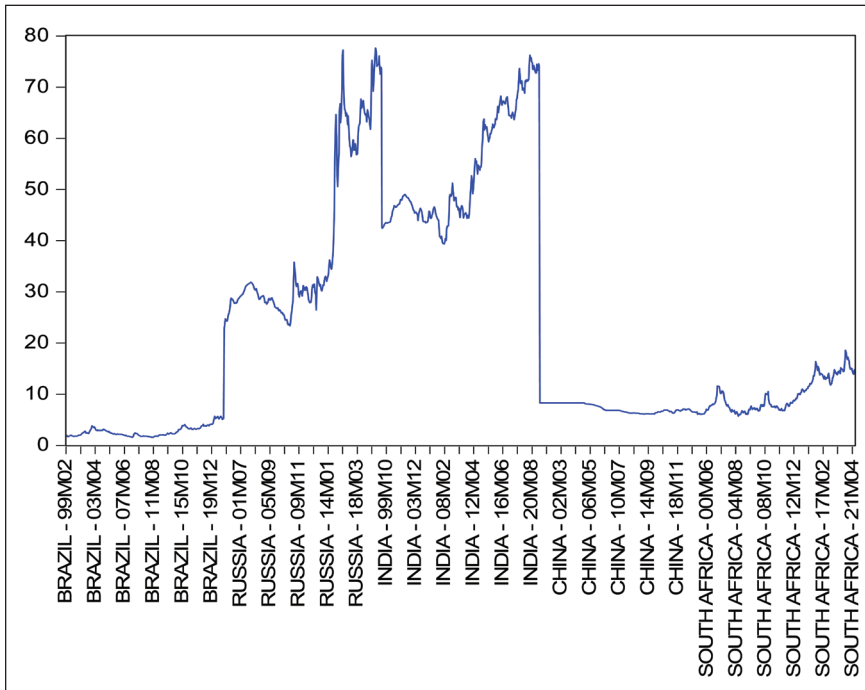


Figure 1. ER.

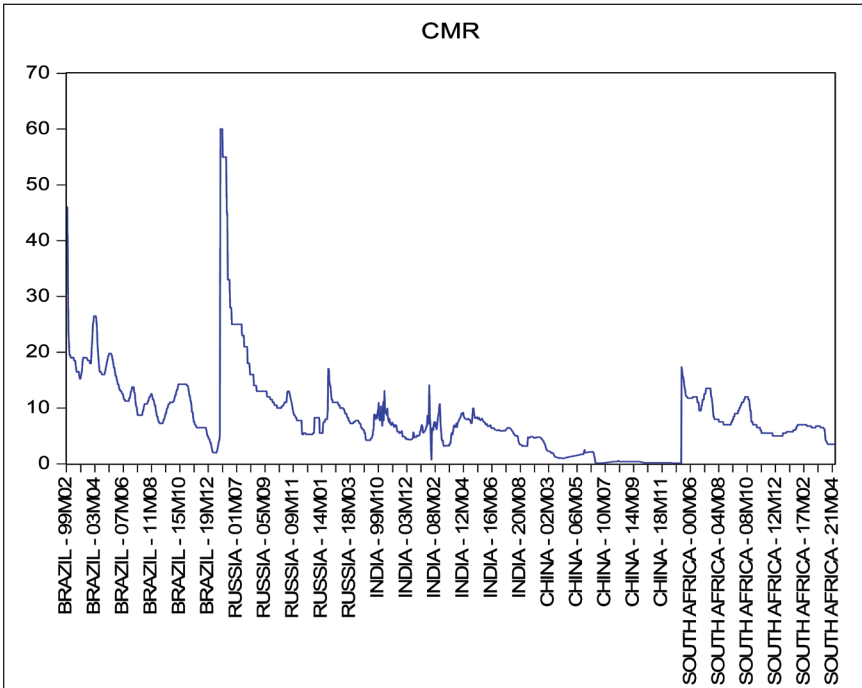


Figure 2. CMR.

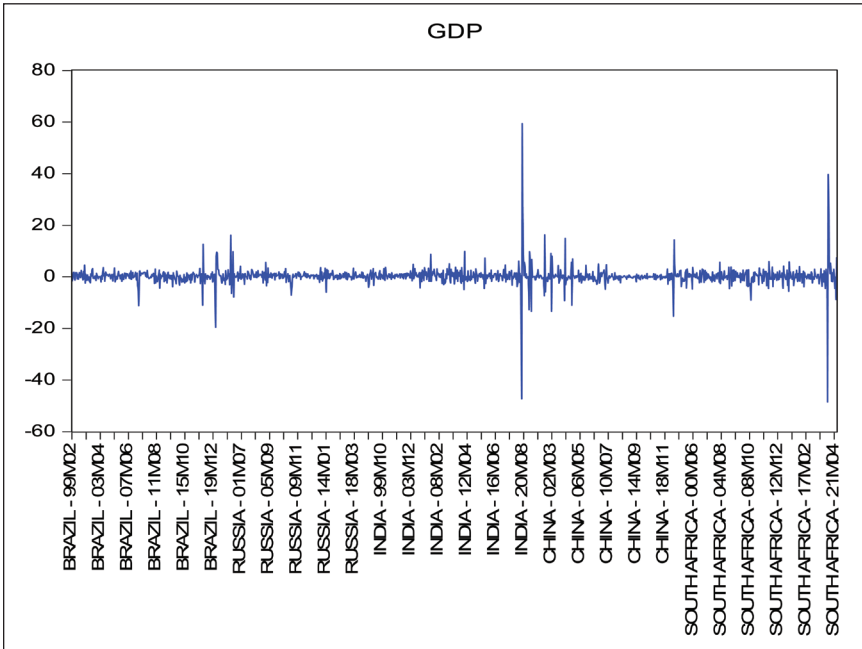


Figure 3. GDP.

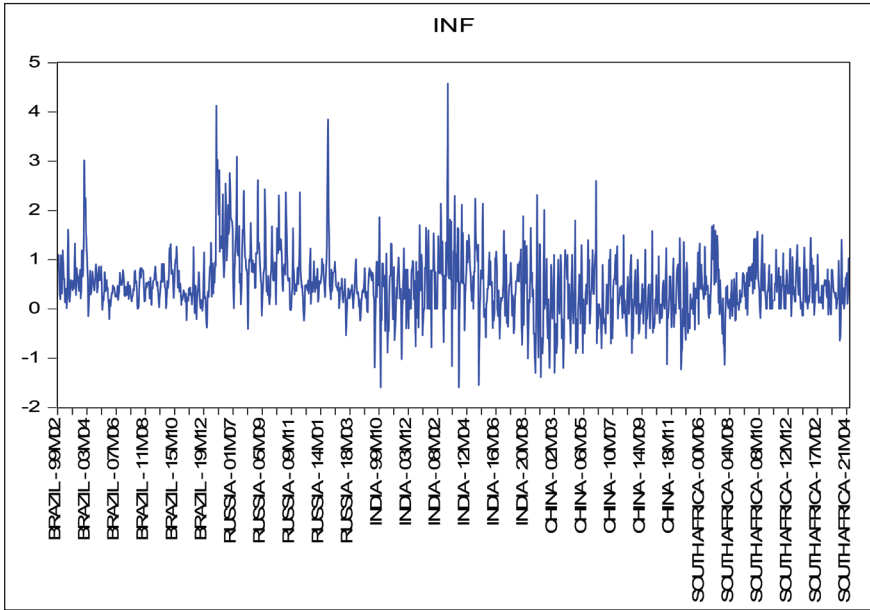


Figure 4. INF.

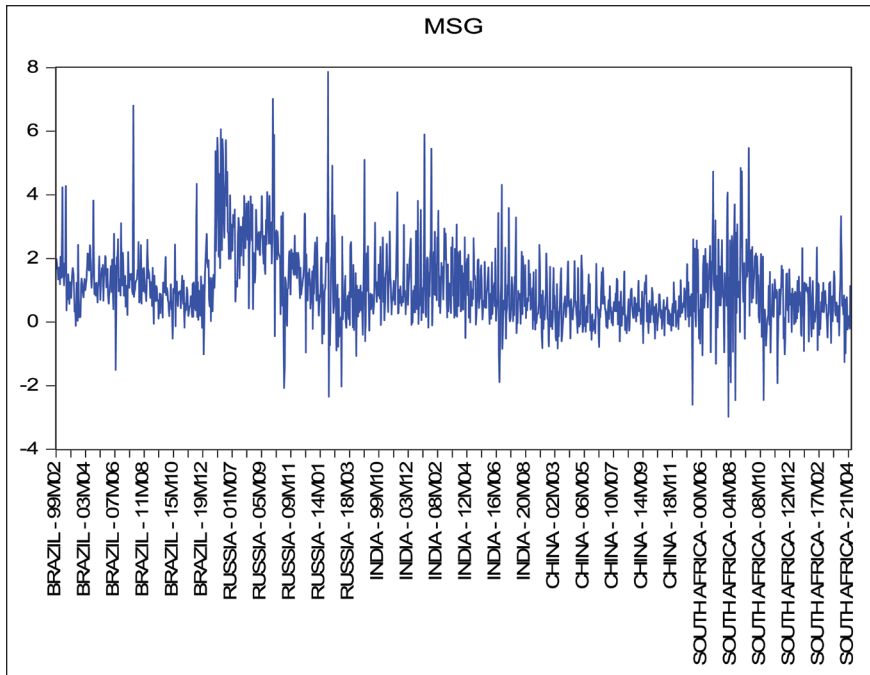


Figure 5. MSG.

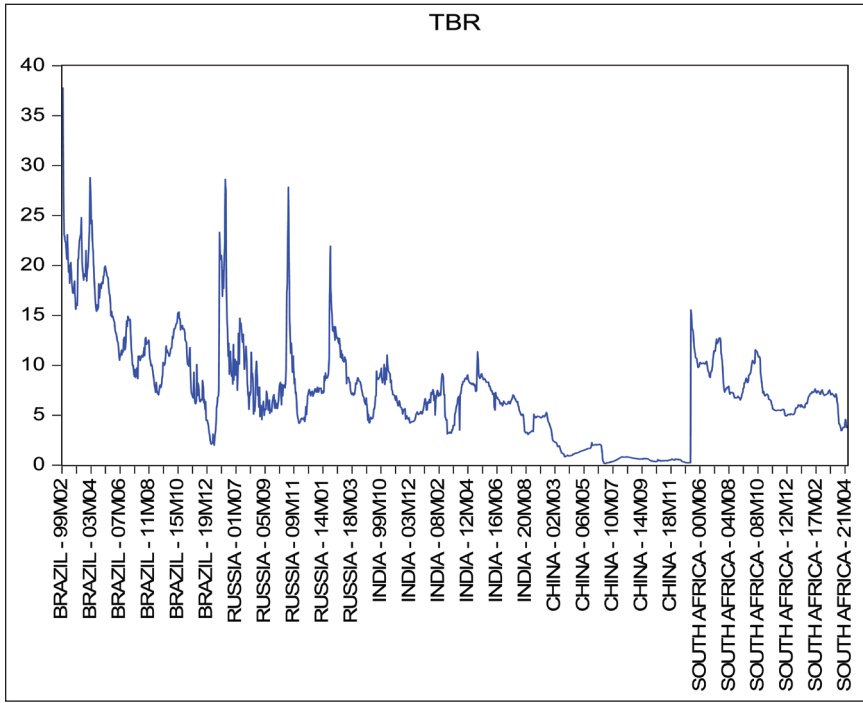


Figure 6. TBR.

et al. (1997) LM test, wherein the former assumes homogeneity in the dynamics of AR coefficients for all panel members and the latter allows for heterogeneity. The non-parametric unit root tests of Maddala and Wu (1999) are also applied using Fisher ADF and Fisher PP tests. In all the cases, we test the null of non-stationarity against an alternative of a unit root. Results are reported in Table 3. We find a mixture of $I(0)$ and $I(1)$, and none variable is $I(2)$, and, therefore, vindicate the application of a panel dynamic model.

Panel Cointegration Test

With a mix of $I(0)$, and $I(1)$ variables, we proceeded to check for the possibility of long-run cointegration among the variables. Pedroni’s (1999, 2004) residual-based heterogeneous panel cointegration test, which permits cross-section interdependence with distinct individual effects, is estimated. Since our BRICS panel is heterogeneous, using the Pedroni test is appropriate. To test the null of no cointegration, Pedroni (1999, 2004) developed 7 test statistics (Panel PP-statistic, Panel rho-statistic, Panel ADF-statistic, Panel v-statistic, Group PP-statistic, Group rho-statistic, Group ADF-statistic). All these test statistics are assumed to follow a normal distribution. To validate Pedroni’s (1999, 2004) results, Kao (1999) is also employed. Table 4 shows that out of seven Pedroni’s (1999, 2004) test statistics, cointegration is found in five tests when it is examined among

Table 3. Unit Root Analysis.

Test Method	Variables					
	ER	CMR	GDP	INF	MSG	CMR
Null hypothesis: Assume a common unit root process						
Levin, Lin and Chu t^*	-9.543b	-2.919a	0.412a	-8.705a	-4.935a	-1.979a
Null hypothesis: Assume individual unit root process						
Pesaran and Shin LM test	-12.710b	-3.319a	-18.907a	-13.686a	-12.721a	-2.575a
Fisher ADF Chi-square	175.655b	34.085a	309.587a	198.427a	182.589a	24.290a
Fisher PP Chi-square	428.237b	70.720a	527.638a	389.055a	591.356a	38.353a

Note: 'a' represents the stationary at level and 'b' indicates stationary at first difference respectively.

Table 4. Panel Cointegration Tests with CMR as Proxy for Interest Rate (LER, CMR, GDP, INF and MSG).

	Statistic	P-value	Weighted Statistic	P-value
<i>a. Pedroni</i>				
Panel v-statistic	-2.321	0.0098	-2.348	0.0006
Panel rho-statistic	-2.761	0.002	-6.868	0.000
Panel PP-statistic	-3.039	0.001	-5.417	0.000
Panel ADF-statistic	3.676	0.999	3.496	0.999
Group rho-statistic	-2.926	0.001		
Group PP-statistic	-3.196	0.0007		
Group ADF-statistic	5.222	0.860		
<i>b. Kao</i>				
ADF	-1.610	0.023		

(ER, CMR, GDP, INF and MSG). The test statistics reject the null of no cointegration and, therefore, establish the evidence in favour of a long-run association among ER, CMR, GDP, INF and MSG. Similarly, Table 5 reported evidence of cointegration in five out of seven test statistics, when examined among (ER, TBR, GDP, INF and MSG). The Kao tests in the lower panels of Tables 4 and 5 again authenticate the presence of cointegration among the two sets of variables. Thus, it can be concluded that a long-run cointegration exists among the variables.

Empirical Results

We begin with the estimation of model 1 (PARDL), model 2 (FMOLS) and model 3 (DOLS). Table 6 reports the results of all three models. In the long run, the impact of IR (CMR as a proxy for IR) is positive and statistically significant in all the

Table 5. Panel Cointegration Tests with TBR as Proxy for Interest Rate (LER, CMR, GDP, INF and MSG).

	Statistic	P-value	Weighted Statistic	P-value
<i>a. Pedroni</i>				
Panel v -statistic	-2.303	0.989	-2.345	0.990
Panel ρ -statistic	-1.835	0.033	-3.660	0.0001
Panel PP-statistic	-2.231	0.012	-3.544	0.0002
Panel ADF-statistic	-0.986	0.162	-1.590	0.055
Group ρ -statistic	-1.828	0.003		
Group PP-statistic	-1.587	0.056		
Group ADF-statistic	-0.165	0.434		
<i>b. Kao</i>				
ADF	-2.048	0.020		

Table 6. Results of ARDL, FMOLS and DOLS (CMR as a Proxy for Interest Rate).

Variable	Model 1	Model 2	Model 3
Long-run coefficients			
CMR	0.015 (2.880)*	0.099 (11.044)*	0.093 (10.499)*
INF	0.140 (2.387)*	0.356 (6.414)*	0.293 (4.199)*
MSG	0.070 (2.242)**	0.269 (8.732)*	0.330 (7.824)*
GDP	-0.016 (-1.765)	0.018 (8.308)*	0.010 (3.406)*
Short-run coefficients			
$D(\text{CMR})$	0.0005 (0.603)		
$D(\text{INF})$	0.0001 (0.207)		
$D(\text{SG})$	-0.0001 (-0.653)		
$D(\text{GDP})$	-0.600 (-0.923)		
CONSTANT	0.008 (2.173)**		
TREND	4.174 (1.781)***		
ECT	-0.711 (-1.712)***		

Note: Figures in parentheses are t-statistic values. *, ** and *** indicate statistical significance at the 1%, 5% and 10% levels, respectively.

models. This implies that an increase in the IR will cause depreciation of the ER across BRICS (or ER will increase). This phenomenon is due to the fact that an increase in domestic IR will lead to a fall in demand for money due to an expected increase in inflation and, hence, cause depreciation of domestic currency (Frankel, 1984; Sharma & Setia, 2015). Table 6 indicates that in the long run, a 1 unit increase in IR will increase the ER by 1.5%, 9.9% and 9.3% in models 1, 2 and 3, respectively.

On the other hand, the effect of money supply and inflation on the ER, in the long run, is positive and statistically significant, implying that an increase in money supply and inflation will cause domestic currency depreciation. This happens

because an increase in money supply will cause an increase in the purchasing power, hence demand-pull inflation, thereby leading to a decrease in exports (higher inflation creates lower demand for exports) and thereby currency depreciation.

Lastly, the impact of GDP is positive and statistically significant in models 2 and 3 but is insignificant in model 1. This implies that an increase in GDP will increase the ER (currency depreciation). This is because an increase in GDP will increase imports more than exports, hence, capital outflow and, therefore, currency depreciation.

On a comparative note, the impact of inflation on the ER fluctuations is substantial as followed by MSG, GDP and CMR, respectively. Finally, regarding the error-correction coefficient, the negative sign establishes the indirect evidence of long-run association. Model 1 reported a speed of correction of 0.711, suggesting that disequilibrium would be corrected by 71.1% per month.

Robustness Check

To check the reliability of the coefficients, we estimated an additional model with TBR as a proxy for IR. The results are in line with the above models. Table 7 reported that IR has a positive and significant effect on the ER in all models. Similarly, an increase in INF and MSG will cause ER to increase (currency depreciation). Lastly, the impact of GDP is positive and statistically significant in models 2 and 3 but insignificant in model 1 (see Table 7). This implies that an increase in GDP will depreciate the domestic currency. Again, the inflation is found to be dominant determinant of ER fluctuations as compared to other explanatory variables incorporated

Table 7. Results of ARDL, FMOLS and DOLS (TBR as a Proxy for Interest Rate).

Variable	Model 1	Model 2	Model 3
Long-run coefficients			
TBR	0.036 (3.717)*	0.033 (4.500)*	0.125 (14.531)*
INF	0.127 (2.582)*	0.437 (5.780)*	0.131 (2.203)*
MSG	0.084 (2.845)*	0.323 (8.280)*	0.270 (7.200)*
GDP	-0.012 (-1.533)	0.025 (4.067)**	0.010 (0.502)**
Short-run coefficients			
D(TBR)	0.0005 (0.609)		
D(INF)	-0.0001 (0.290)		
D(MSG)	-0.0002 (-1.147)		
D(GDP)	-0.0001 (-1.213)		
CONSTANT	0.007 (2.296)**		
TREND	3.956 (1.617)***		
ECT	-0.811 (-1.631)*		

Note: Figures in parentheses are t-statistic values. *, ** and *** indicate statistical significance at the 1%, 5% and 10% levels, respectively.

into the analysis. The error-correction term is again negative and significant, implying that equilibrium will be corrected by 81.1% per month.

Conclusion

The IR and ER nexus has long been a focus of researchers and policymakers. This study attempts to examine the impact of IR on ER in the case of the world's five emerging market economies, namely, Brazil, Russia, India, China and South Africa (BRICS), using the monthly data from 1999 (M02) to 2021 (M08). For the empirical exercise, the PARDL model developed by Shin et al. (2014), FMOLS developed by Pedroni (2001) and DOLS developed by Stock and Watson (1993) were incorporated to ensure the relationship among the variables. In addition to IR, the possible impact of inflation, money supply and GDP is also estimated. Incorporating the monthly data from 1999 (M02) to 2021 (M08) the results suggested that IR impacts ER positively, meaning that an increase in IR will increase ER (increase in ER implies currency depreciation). However, the impact of all other explanatory variables is also positive and statistically significant in the long run.

Policy Implications

The findings of this article lead to some important policy implications. It shows that an increase in IR attracts more foreign capital flows, increasing the demand for domestic currency and ER appreciation, which affects the country's net exports and imports (trade balance), domestic investment and overall macroeconomic scenario. Thus, monitoring the IR and ER becomes crucial for the efficiency of monetary policy.

Declaration of Conflicting Interests

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Notes

1. More specifically, MG assumes that intercepts, slope coefficients (both short-run and long-run) and error variances are allowed to vary across panel members. On the other hand, PMG estimator allows intercepts, error variances and short-run coefficients to vary, whereas the long-run coefficients are assumed to be uniform.
2. The choice of data period is made based on data availability.

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Hotel Booking Intentions: A Literature Review

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Abstract

This study aims to review tourism and hospitality management research on online satisfaction, offline satisfaction and booking intentions published in numerous recognised tourism and hospitality journals from 2000 to 2023. This article studied and reviewed 62 published articles that emerged in the past 22 years in selected top 10 tourism, leisure and hospitality journals. Various variables influencing customer satisfaction, that is, online satisfaction and offline satisfaction leading to the intention to book a hotel online, were identified based on the previous studies. A conceptual model is proposed, which can be empirically tested while conducting future studies in the tourism and hospitality sector, specifically with respect to hotel booking intention. This study offers a conceptual framework for the antecedents used to measure online and offline satisfaction while booking a hotel online. The study ascertained information quality, system quality and service quality as independent variables to measure online satisfaction and perceived values like perceived functional value, emotional value, social value, and monetary value as independent variables to measure offline satisfaction. This study provides a detailed literature review on hotel booking intention and variables that influence overall satisfaction, that is, online and offline satisfaction published in specific hospitality and tourism journals over the past 22 years.

Keywords

Online satisfaction, offline satisfaction, hotel booking intention, literature review

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Introduction

The growth of the Internet has changed how customers seek information before making any travel-related decisions, particularly concerning online hotel booking (Buhalis & Law, 2008). Travellers explore the internet to search for related information to finalise the hotel room they might prefer to book at the destination. This journey starts with searching for hotels available at the destination, prices, amenities, ratings, and reviews. Therefore, this highlights that travellers use the internet to search for relevant information related to hotel booking.

The role of customer satisfaction on the customers' purchase intention has been extensively studied in the literature on tourism and hospitality (Ali, 2016; Ryu et al., 2012). Various authors have widely studied customer satisfaction leading to purchase intention of the customer in distinct contexts like restaurants (Kim et al., 2013), luxury cruise travelling (Han & Hyun, 2018), hotel industry (Cheng et al., 2019), independent travellers' niche hotel booking (Wang et al., 2020) and hotel booking intentions (Akhoondnejad, 2015; Chan et al., 2017). The use of the digital medium has turned out to be a blessing for the tourism-related services industry (Ho & Lee, 2007; Pelsmacker et al., 2018). From a customer viewpoint, access to information is immediate while using the online platform, as the customer can make uninterrupted price comparisons based on their preferences and perceived value through the discounts provided in real-time, juxtaposing the various values, services, facilities, and prices (Gao & Bi, 2021). Additionally, the customers can go through the reviews and ratings, types of rooms available, hotel pictures, and the additional facilities provided by the hotel like a swimming pool, gymnasium, spa, coffee shop and restaurants (Park et al., 2017). It is crucial to consider online satisfaction and offline satisfaction, which can be beneficial to understanding the customer's overall satisfaction and purchase intention to book a room in a hotel. Scientific inquiry examining the specific role of online and offline satisfaction in hotel booking intentions has received little heed and remains a substantially un-investigated (Lee et al., 2020). Thus, a research gap emerged in studies on hotel booking that addressed online and offline satisfaction leading to hotel booking intention.

The remainder of the study is arranged as follows: the second section lays out the theoretical background on customer satisfaction and hotel booking intentions; the third section provides the research methodology using a systematic literature review; the fourth section incorporates the descriptive findings of data extracted and the results and discussion. In the end, the fifth section concludes with the theoretical and managerial implications and future research possibilities and limitations.

Literature Review

Customer Satisfaction and Hotel Booking Intentions

The concept of customer satisfaction has been widely explored in the field of marketing, especially with respect to hospitality and tourism studies

(Sánchez-Rebull et al., 2018). Customer satisfaction is a notion that gauges the internal state of the customer's feelings with past experiences and the current state of mind while making a choice. It is also defined as the customer's overall experience comprising prepurchase, that is, need recognition and information search, purchase, and the post-purchase behaviour with a product or service provider (Carlson et al., 2019). Moreover, customer satisfaction in the hospitality and tourism industry is critical as it helps influence customers to purchase, repeat purchases, build customer loyalty, and provide service recommendations by spreading positive word-of-mouth to others (Pizam et al., 2016).

Past research also shows that the level of satisfaction in customers while using the online environment is relatively more as the online domain provides ease of use in providing necessary information to the customer (Melián-González & Bulchand-Gidumal, 2016).

For online satisfaction, the study incorporates the information system success model to measure user satisfaction parameters to online satisfaction in hotel booking intention (DeLone & McLean, 2003). Online satisfaction in the present study means the online experience of the individual customer from information search to the final online booking of the hotel. Moreover, for offline satisfaction, different values perceived by the customer when searching and booking hotels were taken into consideration. The offline satisfaction in the present study means the different values perceived by the customer while booking the hotel online. The determinants of offline satisfaction by way of perceived value while booking a hotel online has been pointed out by various authors. Perceived value is used in different contexts like in the homestay industry (Zhao et al., 2020), foodservice industry (Kim et al., 2018), guesthouse booking (Waheed & Hassan, 2016) and online hotel booking (Confente & Vigolo, 2018). A study conducted by Shankar et al. (2003) ascertained that offline satisfaction positively influences booking intention. Offline satisfaction can be defined as the customer's perception (perceived value) towards the kind of services rendered and supplied by the hotel (Zhao et al., 2020). Thus, the present study broadly focuses on the following research questions:

1. What factors of online satisfaction influence hotel booking intentions?
2. What factors of offline satisfaction influence hotel booking intentions?

Over the past few years, the advancement in digital media has brought opportunities as well as challenges for hotel booking. Nowadays, most hotels have already developed an online presence to constructively engage with customers by providing crucial information through which a customer can generate online satisfaction (Law, 2019; Wong & Law, 2005) and perceive the value as well (Ozturk et al., 2016). Thus, hotels have started engaging in digital media to enhance their exposure to a broader segment of the targeted market and give customers a more realistic experience (Pelsmacker et al., 2018).

Therefore, the present study aims to map the current state of field research, identifying emerging areas of online satisfaction, offline satisfaction, and booking intentions. Moreover, this study focuses on filling the void by producing a

systematic literature review of hotel booking studies in hospitality and tourism to highlight the antecedents and encourage future developments in related research (Kwok et al., 2017).

Methodology

Journal Selection

Recognizing and identifying the prominent journals in the tourism and hospitality field was challenging. Several academicians suggest that more than a hundred journals have published articles related to this field (Ma & Law, 2009). However, there exists no ordinary list of ranked tourism and hospitality journals recognised by universities and researchers (Law et al., 2010). Lately, numerous Hospitality, Sports, Leisure and Tourism-associated journals have been encompassed in the Thomson Reuters Social Sciences Citation Index (SSCI).

The 2023 SJR list comprises 123 journals from tourism, sports, leisure and hospitality management. The researcher included only WoS (Web of Science) journals, which were reduced to 82. Sports journals were omitted to rank to stay focused on the primary subject. After cautiously scrutinizing the aims and scope of these journals, some journals were removed since they were not covering the area of the topic under review, like the Journal of Service Management, Cities, and others for not falling in the category of peer-reviewed journals. The journal's impact factor and H index were considered while selecting an article. Finally, the top 10 journals focusing on determinants of travel purchase intentions or satisfaction were eventually selected.

The top 10 journals included in this study were the journals that were chosen from the hospitality and tourism journal ranks listed in the SJR (*Scimago Journal and Country Rank*), as shown in Table 1.

Research Paper Selection

The literature identifies different online and offline satisfaction indicators while booking a hotel. The literature review includes only full-length peer-reviewed articles that have conducted a study in the area of hotel booking. A structured approach based on Snyder (2019) recommendation was followed to conduct the study. Leading research articles published in journals were reviewed while ignoring the conference proceedings.

To ensure that other related materials published in peer-reviewed journals were also included in this literature review. The renowned online databases used for academic journals like Scopus (<http://www.scopus.com>), Science Direct (<http://www.sciencedirect.com>) and Emerald Insight (<https://www.emerald.com/insight>), along with Google Scholar (<http://www.scholar.google.com>) were also explored to find out the other suitable published articles. The databases mentioned above are considered the leading and most widespread databases (Sun et al., 2017). The keywords used for the search comprised diverse word combinations

Table 1. Rankings of Hospitality and Tourism Journals (Data Captured on June 27, 2023).

Rank	Title	SJR	H Index	Total Docs (3 Years)	Total Cites (3 Years)	Cites/Doc. (2 Years)	Ref/Doc. (2018)	Country
1	<i>Tourism Management</i>	3.561 Q1	236	558	8,953	15.35	82.23	United Kingdom
2	<i>Annals of Tourism Research</i>	3.426 Q1	201	543	6,447	11.74	57.19	United Kingdom
3	<i>Journal of Travel Research</i>	3.249 Q1	159	295	3,777	12.18	88.69	United Kingdom
4	<i>Journal of Sustainable Tourism</i>	2.966 Q1	127	378	5,160	13.72	85.97	United Kingdom
5	<i>International Journal of Hospitality Management</i>	2.928 Q1	151	891	12,247	13.62	81.35	United Kingdom
6	<i>Journal of Hospitality Marketing and Management</i>	2.520 Q1	67	139	1,920	15.12	89.78	USA
7	<i>International Journal of Contemporary Hospitality Management</i>	2.500 Q1	113	619	7,040	12.23	83.76	United Kingdom
8	<i>Journal of Travel and Tourism Marketing</i>	2.126 Q1	95	202	2,014	7.72	87.47	USA
9	<i>Current Issues in Tourism</i>	2.062 Q1	94	651	6,660	10.23	61.21	United Kingdom
10	<i>Journal of Destination Marketing and Management</i>	1.936 Q1	63	283	2,909	10.11	91.21	United Kingdom

related to hotel booking intentions, such as ‘online hotel satisfaction’, ‘offline hotel satisfaction’ and ‘intention to the book’. For final inclusion, the complete text of articles that might be pertinent was examined (see Figure 1).

The researchers independently assessed titles and abstracts using the aforementioned standards to decide which articles qualified for inclusion in the study. For final inclusion, the complete text of articles that might be pertinent was examined.

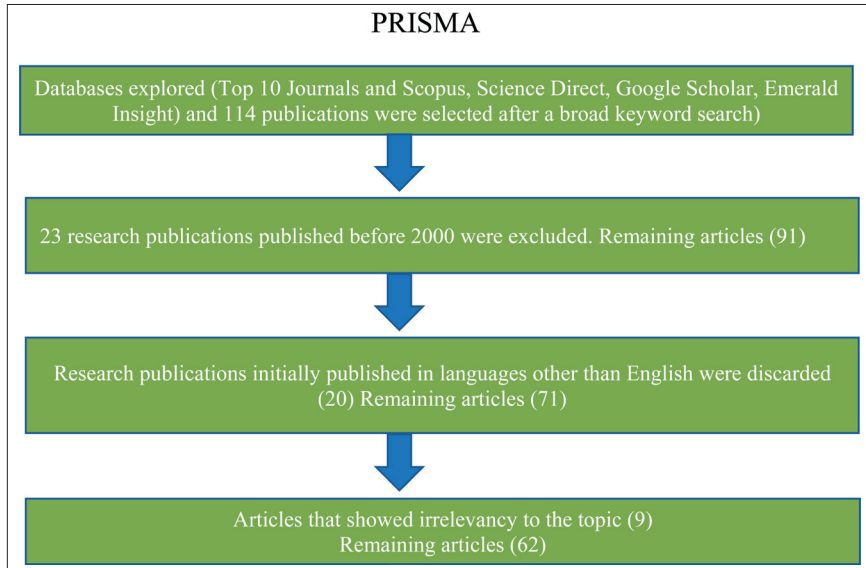


Figure 1. A PRISMA Flow Chart Depicting How Papers Were Selected.

Descriptive Findings

Characteristics of Included Studies

A comprehensive analysis of 62 research articles aim in presenting descriptive findings to map research area development in terms of documents by year, the number of documents sources, and documents by country.

Figure 2 represents the documents published between the period 2000 and 2023. The research published on hotel booking intention has rapidly increased in the last six years. The full published articles in this area were in 2020, where nine articles were published. In recent years, the rise in research intensity reflects a strong positive trend in the overall number of publications and suggests an increasing recognition and interest in the topic.

In terms of approach, we discovered that there was primarily quantitative research ($n = 37$). However, the distribution of findings between qualitative and mixed methods studies is extremely balanced, with 15 results from mixed methods studies and 10 results from qualitative studies, respectively.

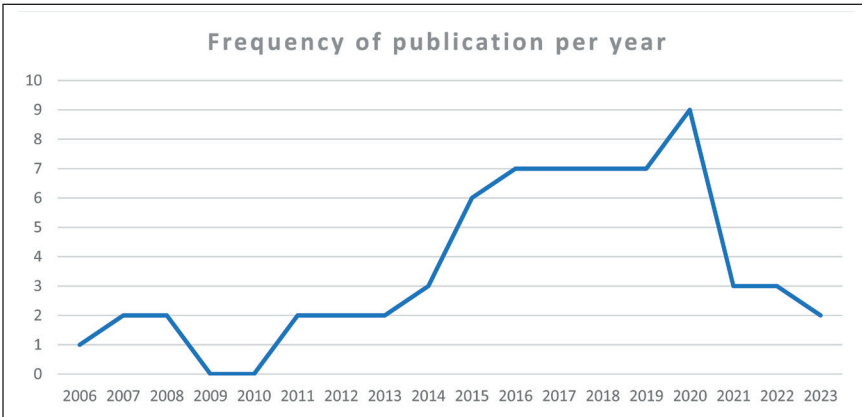


Figure 2. The Number of Articles by Publication Year Between 2000 and 2023.

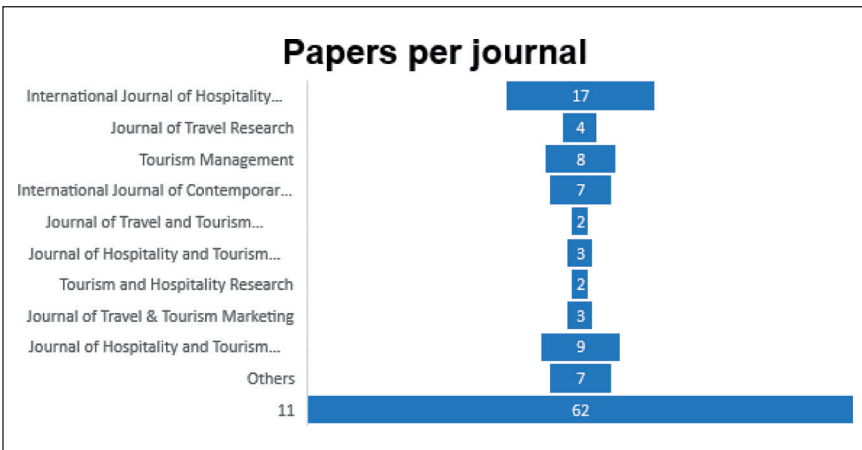


Figure 3. Number of Published Articles per Journal.

Figure 3 represents the dispersion of publications across highly ranked journals reflecting the research done on hotel booking intentions between 2000 and 2023. Nearly 27% of the articles appearing in the *International Journal of Hospitality Management* related to booking intentions have emerged, indicating that this journal is becoming the subject of the study of booking intentions in the hospitality industry.

Analysis of regional distribution in research shows that The United States of America is the most prolific publishing source. Figure 4 depicts a Pareto distribution showing the country-wise number of publications as calculated by the position of the author’s institution. Five nations, including The United States of America, South Korea, Taiwan, China and Malaysia, account for more than 54% of the published articles on hotel booking intentions. The results suggest an

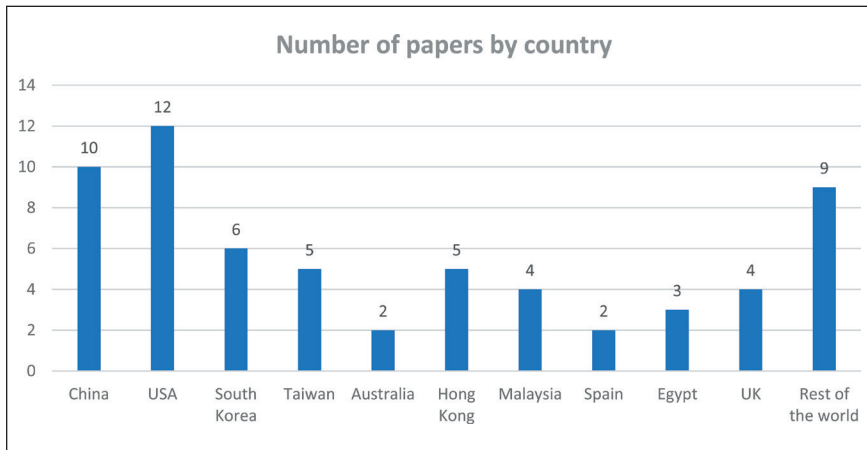


Figure 4. Geographical Distribution of Research.

increase in the regional dispersion of research across various countries, as new researchers from multiple countries are attracted to the subject.

Results

Determinants of Online Satisfaction

Online satisfaction in the present study is based on the model presented by DeLone and McLean (2003), based on satisfaction while using the online environment. In the context of online customer satisfaction, various authors have highlighted and identified the critical dimensions to measure the level of online satisfaction. Online satisfaction has been studied in different contexts, such as the hospitality and tourism (Pizam et al., 2016), hotel (Shaikh & Khan, 2013), university students' travel behaviour (Gallarza & Saura, 2006) and online hotel booking (Ullah et al., 2019). Amongst which a variety of studies have been proven to be highly significant in assessing the antecedents of online satisfaction.

System Quality

System quality refers to the desirable characteristics and features of an e-commerce system, like ease of use, system availability, system reliability, system usability and adaptability (DeLone & McLean, 2003). In the hotel booking context, system quality means the system used to fulfil customers' needs by providing good system quality while using an online booking platform (Wen, 2012). System quality plays an important role when customers want to book a room in a hotel using the Internet. Customers utilise the various available functions of the websites, like inquiries about the hotel, hotel location, facilities provided by the hotel, booking status, and the available payment option. If the hotel site offers excellent system quality, the level of satisfaction of the customers using the Internet to book a hotel is increased (Gao et al., 2017; Xu et al., 2013).

System quality has been examined in various contexts by different authors like online shopping intentions (Cho & Sagynov, 2015), internet shopping (Shin et al., 2013), ride-hailing service (Phuong & Trang, 2018), online travel ticket booking websites (Noronha & Rao, 2017) and online booking intentions (Wang et al., 2015). According to the Information System Model, an information technology system's most critical success attribute is the system quality that influences user satisfaction and, eventually, the intention to use (Dreheeb et al., 2016).

Information Quality

Information quality refers to an individual user's experience with the quality of the information shown on a hotel website (Shah & Attiq, 2016). Information quality is assessed on two basic criteria, namely content adequacy and content usefulness; the former is associated with the consistency, capability, relevance, timeliness, and completeness of the information displayed (Gürkut & Nat, 2018), while the latter includes informativeness and valuableness of the information provided (Park & Gretzel, 2007). Information systems are designed to allow users to get the necessary, relevant, and accurate information, as it is a crucial success aspect while investigating the overall information system success (DeLone & McLean, 2003).

Information quality has been examined in various contexts to determine the satisfaction of the customer like in the e-travel service quality (Ho & Lee, 2007), repurchase intention on the Internet (Shin et al., 2013), rural lodging establishments (Melo et al., 2017), customer satisfaction and repurchase intention (Choi & Kim, 2013), and service quality perception (Ismoyo et al., 2017). Information quality plays a vital role while booking a hotel using the internet. The customer checks out specific hotel information, including the hotel's price, star rating of the hotel, reviews posted by other customers, and ratings given by the other customer. After searching for all relevant information, customers subsequently book a hotel. While using the internet for booking a room in a hotel, if the information a customer gets is of high quality, the customer's online satisfaction will correspondingly be high (Emir et al., 2016).

Service Quality

In order to measure the service quality of online hotel booking websites. A seven-criteria model was proposed by Kaynama and Black (2000), which includes navigation to the website, content available on the website, presentation/design, accessibility, background information, responsiveness, and customisation. These parameters were explicitly considered because of their similar nature with the five dimensions of the SERVQUAL model proposed by Parasuraman et al. (1985). The 'reliability' dimension was changed to content available on the website to be assumed as the promised services. The dimension of 'assurance' is converted into the 'background'. The dimension of 'Tangibility' is demonstrated in the service attributes of online hotel booking for 'accessibility', 'navigation' and 'presentation/design'. The provision of personal attention to customers described by the 'empathy' dimension was fixed in the 'customisation' by the website. The 'responsiveness' dimension is reserved with the same name (Kaynama & Black, 2000).

A study conducted by Nusair and Kandampully (2008) explored the possible attributes of customer satisfaction with respect to travel websites. The result shows that a multi-dimensional construct, that is, service quality has a pivotal contribution to customer satisfaction. Additionally, they found the constructs of the website interface, which consider the website's appearance, the speed of website loading, easy access, website interactivity, website navigation, and security. Based on the mentioned service attribute, they were mostly connected to the website's functions.

The literature review on the parameters of online satisfaction while booking a hotel is given in Table 2.

Determinants of Offline Satisfaction

Offline satisfaction in the present study is by way of the customer's perceived value while booking a hotel online. Zeithaml, (1988) proposed a commonly accepted definition of value. The author argued that, though there are various expressions of the value of a consumer, still perceived value can be represented in one broad definition as the consumer's comprehensive assessment of the utility of a product or service based on perceptions of what is received and what is given to the consumers. Empirical research was conducted to measure the customer's perceived value in the hotel environment; the result shows that individual hotels deliver notably different levels of customer satisfaction through value. The hotel's perceived value affects the customer satisfaction (Bi et al., 2020). Previous studies have paid increasing attention to the significance of perceived value on the tourist satisfaction (Chang et al., 2014), purchase intentions (Wu et al., 2018), and intention to hotel booking (Thielemann et al., 2018). In a study conducted by Keshavarz and Jamshidi (2018), service quality and perceived value were the most critical drivers of customer satisfaction and tourist loyalty (Keshavarz & Jamshidi, 2018).

Several studies on tourism have examined factors like the functional value (Lee et al., 2011), emotional value (Sánchez et al., 2006), social value (Confente & Vigolo, 2018), and monetary value (Chen et al., 2016) that has an impact on the offline satisfaction of the customer (Zhu & Chen, 2012).

Functional Value

Functional value can be defined as 'the perceived utility acquired from an alternative's capacity for functional or utilitarian performance' (Sheth et al., 1991). According to consumption value theory, the functional aspect of value refers to individuals' rational and economic evaluation that reflects the quality of using a service (Berry et al., 2002). It is the inherent capability of the offering to satisfy the customers, along with the benefits related to owning the offering (Cheng et al., 2019).

In the present study, functional value can be summarised as the customer's viewpoint that hotel booking is the source of generating value. The functional value is signified as the perceived experience the consumers acquire through the attributes and functions of the services offered by the hotel. In a study conducted by Du et al. (2020), 'room', 'convenience', 'location', 'geography', 'comfort' and 'cost-effective' were the high-frequency words relate to functional value. In the

Table 2. Empirical Research Investigating Online Satisfaction.

Past Studies	Independent Variable	Dependent Variable	Context
Anand et al. (2023)	Information quality, system quality, and service quality	Visitors satisfaction	Smart tourism
Liu et al. (2023)	Information quality (inq), system quality (syq), service quality (seq)	Satisfaction	Travel applications
Gao et al., (2017)	System quality and information quality	Satisfaction, WOM	Virtual travel community
Ho and Lee (2007)	Information quality, security, website functionality, customer relationships, responsiveness	Overall service quality	E-travel
Vladimirov (2012)	Variety of online product, quality of information, website playfulness, navigability, responsiveness, personalisation, trust, opportunities	Customer satisfaction	Tourism companies' websites
Noronha and Rao (2017)	Information quality, website design, system quality, service quality	Purchase intention	Online travel booking
Lee et al. (2020)	Online experience, hotel service experience	Satisfaction, revisit intention	Hotel booking
Chung et al. (2015)	Information quality, design quality, system quality	Intention to use, user satisfaction	Tourism website
Marinkovic and Kalinic (2017)	Perceived website interactivity	Hotel website revisit intention	Hotel booking
Xu et al. (2013)	Information quality, service quality, system quality	Intention to visit	E-service
Handayani et al. (2017)	Website quality (usability, ease of use, entertainment, complementarity)	E-trust, online booking intention	Hotel booking
Lin et al. (2011)	Information quality, system quality, service quality, product quality, delivery quality, perceived price	Online user satisfaction	Online purchase
Tran et al. (2019)	Information quality, responsiveness, security assurance	E-satisfaction	Hotel booking
Cho and Sagynov (2015)	Perceived product information, price perception, convenience perception, perceived product & service quality	Purchase intention	Online purchase behaviour
Emir et al. (2016)	Information quality, perceived interactivity, safety and privacy, price and promotion, ewom	Online hotel booking	Hotel booking
Liu and Zhang (2014)	Website quality (information quality, service quality, accessibility, trust)	Information search intention, purchase intention	Online hotel booking

Masri et al. (2020)	Information system quality, perceived value	Continuance intention	E-tourism
Ladhari and Michaud (2015)	Hotel website quality, trust towards the hotel, attitude toward the hotel	Booking intentions	Hotel booking
Molinillo et al. (2018)	Cognitive image, involvement, affective image	Intention to visit	Destination management organisations
Dreheeb et al. (2016)	Perceived website usability, perceived risk online, online satisfaction	Affect towards the travel destination	Travel booking
Bai et al. (2008)	Website functionality, website usability, customer satisfaction	Purchase intentions	Travel-related products
Wang et al. (2015)	Hotel website quality	Online booking intentions	Hotel booking
Back et al. (2020)	Websites' pictorial information	Booking intentions and willingness to pay more	Hotel booking
Xu and Schrier (2019)	Perceived website aesthetic, perceived ease of navigation, perceived information quality	Booking intention	Hotel booking
Ghazali (2020)	Information quality, system quality	Purchase intention	Hotel booking
Mahadin et al. (2020)	User-friendliness, information quality, entertainment, security and privacy	Tourist e-satisfaction	Hotel booking
Ali et al. (2017)	Functional quality, technical quality	Customer satisfaction	Hotel booking
Agag et al. (2020)	Perceived website trust	Intention book hotel online	Hotel booking
Belver-Delegado et al. (2020)	Perception of booking website quality, hotel star rating perception	Satisfaction with specific hotel experience, favourable behavioural intentions towards the hotel	Hotel booking
Wen (2012)	Information quality, system quality, service quality	Purchase intention	Online travel
Essayy (2019)	Information design, graphics design	Booking intentions	Hotel booking

same study, variables that influence customer satisfaction primarily comprise the hotel's geographical location, room size and comfort, the availability of transportation, hotel infrastructure, and the overall decoration of the hotel adds up to the perceived functional value (Du et al., 2020).

Various studies have empirically proved that perceived functional value strongly influences users' behavioural intentions to use hotel booking services. Therefore, the hotel's function value significantly affects users' behavioural intention to go for hotel booking (Ahn & Back, 2019; Lee et al., 2011).

Emotional Value

Emotional value is the utility obtained from the affective states or feelings that a product or service brings out (Sweeneya & Soutar, 2001). Emotional value positively influences experiential satisfaction and behavioural intentions in the tourism industry (Wu et al., 2018). In the context of hotel booking intentions, emotional value is the perceived value derived by a customer in distinction to the affective state that the hotel will generate while using the services (Lee et al., 2011). When the perceived value of the services satisfies customers' psychological or mental needs, customers' emotional value tends to be higher, leading to a higher offline satisfaction (Chang, 2008; Lee et al., 2020). Emotional value is one of the factors which can be used as a determinant to measure the offline satisfaction of the customer. Therefore, the hotel's perceived emotional value significantly influences users' behavioural intention to book a hotel.

Social Value

Social value refers to the perceived utility linked with the customer's geographical, demographic, financial, political, ethnic and cultural scopes following the attributes of the product or service in social groups (Sheth et al., 1991). Social value signifies the utility gained from the product or service to improve the collective reputation of group or community, in compliance with the preferences of others (Chen et al., 2016). This concept suggests that a product or service can be valuable not just for its direct benefits, but also for the positive impact it can have on the wider social context. It is the value resulting from the ability of the product or the service to increase the social status of the customer (Menard, 2016).

In the context of hotel booking intentions, social value is considered the perceived social approval and impression a customer will generate while using the hotel services. While booking a room in a hotel, if a customer gets a sense of an increased self-identification, it increases the offline satisfaction of the customer (Waheed & Hassan, 2016). Therefore, perceived social value can be a determining factor for offline satisfaction.

Monetary Value

The monetary value represents the value perceived by the consumers where the price level provided by the hotel are regarded as reasonable and fair as against the competitive offerings of the other hotels (Ladeira et al., 2016). Monetary value shows the economic benefits derived to the customer while using the hotel services (Lee & Phau, 2018). The price offered has a significant functional value in the tourism industry (Chiang & Jang, 2006).

In the context of hotel booking intentions, when a customer spends money, time and effort to book a hotel, customers reflect the economic value received. If the hotel services can give a higher monetary value to the customers, the high monetary value will eventually increase offline satisfaction (Emir et al., 2016). Therefore, monetary value can be considered as a factor influencing the offline satisfaction of the customers.

The literature review on the parameters of offline satisfaction while booking a hotel is given in Table 3.

Conclusion and Managerial Implications

This article has addressed the research question that aimed to explore the current state of knowledge and awareness of the satisfaction and booking intentions of customers who book hotels online. Using a systematic literature review technique, this article reviewed 62 booking intention articles to identify the contexts where satisfaction and booking intentions have been examined from 2000 to 2023. The current research offers a timely and practical overview of essential satisfaction and hotel booking intentions theories. The applicability of the present study is for academics in line with the growing importance of digital platforms in the hospitality and tourism industry to improve customer satisfaction and find new possibilities for co-creation and innovation. The researchers found that the number of studies on hotel booking intention has significantly increased since 2014. Authors from the USA, Taiwan, China, and South Korea contributed to most of the studies on hotel booking intention conducted from 2000 to 2023. The result shows that the antecedent of online satisfaction is the information quality, system quality, and service quality. The independent variables that influence offline satisfaction are emotional value, functional value, monetary value and social value. Consequently, Figure 5 illustrates the integrated proposed research model for hotel booking intention, incorporating both online and offline satisfaction factors.

From an academic point of view, the systematic literature review has disseminated a conceptual model, a modest evolution of factors influencing hotel booking intention, and an increased interest in this research field. Optimistically, by giving new insights into how hotel booking intentions have developed, the present study provides an opportunity to enhance this field further.

Additionally, the present research can have real value for practitioners and academics by exploring the state of academic research on hotel booking intention by way of satisfaction with online hotel booking and providing potential further research developments. The present study integrates the contexts that have been discussed in the existing hospitality and tourism literature. The articles considered for review were expected to signify the current status of research on booking intentions. They are published in the top 10 major tourism and hospitality journals that have been extensively cited in the field. Therefore, in the following section, we come up with the theoretical implications followed by a research agenda for further research possibilities, managerial implications and finally, the limitations of the research.

Table 3. Empirical Research Investigating Offline Satisfaction.

Past Studies	Dependent Variable	Independent Variable	Context
Touni et al. (2022)	Functional value, social value, and entertainment value	Booking intention	Hotel booking
Vayghan et al. (2022)	Utilitarian value, social value and hedonic value	Engagement and loyalty	Hotel booking
Cao et al. (2022)	Functional value, emotional value, social value and privacy risk	SVA adoption intention	Airbnb guests
Kim and Park (2016)	Economic value, functional value, emotional value, and social value	Loyalty, satisfaction	Community-based ecotourism
Han et al. (2018)	Social value	Satisfaction, revisit intentions	Casino industry
Agag and El-Masry (2016)	Shared value, opportunistic behaviour, communication, privacy, perceived usefulness, perceived ease of use	Intention to book hotel online	Hotel booking intentions
Dedeoğlu et al. (2015)	Quality value, monetary value, emotional value, behavioural price value, and social value	Revisit intention, recommendation	Tourism
Lee et al. (2011)	Functional value, emotional value	Visitor satisfaction, behavioural intentions	Festival evaluation (tourism)
Chang et al. (2019)	Functional value, emotional value, social value, monetary value	Intention to book	Hotel service
Ozturk et al. (2016)	Perceived risk, perceived ease of use, subjective norm, innovativeness	Continued use	Mobile hotel booking
Wu et al. (2018)	Experiential satisfaction (emotional value & functional value), experiential quality (interaction quality, physical environment quality, outcome quality, access quality)	Revisit intention	Theme parks
Gardiner et al. (2013)	Hedonic value (emotional value, novelty value), functional value (value for money, quality)	Attitude, intention	Travel decision making
Prebensen and Rosengren (2016)	Functional value, value for money, emotional value, social value, novelty value, relationship building value	Satisfaction	Tourism
Sánchez et al. (2006)	Functional value, emotional value, social value,	Perceived value of the purchase	Tourism product

Waheed and Hassan (2016)	Functional value, hedonic value, symbolic value, financial value	Purchase intention	Luxury hotel
Chen and Peng (2014)	Functional value, experiential value, symbolic value	Attitude, staying behaviour	Luxury hotel staying behaviour
Kirillova and Chan (2018)	Aesthetic value, functional value	Booking intention	Hotel booking
Ahn and Back (2019)	Functional value, wellness value	Customer satisfaction, behavioural intention	Tourism business
Gao and Mattila (2014)	Service outcome (perceived warmth, perceived competence)	Satisfaction, behavioural intentions	Green hotels
Bao (2017)	Functional value, psychological value, external value	Satisfaction with a loyalty program	Hotel
Lee and Chau (2018)	Perceived monetary value {Functional value – Monetary}, Object based Authenticity {Functional value – quality}, Existential Authenticity {Emotional/Social value}	Satisfaction	Young tourists
Chang (2008)	Customer value (functional value, social value, emotional value, epistemic value, conditional value)	Service quality (tangible cues, responsiveness, reliability, empathy)	Hotel
Wu, et al. (2018)	Emotional value, functional value, experiential quality	Behavioural intentions, reputation	Cruise tourists
Bhatiasevi and Yoopetch (2015)	Perceived value, perceived ease of use, perceived usefulness	Intention to use	Hotel booking
Chiang and Jang (2007)	Perceived price, perceived value	Purchase intention	Online hotel booking
Agag et al. (2020)	Perceived value	Intention book hotel online	Hotel booking
Israel et al. (2019)	Perceived usefulness, perceived enjoyment,	Booking intention	Hotel booking
Talwar et al. (2020)	Functional value, social value, epistemic value, conditional value	Purchase intentions	Hotel booking
Du et al. (2020)	Emotional value, functional value, service value	Customer satisfaction	Hotel booking
Kirillova and Chan (2018)	Aesthetic value, functional value	Booking intention	Hotel booking
Ismoyo et al. (2017)	Functional value, emotional value, social value	Customer satisfaction	Hotel
El-Adly (2019)	Self-gratification, price, transaction, hedonic, quality values	Customer satisfaction, customer loyalty	Hotels

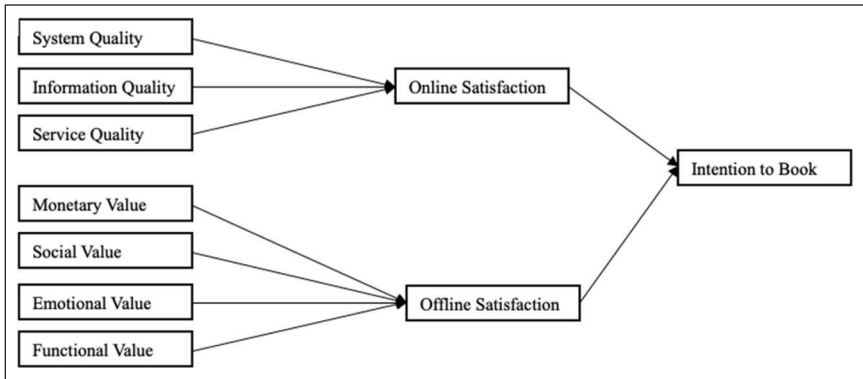


Figure 5. Proposed Model.

Managerial Implications

The results mentioned in the previous section can be insightful for hotel managers, as they need extensive consumer knowledge to relate to the offerings, and satisfaction while booking online offers powerful insights to support them in accomplishing this goal. Hotel managers can exploit it and formulate a digital marketing strategy to target potential customers.

All the factors influencing the hotel booking intention suggest managerial implications and help hotel managers to take an active part in creating a digital presence for their hotel. Results have showcased hotels' importance in maintaining a digital presence that meets customers' desires and allows booking smoothly. Consequently, if hotel managers aim to optimise their hotel's digital media presence, they have to keep an eye on the evolution of rapidly changing technologies to stay in touch with customers.

It is highly advisable for managers of the hotels to categorically define the content of information available on the website by paying more attention to the facilities provided. Finally, they should present their hotel on digital platforms using the best-suited visual and tactile sensory means to effectively communicate the different values around their hotels.

Limitations and Future Scope

Final, this study has some limitations. To begin with, it has a limited scope, which only covers the period from 2000 to 2023. Second, the study merely selected and reviewed satisfaction (online and offline) and booking intentions research articles published in peer-reviewed journals only. Other sources like printed books, research thesis, industrial reports and articles in conference proceedings were excluded for review purposes. Studies in the future may ponder this drawback, and they may cover all these sources to get more published data. Third, this article included only 10 selected journals recognised with the Scopus Cite Score metrics

in 2022. Studies in the future may look at some other databases and enhance the scope of their research. Lastly, this study focused on articles published in the tourism and hospitality literature. Studies in the future are directed to use other research, such as marketing and consumer behaviour, which is also focused on understanding and predicting consumer behavioural intentions and their booking intentions.

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Illuminating Fairness: A Comprehensive Review of Workplace Equity Sensitivity

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Abstract

The literature on equity sensitivity is fragmented and has numerous inconsistencies, with various conjoined fields being studied. Given the shortcomings that equity sensitivity fulfils in the workplace equity theory and the predictive power of the construct to explain the workplace attitudes and behaviours, this review aims to synthesise the highly fragmented studies, highlight the publication activity, propose a framework based on a content analysis and identify the research gaps in the area of equity sensitivity. This review also aims at suggesting future research avenues in the field of equity sensitivity. Using a systematic literature review approach, the present study reviews 74 articles published from 1987 to 2020 on equity sensitivity. The review provides a content analysis-based framework for future directions of research and reveals a lack of consensus around a theoretical framework and ambiguity in the conceptualisation of the equity sensitivity. Additionally, the lack of longitudinal qualitative research with limited sample selection are the methodological gaps hindering the field's progress. This work will help future researchers, interested in extending their contribution to this field.

Keywords

Equity sensitivity, systematic literature review, benevolent, entitled, workplace justice, organizational behavior

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Introduction

The theory of equity (Adams, 1963; Walster et al., 1973; Weick, 1966) has gained a lot of attention from researchers in psychology and human relations. The theory is based on Festinger's theory of cognitive dissonance and postulates that an individual psychologically compares his/her job inputs and outcomes with their referent others (Adams, 1963). However, the equity theory has primarily been criticised on the grounds of homogenising individual response to the equity/inequity conditions thus ignoring the individual differences in shaping these responses. To overcome this shortcoming, Huseman et al. (1985, 1987) introduced the concept of 'equity sensitivity'.

Equity sensitivity categorises individuals into benevolent (individuals more inclined towards inputs rather than the output), equity sensitive (who like to maintain a balance between their level of inputs and the outcome they receive) and entitled (individuals who are focused on obtaining more output for the input they provide). These individuals react to equity/inequity conditions differently depending on demographic and psychological variables. Equity sensitivity is believed to enhance the equity theory's predictive power (King Jr et al., 1993). Equity sensitivity's superiority is proposed due to the following reasons. First, the equity sensitivity of an individual aids in establishing behavioural clarity in ambiguous workplace contexts (Otake-Ebede et al., 2016). Second, equity sensitivity offers a holistic apprehension of the equity process by incorporating the individual difference variable (King Jr et al., 1993). Third, Mudrack et al. (1999) highlight the importance of equity sensitivity in explaining the behaviour of individuals in an ethical dilemma situation in the workplace which augments its applications further.

Given the shortcomings that equity sensitivity fulfils in the workplace equity theory and the predictive power of the construct to explain the workplace attitudes and behaviour, a systematic literature review (SLR) was carried out to study the domain. The past literature has been confounding in terms of determining the nature of the domain (Huseman et al., 1987; Miller, 2009), conceptual underpinnings (Huseman et al., 1987; King Jr et al., 1993; Sauley & Bedeian, 2000) of the concept and its dimensionality (Davison & Bing, 2008; Huseman et al., 1985; Sauley & Bedeian, 2000). In response to this increased fragmentation of the findings and aforementioned inconsistencies prevalent in the literature, this SLR aims to provide an integrated view of the research, categorising and identifying the problems in the existing literature and proposing new avenues for future research. This review will serve as a relevant push for the future researchers to investigate the role of equity sensitivity in predicting the various outcomes by developing perceptions in a workplace.

To achieve these objectives, this research is guided by the following research questions:

- How has the domain of equity sensitivity developed over the years?
- What are the different theoretical underpinnings and constructs in the domain?

- What are the research gaps in equity sensitivity research?
- What are some productive future research areas for further development?

Recent years have seen a decline in the equity sensitivity research possibly due to the underdeveloped foundation of the concept. Thus, the authors propose a conceptual model of equity sensitivity, which will help broaden the understanding of the role of equity sensitivity as an individual difference variable in the workplace setting. Thus, the review is organised as follows: first, equity sensitivity is introduced, followed by the research methodology. Second, the description of the literature is provided along with an overview of the selected articles. Finally, the findings are highlighted, and future research avenues are suggested.

Methodology

Literature reviews are believed to lay the groundwork to advance a concept or theory and help in tracing the evolution of a phenomenon over time (Kumar, 2022; Kumar et al., 2023a). Therefore, the methodology for reviewing the literature must be systematic, scientific, comprehensive and explicitly report all the steps and procedure for conducting the review (Tuli et al., 2023c). Following Tranfield et al. (2003), the study has used SLR methodology to review the existing literature on equity sensitivity. The review process adopted to summarise the existing research and to identify the future research agenda has been categorised into 4 phases, as shown in Figure 1.

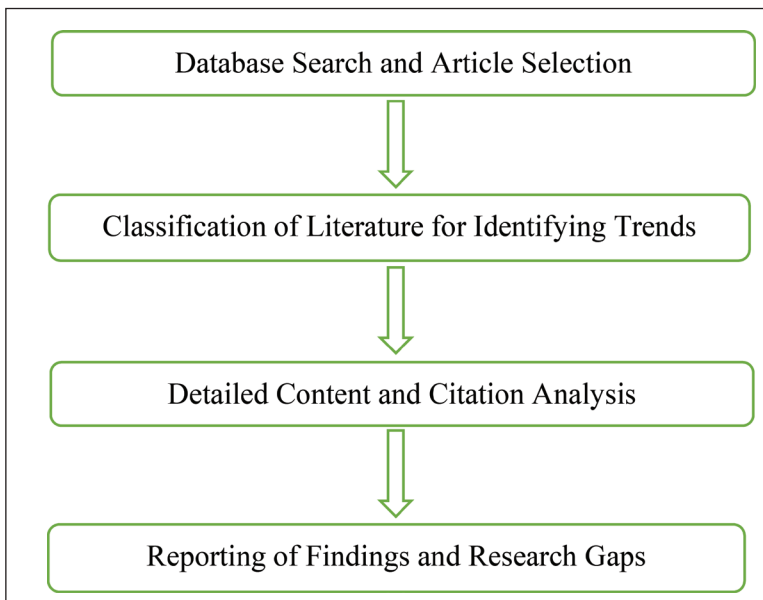


Figure 1. Summary of the Systematic Review Process.

To keep the review comprehensible, the study focuses on the literature of equity sensitivity and excludes the job equity theory, although closely related to the interest. This is due to two reasons: First, multiple reviews have been conducted on job equity (Carrell & Dittrich, 1978; Pritchard, 1969), whereas no such review has been done for equity sensitivity. Second, equity sensitivity categorises individuals, which facilitates the understanding of the behavioural and psychological effects of perceived equity/inequity (Huseman et al., 1985, 1987). Thus, a prolific amount of literature is out of the scope of the research area. To uphold the quality of the research, the authors have only included peer-reviewed scholarly articles published in academic journals, which ensure a high-grade inclusion.

Literature Collection and Boundary Identification

The PRISMA model was used to carry out the search to enhance the rigor and objectivity of the search procedure (Moher et al., 2009; Tuli et al., 2023a). The steps are discussed in detail below.

Step 1: Identification

Literature for this review has been identified with the help of keyword/phrase search. Subsequently, the authors delimited the selected literature using a combination of deductive and inductive approaches. As input criteria initially, the use of keywords like ‘workplace equity’ or ‘equity sensitivity’ or ‘sensitivity model’ or ‘inequity’ was made. Several research databases have been used to ensure the inclusion is comprehensive and includes a diverse range of articles in the review. Emerald, ProQuest, EBSCO, JSTOR, SAGE and Elsevier have been used to search the articles. The first round of the database search was confined to keywords, title and abstract. This resulted in 923 articles depicted in Table 1. Additional delimiting boundaries for screening the literature were developed. These boundaries were given as:

Table 1. Details of Article Search in Database.

Database	Scope	Date of Search	Date Range	Number of Items	Cumulative Total
Elsevier	Title, keyword & abstract	14.01.2021	1987–2022	135	135
Emerald	Title, keyword & abstract	14.01.2021	1987–2022	199	334
ProQuest	Title, keyword & abstract	15.01.2021	1987–2022	266	600
EBSCO	Title, keyword & abstract	15.01.2021	1987–2022	180	780
JSTOR	Title, keyword & abstract	15.01.2021	1987–2022	86	866
SAGE	Title, keyword & abstract	16.01.2021	1987–2022	57	923

- Articles published only in peer-reviewed journals were considered.
- Articles written in English language were included.
- Articles in the field of business, management and accounting and psychology were considered.
- Papers with full-text available were considered.

This led to a total of 116 articles.

Step 2: Screening

To make the study impactful, abstracts were filtered to include the studies conducted in the workplace context. Additionally, 20 articles duplicated in more than one database were removed. Subsequently, 41 articles were excluded from the final sample which led to the inclusion of 75 articles for the final review.

Step 3: Eligibility

The full texts were then obtained for the articles. These articles were analysed for their contribution towards the application or refinement of the domain, development of a scale to measure the domain as well as building theories to enhance the knowledge of the concept. Consequently, only conceptual and empirical papers were included. Any review articles directly addressing the domain were decided to be excluded but apparently no such study was found. This led to the inclusion of 65 articles in the review.

Step 4: Inclusion

Further, to make the data set comprehensive and to include all the relevant articles, detailed scanning of references of all selected articles were done. Finally, 9 articles were included in the final sample, which took the final selection to 74. A proper worksheet was maintained to record the summary of the final included articles, which were reviewed to record various parameters including:

- Year of publication
- Journals of publication
- Prominent authors in the field
- Research approaches and methods
- Geographic region
- Citation analysis
- Content analysis

The synthesis of the literature review involves itemisation of selected articles, and it unearths the explicit and implicit relevant facts from the existing body of knowledge. A detailed process of article selection is presented in Figure 2.

Description of the Literature

This section provides a description of the existing literature in the equity sensitivity domain that will help provide insights into the current developments in the domain (Kumar et al., 2023a).

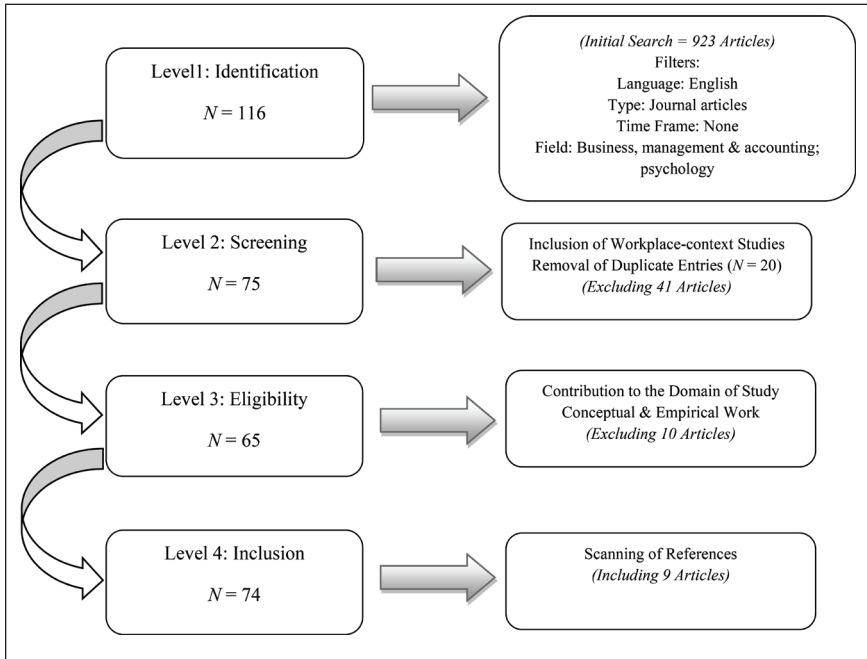


Figure 2. Article Selection Process.

Publication Activity

As evident by Figure 3, the equity sensitivity research has been following an increasing trend from 3 articles before 1990 to 10 during the 1990–1999 period and eventually to 59 articles distributed over the 2000–2022 span.

The 74 articles included in the review are published in 43 different journals, constituting fields such as psychology, management, ethics and behavioural sciences and marketing. A total of 32 journals (74%) of the 43, have published only single article and only four journals have published four or more articles. Figure 4 shows the journals with more than one publication in the field. Figure 5 depicts the authors who have contributed significantly to the field.

Research Approaches and Methods

The majority of the reviewed articles were empirical ($n = 67$), with a mere seven articles opting for a conceptual study. Table 2 depicts the different methodologies adopted by the studies included in the review. Surveys were observed to constitute a large number of studies followed by the conceptual method. Among the articles included in the review, no literature reviews were found, which strengthens the fact that equity sensitivity literature is still underdeveloped.

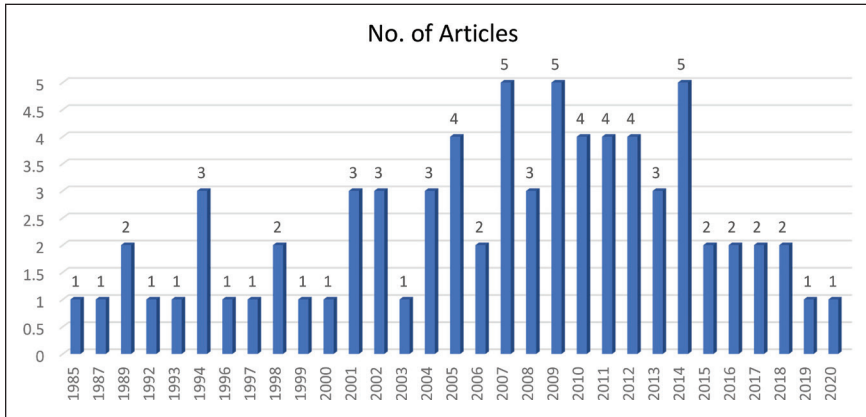


Figure 3. Year-Wise Publication.



Figure 4. Journal-Wise Publication.

Nature and Geographical Distribution of the Studies

Table 3 depicts the geographic distribution as well as the nature of the sample employed in the empirical articles reviewed. The majority of the articles were based on the sample from United States (44 studies) followed by Canada (3 studies) and Korea, Australia and the Philippines (2 studies each). The analysis also indicated five articles conducted in a cross-country setting and seven studies employing a mixed sample.

Three of the studies explored the impact of equity sensitivity under team setting. Political ideology/setting, gender influence, generation gap and negative effects of equity sensitivity found their place in two studies each. Additionally, all the articles included in the review used the cross-sectional method of data collection as no longitudinal study was found.

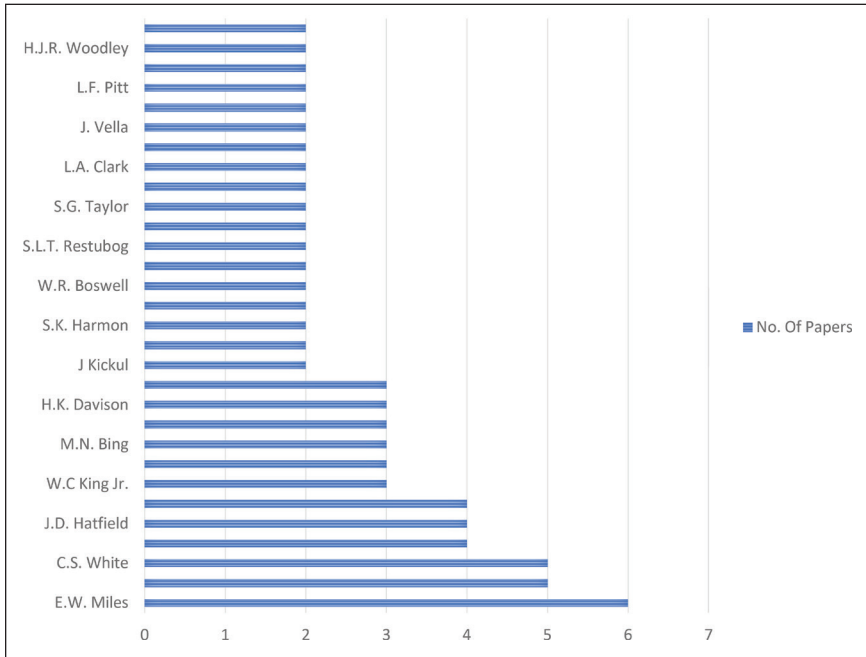


Figure 5. Author-Wise Publications.

Table 2. Research Approaches and Methods Used in the Articles.

Research Approach	Research Method	No. of Articles
Empirical papers	Quantitative	65
	1. Survey	61
	2. Experiment	3
	3. Multiple methods	1
	Mixed method	2
Conceptual papers		7
	Total	74

Table 3. Nature and Geographic Distribution of the Sample.

Continent	Sample	Number of Studies	Total no. of Studies
North America	Students/university settings	20	47
	Working professionals	18	
	General public	2	
	Mixed	7	
Europe	Working professionals	2	2
Asia	Students	2	10
	Working professionals	8	
Australia	Students	1	2
	Working professionals	1	
Africa	Working professionals	1	1

Findings

Citation Analysis

Citation analysis refers to the analysis of the number of times an article has been referred to in other studies to identify the most influential works in the field. This will also help in identifying the articles that are most impactful in deepening the knowledge of the field. For this purpose, the citation information provided by Google Scholar as of March 26, 2022 was used. The 74 articles were found to have 8,829 citations making the average citation as 119 per article. The articles with more than 100 citations are shown in Table 4. It was found that Huseman et al. (1987) is the most-cited article with 1,489 citations. This might be due to it being a seminal study. Other top-cited articles were Konovsky and Organ (1996), Kickul and Lester (2001) and Blakely et al. (2005).

Content Analysis

The articles were then analysed for their content. The authors independently reviewed the papers to identify the constructs and perspectives being studied in

Table 4. Citations of the Reviewed Articles.

S. No.	Article	Number of Citations
1.	Huseman et al. (1987)	1,489
2.	Konovsky and Organ (1996)	1,156
3.	Kickul and Lester (2001)	534
4.	Blakely et al. (2005)	429
5.	King Jr et al. (1993)	300
6.	Huseman et al. (1985)	293
7.	O'Neill and Mone (1998)	265
8.	King Jr and Miles (1994)	251
9.	Miles et al. (1989)	222
10.	Miles et al. (1994)	219
11.	Restubog et al. (2007)	216
12.	Sauley and Bedeian (2000)	205
13.	Scott and Colquitt (2007)	193
14.	Kickul et al. (2005)	182
15.	Naumann et al. (2002)	145
16.	Allen and White (2002)	136
17.	King Jr and Hinson (1994)	134
18.	Wheeler (2002)	119
19.	Bing and Burroughs (2001)	112
20.	Mudrack et al. (1999)	110
21.	Restubog et al. (2009)	109
22.	Mueller and Clarke (1998)	107
23.	Shore et al. (2006)	102

Table 5. Theoretical Perspectives in Reviewed Articles.

Theoretical Perspective	Number of Articles	Original Sources (Examples)
Equity Sensitivity (Application & Refinement)	59	Huseman et al. (1985); King Jr et al. (1993)
Measure of Equity Sensitivity	10	Sauley and Bedeian (2000); Davison and Bing (2008)
Entitlement	5	Naumann et al. (2002); Allen et al. (2015)

the domain. Each author provided codes to their analysis that were then compared and contrasted to reach a consensus. A thorough content analysis helped the authors identify the various theoretical perspectives that the articles adopted in the field. These perspectives are highlighted in Table 5.

Further analysis helped in highlighting the constructs predominantly studied in the equity sensitivity field. This was done to single out the concepts or processes being studied the most. Table 6 presents the list of these constructs. As evident by the table, both the organisation-specific and the non-organisational constructs were found to be significantly focused on by the studies. Among the organisational constructs, job satisfaction and organisational citizenship behaviour are the most studied. Individual dispositions are prominently studied among the non-organisational constructs.

Based on the content analysis of the literature, a framework is collated which can be taken as the basis of future research in the field. Figure 6 presents the model. Being a typical individual difference variable, equity sensitivity has its grounding in the post-positivist paradigm due to its psychological nature and individual differences pertaining to contextual and demographic variables. Hence, the literature proposes that the sensitivity to equity that is, benevolence and entitlement will moderate the relationship between various reward systems, certain personal characteristics and social exchange variables which will then drive various positive or negative workplace attitudes and behaviour (Kumar & Agarwal, 2023). Equity sensitivity is affected by various demographic as well as individual disposition factors. These variables have been found to have an effect and interaction with equity sensitivity (Bourdage et al., 2018; Kim et al., 2013; O'Neill & Mone, 1998).

The moderating effects (Kumar et al., 2023b) of the differing equity sensitivity can be summarised as follows. Unlike the entitled individuals, the tolerant and 'giving' nature of the benevolent inclines them to display positive attitudes and behaviours in the work environment irrespective of the reward conditions (under reward or over reward) (King Jr et al., 1993). They are found to prefer intrinsic outcomes (Wheeler, 2007) and generally perceive distributive justice to exist in the reward distribution (Blakely et al., 2005). Additionally, due to their giving ideology (King Jr & Miles, 1994) and their ability to work in teams (teamwork orientation) (Bing & Burroughs, 2001); they are more likely to depict positive perceptions towards organisational outcomes. Lastly, their benevolence forms tolerance towards contract breach (Roehling & Boswell, 2004) and leadership

Table 6. Constructs Studied in the Equity Sensitivity Research.

Nature of the Construct	Construct	Finding	Sources
Organisational	Job satisfaction	Benevolent are found to be more satisfied with their jobs than entitled.	Huseman et al. (1985); King Jr et al. (1993); King Jr and Miles (1994); O'Neill and Mone (1998); Sauley and Bedeian (2000); Kickul and Lester (2001); Ananvoranich and Tsang (2004); Shore et al. (2006); DeConinck and Bachmann (2007); Taylor et al. (2009); Byrne et al. (2010)
	Organisational citizenship behaviour	Benevolent were found to display organisational citizenship behaviours in various contexts than entitled.	Konovsky and Organ (1996); Chhokar et al. (2001); Kickul and Lester (2001); Blakely et al. (2005); Shore et al. (2006); Restubog et al. (2007); Scott and Colquitt (2007); Akan et al. (2009); Restubog et al. (2009); Taylor et al. (2009); Allen et al. (2011); Bynum et al. (2012); Bourdage et al. (2018); Han et al. (2018)
	Turnover intentions	Benevolent had lower intention to leave their jobs as compared to entitled	O'Neill and Mone (1998); Shore (2004); Ananvoranich and Tsang (2004); Shore et al. (2006); DeConinck and Bachmann (2007); Kim et al. (2019); Rai et al. (2020)
	Organisational commitment	The giving nature of benevolent makes them more committed to their organisations than the entitled.	King Jr and Miles (1994); O'Neill and Mone (1998); Shore et al. (2006); DeConinck and Bachmann (2007); Restubog et al. (2009); Clark et al. (2010); Allen et al. (2011); Vella et al. (2012); Vella et al. (2014)
	Job performance	The job performance of the benevolent is superior to that of Entitled.	Bing and Burroughs (2001); Shore et al. (2006); Restubog et al. (2007); Scott and Colquitt (2007); Taylor et al. (2009)
	Psychological contract	Both benevolent and entitled react to psychological contract breaches, though benevolent tend to be more tolerant.	Kickul and Lester (2001); Roehling and Boswell (2004); Restubog et al. (2007); Restubog et al. (2009); Aggarwal and Bhargava (2010); Bynum et al. (2012)

Justice/fairness perceptions	Equity sensitivity found to have a positive (no impact in some contexts) on justice perceptions.	King Jr et al. (1993); King Jr and Miles (1994); Konovsky and Organ (1996); Harmon and Foote (2004); Shore (2004); Blakely et al. (2005); Kickul et al. (2005); DeConinck and Bachmann (2007); Scott and Colquitt (2007); Jeon and Newman (2016); Hayibor (2017)
Non-organisational	Individual dispositions The effect of various personality traits, attitudes, values and ideology were found to be associated with equity sensitivity.	King Jr and Miles (1994); Mudrack et al. (1999); Sauley and Bedeian (2000); Bing and Burroughs (2001); Yamaguchi (2003); Foote and Harmon (2006); Scott and Colquitt (2007); Walker et al. (2007); Adams et al. (2008); Shore and Strauss (2008); Miller (2009); Taylor et al. (2009); Conner (2011); Woodley and Allen (2014); Miller (2015); Woodley et al. (2016); Bourdage et al. (2018)
Demographic variables	Effects of gender, age, national origin and occupation on equity sensitivity were tested.	King Jr and Hinson (1994); Mueller and Clarke (1998); Wheeler (2002); Allen et al. (2005); Foote and Harmon (2006); Shore and Strauss (2008); Roehling et al. (2010); Kim et al. (2013); Allen et al. (2015)
Self-efficacy	Self-efficacy was found to be associated and interact with equity sensitivity to predict various outcomes.	O'Neill and Mone (1998); O'Neill and Mone (2005); Walker et al. (2007); Adams et al. (2008)

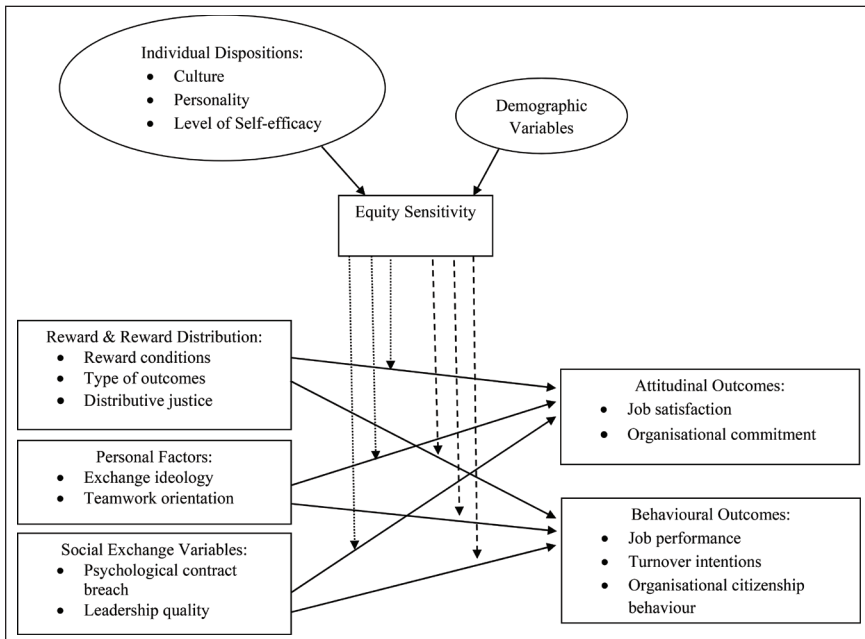


Figure 6. Proposed Conceptual Framework.

(exchange relationship and responsiveness) (Han et al., 2018; McLoughlin & Carr, 1997; Shore et al., 2006); leading to positive attitudes and behaviours towards the organisation.

Research Gaps

This section addresses the following research question: What are the research gaps in the equity sensitivity research? The reviewed articles were analysed to identify the research gaps and find the limitations in methodology, theoretical framework as well as study settings and samples. The authors identified two prominent conceptual gaps and three vital methodological gaps in effective equity sensitivity research.

Conceptual Limitations Lack of Consensus Around a Framework

The review pointed out the lack of a consensus around the framework and role of equity sensitivity. The reason behind this is twofold. First, a relatively small amount of equity sensitivity research is foundational in the sound theoretical framework, and most of this work focuses on either the behavioural impact of the sensitivity (Allen & White 2002; Parnell & Sullivan, 1992), psychological effects (Conner, 2011; King Jr et al., 1993; Naumann et al., 2002) or the refinement of the equity sensitivity instrument (Davison & Bing, 2008; King Jr & Miles, 1994; Sauley & Bedeian, 2000). While integrating a theory from conjoining fields may

be the approach to model development (Bynum et al., 2012), the sensitivity model is perceived to be more complex than this. This complexity arises from the fact that the theory has its base in the perceptual psychology of an individual, which itself is a separate and relevant sub-field in the branch of cognitive psychology.

Second, a relatively large number of studies focus on solving problems (instead of building theory), inducing a variety of theories, many of which are not dominant in the equity sensitivity theory. Although this contributes significantly to the theory, its contribution towards the building of a sound model is limited. The extant literature proposes a moderating role of equity sensitivity, but the work has produced mixed results so far. Some studies established it as a moderator (O'Neill & Mone, 1998) whereas several others found little or no moderation effects (Bing & Burroughs, 2001; Scott & Colquitt, 2007). This has created more confusion than clarity around the role of the construct.

Ambiguity in the Conceptualisation

Our review has identified three prominent ambiguities in the conceptualisation of the equity sensitivity construct. First, ambiguity exists among the measurement scales of the equity sensitivity concept. Studies have continuously claimed one measure as superior to the others (Foote & Harmon, 2006; Shore & Strauss, 2008; Wheeler, 2007). While the sample selection was initially identified as the reason behind one scale being superior to the other, further studies used the same sample and proved otherwise. Such findings cast doubt not only on the effectiveness of the instruments but also the concept as a whole. Another issue identified is the response pattern of the respondents in the study. The plausible reason behind the unclear conceptualisation of equity sensitivity could be the social desirability bias in the response of the respondents. A total of eight articles (Davison & Bing, 2008; Miller, 2009; Scott & Colquitt, 2007) have highlighted this issue. Social desirability bias is the tendency of the respondents in the study to respond in a manner that they perceive to be acceptable in a social setting, and the response they think will put them in a favourable light. Respondents can manipulate the results due to desirability bias by giving benevolent responses when in reality, they adopt an entitled approach.

Second, the conceptualisation of the basic nature of equity sensitivity has still not found its place in the existent literature. The confusion of equity sensitivity being a trait or a state (Huseman et al., 1987), a situation-activated trait (Konovsky & Organ, 1996), attitude (Shore, 2004) as well as the intrinsic (vs extrinsic) nature (Wheeler, 2002) still persists. This is evident by the confounding interactions equity sensitivity has had with various constructs. When equity sensitivity was studied in different cultural settings, no definite relationship was established between the two constructs. Additionally, when other factors, say gender, were considered, the findings were sample-specific (Kim et al., 2013; King Jr & Hinson, 1994; Wheeler, 2002). Some of these findings were in contradiction with the generally established cultural-induced behaviours (Allen et al., 2005; Chhokar et al., 2001; Mueller & Clarke, 1998).

Third, while researchers have hinted at equity sensitivity being a multi-dimensional concept as opposed to the established uni-dimensional understanding

(Bing et al., 2009; Taylor et al., 2009), this aspect was left unattended and has not been acknowledged in the recent research carried out in the field. A lack of clarity in these conceptualisations rob the managers to mould and predict the attitudinal and behavioural outcomes/organisational behaviour of the employees (Naumann et al., 2002).

Methodological Limitations Absence of Longitudinal Research

As mentioned above, all articles included in the review adopt a static point of view, creating a dearth of longitudinal research. It is believed that longitudinal research is necessary to analyse the stability and trends of the theory (Mueller & Clarke, 1998). With equity sensitivity being perception oriented, its dynamic nature needs to be analysed over a period of time. The dearth of longitudinal studies explicitly indicates that not much attention has been given to such dynamic changes. A significant number of researchers also find it difficult to establish a causal relationship between variables and equity sensitivity in a cross-sectional setting (Aggarwal & Bhargava, 2010; Kickul et al., 2005; Oren & Littman-Ovadia, 2013). The causal inferences drawn using cross-sectional study design do not implicate causality but imply inferences (Kickul & Lester, 2001). With researchers worried about the problem of common method variance due to the cross-sectional survey design (Kim et al., 2019), it brings us to our next barrier.

The Dominance of Quantitative Research

The review has identified various research methodologies used to examine equity sensitivity, and a significant number of studies have used quantitative tools. As discussed above, applying quantitative research to study a field that lacks a proper framework to explain its underlying mechanism generally provides ambiguous results (Shore & Strauss, 2008; Wheeler, 2007). It is beneficial to use qualitative methods concomitantly with the quantitative tools to understand the phenomenon (Shah & Corley, 2006). A limited number of articles extend the theory (King Jr & Hinson, 1994), and others refine its applications (Bynum et al., 2012; Conner, 2011; Hayibor, 2017; O'Neill & Mone, 2005). While a substantial number of articles used the survey method as a tool to collect data, one problem underlying the survey method is that it is solely used for theory testing, which is the essence of scientific methodology, overlooking the significance that theory building and refinement holds (Shah & Corley, 2006). The cross-sectional survey method of data collection also carries the problem of common method variance/common method bias. Common method variance/bias refers to the variance attributable to the measurement method and not to the constructs that are being measured. A significant number of articles, a total of 20 (28%) studies, reported this problem.

Qualitative research approach could have significantly added value as it has immense potential to compliment quantitative approach by rendering depth and perspective to statistics (Kumar & Tuli, 2021). Having stemmed from human experiences, it could have thrown better light at the rationale for perceptual differences towards equity sensitivity. Qualitative research helps unfold the how and why (Sutton & Austin, 2015; Tuli et al., 2023b) of a behaviour, thus rendering

better understanding that could have been utilised by organisations to create more equitable environment.

Limitations as to Sample Selection

The final limitation in the equity sensitivity research is the sample selection in the studies. Owing to the geographical bias where majority of the studies emanate from the USA and significant employment of the student sample, it becomes difficult to generalise the findings to the complete universe of research. The measurement scales for equity sensitivity have a wording that limits the equity sensitivity concept to an employer-employee relationship (Foote & Harmon, 2006). Thus, using a student sample for such purposes might not give effective results. Although a few studies used part-time working student samples, the selection still does not represent any individual's perceptions and attitudes in a work environment.

As the literature indicates, the total distribution of studies reviewed are skewed, thus indicating the geographical sampling bias. It also highlights that the sampling effort is 'spatially biased', rather than equally distributed over the study area (Ross & Bibler-Zaidi 2019). Since, the geographical distribution was not a delimitation that the authors consciously made during the exclusionary and inclusionary decisions, neither did the authors have any intention to narrow the scope of the review, it represents a systematic bias introduced into the study design or instrument by the researcher (Price & Murnan, 2004). One reason of high number of studies in the USA could be credited to it being a high-income country with right consciousness among employees. Studies have also shown less accessibility of researches from other parts of the world causes limitation leading to geographical sampling bias (Zizka et al., 2021).

The significant variation in cultural aspects of the westernised developed economies and the Eastern emerging nations (Hofstede, 1984) clearly indicates that generalising the finding of one to another will be like comparing an apple with an orange. Besides this, the generalisability of management theories developed in one culture to other cultures has been seriously questioned in recent years. The literature has recommended the further testing of equity sensitivity in non-Western cultures (Ananvoranich & Tsang, 2004). This is because equity perceptions, by their very nature, are likely to be subject to cultural influences (Chhokar et al., 2001). Such geographical bias has also been found to affect the knowledge production and diffusion process, with the developed high-income countries being the producers and the middle- and low-income countries being mere receivers of such knowledge (Skopec et al., 2020).

Discussion

The current review aimed to revive the equity sensitivity theory by highlighting the developments in the field, collating a conceptual framework largely missing from the existing literature and identifying the research gaps in the existing body of literature on equity sensitivity. This article used the SLR method and reviewed

a total of 74 published articles to highlight the gaps in the theoretical base, research settings and sample selection in equity sensitivity research. In this regard, this review identified two conceptual and three methodological limitations in the existent literature. The lack of consensus around the theoretical framework and role of the construct accompanied by the ambiguous conceptualisation poses gaps in the theory's conceptual base. The findings indicate that, theoretically, equity sensitivity is underdeveloped and stark ambiguity exists in the existing research. While a significant number of studies induced a variety of theories secondary to the idea of equity sensitivity, hinting at broadening the interest of researchers from different fields, this does not contribute towards the development of the core theory. After all, theory building and refinement has equal importance as theory testing (Shah & Corley, 2006).

This theory witnessed many quantitative studies that contribute to the idea but lay no foundation to the theory development. Thus, an increase in the exploratory research practices to build a solid and stable theoretical understanding will be beneficial before performing any confirmatory analysis. To induce stability in the theory, longitudinal studies, which are currently missing from the existing literature body, need to be stressed upon. By identifying the research gaps, this review aims to direct all future studies towards overcoming the shortcomings in this field to aid in the development of the theory.

This review focused on providing a specific number of studies in one place due to the highly fragmented nature of the existing research. This will create awareness of the available research and help future researchers access the relevant literature. Another aim was to highlight the existing problems and inconsistencies that exist in the current research and raise questions around them. The collated framework depicting equity sensitivity's relationship with other constructs will help in reviving the concept and guiding the future research in the field. To keep the scope limited, this review succeeded in including variant studies but can only act as an abridgement to the various gaps in the literature. Future research should aim at going deeper into the gaps identified.

Limitations

While identifying the limitations in the existing literature, the authors do not fail to acknowledge their review's limitations. To uphold the quality of the reviewed articles and make the review comprehensive, academic articles from six distinct databases covering a variety of journals were included. The inclusion of published articles, though, ignores the latest research, which adds to the cumulative knowledge of the field. To eradicate any unpremeditated biases, transparency and evidence-based analysis were stressed upon.

Future Research Directions

Addressing the shortcomings in the existing body of literature as identified by the review provides a direction for future research. First, the influence of external

factors (Ananvoranich & Tsang, 2004; Conner, 2011) as well as the work environment (Kim et al., 2019; Roehling et al., 2010) on the equity sensitivity of an individual can enhance the conceptualisation of the equity domain, and hence can be a direction for future research. Second, the future researchers must undertake cross-cultural research with equity sensitivity to solidify the relationship between the two constructs and increase the generalisation of the findings (Allen et al., 2005; Wheeler, 2002). Third, the ‘dark side’ of the equity sensitivity of an individual must be studied more to develop a holistic conceptual understanding of the construct and enhance the role of individual differences in guiding specific behaviours and/or traits (Woodley & Allen, 2014). Fourth, the intensity of the impact of equity sensitivity on the attitudinal and behavioural work-related outcomes, and how such an impact differs between the benevolent and the entitled (Kickul & Lester, 2001) can be another avenue for future research. Last, equity sensitivity is a psychological phenomenon influenced by context and demography (Huseman et al., 1987; Mudrack et al., 1999), having its roots in the post-positivist paradigm. The existing research in this domain complements the paradigmatic approach. Currently, the concept has a production-based orientation (input/output ratio), but it has to be looked at from other perspectives and lenses. For instance, the studies focusing on the sex-related differences in equity orientation in the workplace, have evolved with the findings showing the changing orientations towards workplace equity among the females (Kim et al., 2013; Major et al., 1989). Thus, looking at the domain from a feminist paradigm will facilitate in understanding this evolution in the equity sensitivity. Additionally, an interpretivist approach would enable an understanding of the ‘why’ part of the process as opposed to the existing ‘what’ and ‘how’ of the equity sensitivity. Since, it is an individual difference, it is affected by the social environment. Thus, an interpretivist lens might also develop an understanding on whether these equity orientations in the workplace transfer to the other contexts in which an individual operates or vice-versa.

In addition to the aforementioned future research directions, the authors propose further avenues to address the existing gaps in the body of literature on equity sensitivity. These are elaborated below.

Enhancing the Conceptual Foundation

The theory suffers from the limitation to classify equity sensitivity as a state or a trait (Huseman et al., 1987). With no empirical evidence addressing this issue, the theoretical underpinning of equity sensitivity still remains ambiguous. This calls for a deeper investigation to determine its nature wherein a longitudinal study might fulfil the said purpose. Additionally, qualitative research will thereby enhance the building of a framework (Shah & Corley, 2006). Further, it is imperative to address the contradictions that exist in theory to conceptualise the construct. For instance, Foote and Harmon (2006) failed to establish convergent validity between the two widely used measures of equity sensitivity. Thus, future

researchers need to solidify such instruments' effectiveness to cater to the shortcomings in the field.

Since equity sensitivity research is primarily conducted in the work environment, the prevalence of socially desirable responses is preeminent. Future research must make provisions to control for this aspect while analysing the data collected. Another area that future research needs to address includes the multi-dimensional nature of equity sensitivity which is proven by the changing relationship of the construct with various individual dispositions and demographic variables (Wheeler, 2002; Woodley et al., 2016). Thus, the construct must be studied in various situational contexts to clearly establish its multi-dimensionality, which is currently lacking in the literature.

Addressing the Methodological Shortcomings

Future research must reduce its dependence on the survey method of data collection and adopt more qualitative tools to understand whether the variance is a result of the constructs being studied or the measurement scale being used. This will aid in better understanding of the relationships between the construct and other behavioural and psychological variables. Future researchers must focus on the sample outside of the USA to increase the generalisation of their findings. Further, since the instruments to measure equity sensitivity are designed to study work relationships (Foote & Harmon, 2006), the use of a non-student sample must be undertaken unless a new dynamic measurement scale is developed.

Managerial Implications

Equity theory has been known to understand the perceptions of individuals regarding equitable treatment in their respective workplaces (Adams, 1965). Thus, the research on this theory has been prolific. On the other hand, equity sensitivity theory, which has enhanced the equity theory's predictive power (Huseman et al., 1987), has been underdeveloped despite its practical value. But it is essential to emphasise the workforce's equity sensitivity perceptions for the effective and efficient working of the organisation. Globalisation and high diversity among the workforce are some of the contemporary issues in today's labour management, which marks the necessity of equity perceptions to be understood in depth (Kim et al., 2013; Yamaguchi, 2003). The comprehension of how the equity perceptions affect and formulate attitudes towards the workplace stimuli will aid in designing conducive compensation policies (Parnell & Sullivan, 1992). Additionally, the importance of equity sensitivity as an individual difference variable persists due to the dynamic social system that an organisation is and the value that such variables provide in comprehending the workplace attitudes and outcomes (Bourdage et al., 2018; Miller, 2015) as corroborated by the existing literature. Thus, the review can provide insights to the managers on what has been found till now and where they need to focus. It also highlights what is missing and where do they need to go.

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