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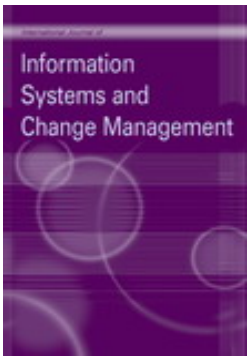

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Navigating firm competitive performance through artificial intelligence: moderation of ethical compliance

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Abstract: Ethics in artificial intelligence (AI) is crucial to ensuring responsible development, deployment, and productive use of AI. The research on IoT and ethics has emerged as the proliferation of connected devices and discusses concerns about privacy, security, and societal implications over the past. This study specifically investigates the relationships between IoT-based technologies (IoTs) and organisational competitive performance (OCP) with the moderation of ethical compliance (EthC) drawing on technology acceptance model (TAM) and utilitarianism theory perspectives. The findings are reported by utilising a total of 739 ($N = 739$) questionnaires using a structured approach based on partial least squares. It is preliminarily revealed that IoT technologies (e.g., IoT sensors, smart operational solutions, predictive maintenance, machine learning, blockchain, robotics, edge computing, IoT-enabled communication, augmented reality, and quality control sensors) are positively linked with OCP. Moreover, the study found a positive moderation of EthC among the relationships between IoT and competitive performance.

Keywords: artificial intelligence; internet-of-things; EthC; ethical compliance; competitive performance; SEM; structural equation modelling.

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1 Introduction

Ethics in business operations is paramount for sustaining trust and reputation. Adhering to ethical standards fosters a positive corporate culture, attracting and retaining ethical employees (Jalil et al., 2010; Zhang and Zhang, 2016). Transparent and ethical practices enhance relationships with customers, suppliers, and investors, contributing to long-term success (Brydon, 2006). Ethical conduct mitigates legal risks, fostering compliance and avoiding reputational damage. Ultimately, businesses that prioritise ethics not only comply with societal expectations but also create a foundation for sustainable growth and responsible corporate citizenship (Brydon, 2006; Giannarakis, 2013). Ethical compliance (EthC) in business refers to adhering to moral principles, legal standards, and industry regulations (Francés-Gómez, 2024). It is advocated that maintaining EthC builds trust with stakeholders, mitigates risks, and contributes to a positive organisational culture, fostering sustained success. However, artificial intelligence (AI) is vital for businesses, streamlining processes, enhancing decision-making, and fostering innovation. It analyses vast datasets, automates routine tasks, and provides valuable insights (Li et al., 2019). AI-driven applications improve efficiency, customer experiences, and overall competitiveness, positioning businesses to adapt to rapidly evolving markets and technological landscapes. Internet of Things (IoT) is pivotal for transforming industries by connecting devices and enabling data exchange (Madakam et al., 2015; Rath et al., 2024). It enhances efficiency, automates processes, and provides real-time insights. In business, IoT optimises operations, reduces costs, and facilitates predictive maintenance (Laghari et al., 2021).

For consumers, it improves convenience and personalisation. IoT's impact on healthcare, agriculture, and smart cities underscores its potential for societal benefits. As IoT continues to evolve, its ability to drive innovation, connectivity, and data-driven decision-making solidifies its importance in shaping the future. IoT fosters sustainability by optimising resource usage. It enhances safety through smart systems (Alwahedi et al., 2024; Rath et al., 2024). The ability to create interconnected ecosystems offers immense potential for innovation, economic growth, and a connected, data-driven world. Likewise, competitive performance is crucial for organisations as it directly influences market standing and profitability (Malcata and Hopkins, 2014). It involves consistently outperforming rivals, whether through cost leadership, innovation, or superior customer service. A strong competitive position attracts customers, investors, and top talent. Organisations with highly competitive performance are better positioned to adapt to market dynamics, withstand challenges, and capitalise on opportunities, ensuring long-term viability and success in the ever-evolving business landscape (Jia, 2024). Additionally, competitive performance fosters continuous improvement and strategic agility. It encourages organisational resilience, adaptability to changing market

conditions, and the ability to proactively shape industry trends, ensuring sustained relevance and growth.

Conducting more empirical research on IoT is crucial to understand its real-world impact, uncovering potential challenges, and guiding its responsible development (Xia et al., 2012). Empirical studies provide concrete data, enabling evidence-based decision-making, fostering innovation, and ensuring that IoT technologies align with societal needs while addressing ethical, security, and privacy concerns. It is claimed that research on ethics is essential to establish guidelines for responsible behaviour and decision-making in various fields. It facilitates the identification of moral dilemmas, guarantees adherence to social norms, and directs the creation of ethical frameworks (Crilly et al., 2008). A fair and just society is fostered by ethical research, which advances accountability, openness, and the welfare of individuals and communities. Businesses must carry out additional empirical research on competitive performance in order to determine effective tactics, industry standards, and market dynamics (Jalil et al., 2010). Empirical data offers valuable insights into efficacious practices, thereby facilitating organisations to enhance their overall performance and long-term success in the marketplace by refining their approaches, maintaining competitiveness, and making well-informed decisions. In Chinese organisations, IoT plays a pivotal role in navigating competitive performance. It enables real-time data analysis, enhances operational efficiency, and facilitates innovation (Li and Tsui, 2000; Rouhani and Mehri, 2016). Leveraging IoT technologies allows Chinese businesses to stay agile, meet evolving market demands, and maintain a competitive edge in the global landscape by embracing advanced connectivity and smart solutions. Therefore, we carried out the following objectives to assess the importance of IoTs in terms of competitive performance.

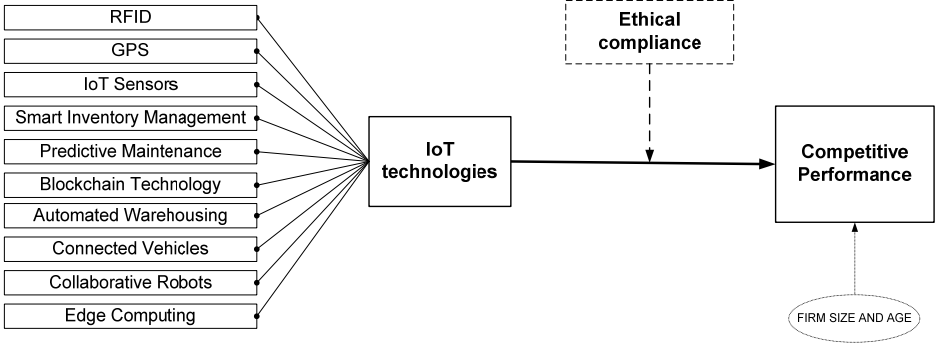
First, the study investigates the impact of IoTs on organisational competitive performance (OCP). Second, the aim is to unveil the moderating link of ethics between IoTs and the competitive performance of the corporates. This study is organised based on the following outlines. First, this study discusses the theoretical framework as well as hypotheses. Subsequently, we conferred the methods of the study, including the sampling procedure, collection procedure, and analysis procedure. The part of the discussion along with implications are reported accordingly. The final part consists of limitations and future opportunities for worldly scholars.

2 Theoretical framework and hypotheses

The technology acceptance model (TAM) is a widely used framework in the field of information systems and technology (Silva, 2015). TAM posits that perceived ease of use and perceived usefulness significantly influence users' acceptance of technology (Lala, 2014). Measuring these attitudes, TAM enables predicting and explaining the user's response behaviour toward adopting new technology (Al-Nassar et al., 2016; Chuttur, 2009). Other theoretical frameworks such as TAM have helped in understanding user attitude and ensuring that appropriate strategies are adopted with a view of improving technology adoption, guiding the design and deployment phase to ensure development of systems which is engaging users (Foster and Rosenzweig, 2010). TAM theory supports further research by allowing structured way of evaluating users' attitudes towards

new technology. However, TAM enables researchers to comprehend factors influencing technology adoption and identify improvement areas as well as pinpoint methods counteracting user acceptance. This continuing research initiative helps augment the effectiveness of technology design and implementation, enabling problematic patterns to be detected early thus facilitating successful adoption. But utilitarianism is an ethical theory that values the principle of increasing overall good or utility (Mill, 2016). Utilitarianism is consequentialist, focusing on outcomes rather than intentions, and provides a quantitative approach to ethical decision-making by evaluating the net balance of pleasure over pain in a given situation. Conducting empirical studies allows researchers to gather data on the consequences of actions, helping to assess their impact on well-being (Sonnentag, 2015). This aligns with utilitarian principles, guiding research toward maximising positive outcomes and societal welfare. Therefore, it is worth mentioning to uncover the nexus of IoTs and ethics concerning sustainable performance based on utilitarianism and TAM theories, as shown in Figure 1.

Figure 1 Research model



2.1 IoTs and competitive performance

IoT technologies are crucial for fostering connectivity and efficiency across diverse sectors (Collymore, 2017). They enable real-time data collection, analysis, automation, optimisation processes, and decision-making (Jones and Johnston, 2011). IoT enhances resource management, facilitates innovation, and improves overall operational effectiveness, making it indispensable for businesses, industries, and societies seeking to thrive in the digital era (Ghapanchi et al., 2008; Yu et al., 2020). IoT technologies are integral to competitive performance, offering a strategic advantage by optimising operations, reducing costs, and enhancing decision-making (Lee et al., 2022). The interconnected nature of IoT facilitates agility, innovation, and improved customer experiences, positioning organisations to outperform competitors in rapidly evolving markets, ensuring sustained relevance, and fostering long-term success (Bayer et al., 2021). Furthermore, IoT technologies provide valuable insights, enabling predictive maintenance and data-driven strategies (Pollice et al., 2021). The ability to harness real-time information enhances the adaptability, responsiveness, and overall competitiveness of organisations in dynamic business environments (Swab and Johnson, 2019). It is hypothesised that IoT technologies positively impact sustainable performance

by optimising resource usage, reducing environmental impact, and enhancing operational efficiency (Collymore, 2017; Kaur et al., 2024; Madakam et al., 2015). The connectivity and data-driven insights provided by IoT enable businesses to implement eco-friendly practices, fostering long-term sustainability and aligning with global environmental goals (Bayer et al., 2021; Laghari et al., 2021). TAM supports further study on IoT technologies by offering a structured framework to assess user acceptance. Researchers can use TAM to explore factors influencing users' willingness to adopt IoT, guiding empirical studies (Atnafu and Balda, 2018; Madakam et al., 2015). Understanding user perceptions aids in designing and implementing IoT systems that align with user needs, promoting successful adoption. Therefore, based on the massive significance of IoT in terms of sustainable performance, we currently assume the following propositions to empirically validate from China.

H1: IoT technologies positively optimise organisational sustainable performance.

2.2 Moderation of ethics

Ethics in business are vital for maintaining trust, reputation, and long-term success (Waheed and Zhang, 2022). It guides responsible decision-making, fosters a positive corporate culture, and attracts ethical employees and customers (Blašková et al., 2018). Adhering to ethical standards also minimises legal risks, builds strong stakeholder relationships, and ensures sustainable growth by prioritising transparency and accountability (Wotruba et al., 2001). EthC serves as a crucial moderator in the relationship between IoT and firm performance (Mill, 2016). Adhering to ethical standards enhances the positive impact of IoT technologies on operational efficiency and innovation (Patel, 2024). Ethical considerations mitigate risks associated with data privacy and security, ensuring responsible IoT implementation (Chou, 2012; Fried, 2003; Reamer, 2017). These dynamics foster a trustworthy environment, positively influencing firm performance by minimising legal and reputational risks and promoting sustainable growth through the ethical and responsible use of IoT technologies (Wang et al., 2019). Moreover, EthC acts as a catalyst, reinforcing the alignment between IoT strategies and organisational values (Reamer, 2017; Yu et al., 2020). It enhances stakeholder trust and confidence, creating a foundation for sustained performance and competitive advantage in the dynamic business landscape (Greenwood and Van Buren, 2010). Ethical compliance plays a pivotal role in optimising business performance by ensuring adherence to moral standards, legal regulations, and industry norms (Fried, 2003; Lee et al., 2022). It fosters trust among stakeholders, mitigates risks, and promotes a positive corporate image (Waheed and Zhang, 2022). Ethical practices contribute to sustained growth, stakeholder loyalty, and the overall success of the organisation (Li and Tsui, 2000). Utilitarianism supports increased research on IoT ethics by emphasising the pursuit of outcomes that maximise overall societal well-being (Mill, 2016). Through empirical studies, researchers can assess the consequences of IoT technologies, ensuring their ethical implications align with the greatest good. Utilitarian principles guide research toward ethical frameworks that enhance both technology adoption and organisational performance (Collymore, 2017; Madakam et al., 2015; Mill, 2016). Therefore, based on the massive significance of IoT in terms of the sustainable

performance, we currently assumed the following propositions to empirically validate from China.

H2: Ethical compliance positively moderates the relationships between IoT technologies and organisational sustainable performance.

3 Methodologies

3.1 Data gathering and sampling

In this research, 1200 questionnaires were carefully distributed to the concerned managers within the Chinese corporates to get feedback. A few procedures were carried out during the data collection procedure such as online circulation employing WeChat and emails as well as personal visits were made with the help of Chinese colleagues. We currently focused on the Chinese market to affirm additional empirical evidence from this market on how IoT technologies could play an essential role in the Chinese market to improve competitive performance. The participants were separately invited for the surveys and 900 and 10 responses were successfully got back. Finally, a total of 852 questionnaires ($N = 739$) were considered for the aim of data analysis after evaluating and scrutinising improperly filled information along with other critical issues such as incomplete responses just to ensure the feedback authenticity. A seven-point Likert scale was majorly employed by inspiring previously published studies of scholars (Mehmood et al., 2019; Ramos-Pulido et al., 2024; Shahid et al., 2022; Younas et al., 2017). Furthermore, the main inquiry statements consisted of 49 questions while respondents' profiles were assessed using 5 characteristics as mentioned in Table 1.

Table 1 Descriptive analysis

	Male		*Female*	
Gender	382	51.69	357	48.31
Qualification				
Bachelor	068	22.90	071	19.89
Master	110	27.42	097	27.17
PhD	125	31.94	124	34.73
Others	079	17.74	065	18.21
Age in years				
17–20	078	20.42	080	22.41
21–23	102	26.70	120	33.61
24–27	122	31.94	108	30.25
>28	080	20.94	049	13.73
Working experience				
<4 years	060	15.71	057	15.97
5–9 years	130	34.03	128	35.85
10–14 years	114	29.84	110	30.81
>15 years	078	20.42	062	17.37

Furthermore, it is important to work on pilot testing before surveying on a large scale to assess better and more fruitful results (Lobbezoo et al., 2024; Thabane et al., 2010). A total of 45 ($n = 45$) questionnaires were treated for this purpose and results were evaluated based on the suggested criteria of the statisticians (Black and Babin, 2019; Hair, 2011). The present values are normal where IoT stood at 0.801, EthC stood at 0.800, and sustainable performance stood at 0.811, respectively (Hair, 2011).

3.2 Measures

IoT variable is used as an independent measure, EthC is used as moderating, while OCP is used as a dependent variable. First, IoT was accessed using 10 items as adopted from the past study (Collymore, 2017; Madakam et al., 2015). Second, EthC was measured using 5 items, as adopted by Waheed and Zhang (2022). Third, OCP was measured using a 4-item adopted from Abdallah and Phan (2007) and Waheed and Zhang (2022).

3.3 Data analysis tools and tactics

First, we applied descriptive statistics to calculate the basic information about the participants' profiles. Subsequently, a correlation testing approach was applied to understand the interrelationships among variables of the study. Third, discriminant validity was calculated and examined based on two methods such as Fornell and Larcker along with HTMT methods (Fornell and Larcker, 1981). Likewise, the convergent validity approach was carried out as per suggested methods such as AVEs, loadings, and by evaluation of reliability (Russell, 1978). Structural equation modelling (SEM) using SmartPLS software was eventually applied to affirm the directional relationships among the variables (Ramayah et al., 2018). It is critical to calculate the values of NIF and SRMR to confirm the authenticity of the model, SEM (Hu and Bentler, 1999). The advised criteria for each analysis and indices are reported as follows. For instance, values should be between –1 to +1 in Pearson testing (Cohen et al., 2009; Hair, 2011), loading and AVEs outcome values should be lower than 0.5 (Hu and Bentler, 1999), reliability values should be higher than 0.7 (Hair, 2011), values should <0.9 in HTMT (Henseler et al., 2015), the outcomes of Square roots of AVEs should be higher than the following interrelationships in discriminant validity (Henseler et al., 2015), values of NFI should be higher than 0.9 (Hu and Bentler, 1999), and finally the outcomes of SRMR should lower than 0.08 (Hair, 2011; Hu and Bentler, 1999).

4 Results

4.1 Validity and reliability

Table 2 confirms the validity as well as reliability values along with other descriptions of means and standard deviations. As reported above, loadings and AVEs outcome values should be lower than 0.5 along with reliability values should be higher than 0.7 (Hair, 2011).

Table 2 Validity process

Coding	*Mean*	*SD*	*Loadings*	*AVE*	*Reliability*
Internet-of-Things (*IoTs*)				0.655	0.802
IoT-I1	5.134	1.351	0.555		
IoT-I2	4.982	1.021	0.634		
IoT-I3	5.189	1.540	0.633		
IoT-I4	5.134	1.351	0.555		
IoT-I5	4.982	1.021	0.634		
IoT-I6	5.189	1.540	0.633		
IoT-I7	4.982	1.021	0.555		
IoT-I8	5.189	1.540	0.634		
IoT-I9	5.134	1.351	0.633		
IoT-I10	4.982	1.021	0.555		
Ethical compliance (*EthC*)				0.658	0.851
EthC-1	5.134	1.351	0.555		
EthC-2	4.982	1.021	0.555		
EthC-3	5.189	1.540	0.634		
EthC-4	5.134	1.351	0.633		
EthC-5	4.982	1.021	0.555		
EthC-6	5.189	1.540	0.555		
EthC-7	4.982	1.021	0.634		
EthC-8	5.134	1.540	0.633		
EthC-9	4.982	1.351	0.555		
Organisational competitive performance (*OCP*)				0.782	0.812
OCP-F1	5.134	1.351	0.555		
OCP-F2	4.982	1.021	0.634		
OCP-F3	5.189	1.540	0.633		
OCP-F4	5.134	1.351	0.555		
OCP-F5	4.981	1.021	0.555		
OCP-F6	5.180	1.540	0.634		
OCP-F7	5.134	1.351	0.633		
OCP-F8	4.983	1.021	0.551		
OCP-F9	5.185	1.540	0.533		
OCP-F10	5.134	1.021	0.522		

*Items removed having <0.5 AVEs and loadings; IoT = Internet of Things; EthC = ethical compliance; OCP = organisational competitive performance.

4.2 Analysis of Pearson's correlation

Table 3 indicates the outcome values of correlation analysis to affirm the relationships among the proposed variables of this study. The values should be between –1 to +1 where negative values affirm a negative connection, lower values affirm a lower connection and higher values assure a higher connection (e.g., Fornell and Larcker, 1981; Hair et al., 2019; Kline, 2005). The results are reported below.

Table 3 Analysis of Pearson correlation

	IoT	*EthC*	*OCP*
IoT	1.00		
EthC	0.28	1.00	
OCP	0.35	0.25	1.00

Values evaluation between –1 to +1.

IoT = Internet of Things; EthC = ethical compliance; OCP = organisational competitive performance.

4.3 Model of discriminant validity

Table 4 shows the values for discriminant analysis being used for validation of the dataset. Researchers have suggested the criteria for this analysis. For example, the outcomes of square roots of AVEs should be higher than the following interrelationships in discriminant validity (Hair et al., 2019). The bold values given in the first row of each column represent the square roots of AVEs, and non-bold values show interrelationships.

Table 4 Discriminant validity

	IoT	*EthC*	*OCP*
IoT	**0.85**		
EthC	0.31	**0.78**	
OCP	0.23	0.40	**0.82**

Bold values are AVE square roots as compared to nonbold values which have interrelationships.

IoT = Internet of Things; EthC = ethical compliance; OCP = organisational competitive performance.

4.4 Heterotrait–Monotrait (HTMT)

Other than Fornel and Lacker (2001) analysis, another technique is HTMT which affirms the validity of the data exploring the similarities. As per the recommendation by Henseler et al. (2015), values should be <0.9 in HTMT analysis. Therefore, the present results confirmed the HTMT validity in the data based on the following accuracy of the results as reported in Table 5.

Table 5 HTMT

	IoT	*EthC*	*OCP*
IoT			
EthC	0.44		
OCP	0.26	0.26	

The value should be lower than 0.9.

IoT = Internet of Things; EthC = ethical compliance; OCP = organisational competitive performance.

4.5 Path relationships using SEM

Table 6 shows the directions of major paths that were evaluated based on beta values through a model of SEM. It is recommended that NFI and SRMR should be observed to discover and analyse the authenticity of the SEM model. For example, the values of NFI should be higher than 0.9 and SRMR should be lower than 0.08 (Hu and Bentler, 1999). The present values are best fit as per recommendations where NFI stood at 0.922 and SRMR at 0.0113.

Table 6 SEM model results

Directions	*ES*	*Direct*	*Moderating*	*Sig.*	*S. E*	*Decision*
H1: IoT→OCP	±	0.112***		0.001	0.012	*Supported*
H2: IoT*EthC→OCP			0.350***	0.000	0.088	*Supported*
		Model fitness				
		NFI	0.9224			
		SRMR	0.0113			
AGE[a]		–	–	–	–	–
SIZE[a]		–	–	–	–	–

***$p < 0.05$.

IoT = Internet of Things; EthC = ethical compliance; OCP = organisational competitive performance.

NFI must be >0.9; SRMR must <0.08; a = control variables.

5 Discussion and findings

A total of two hypotheses were proposed to explore the nexus among the IoT (e.g., IoT sensors, smart operational solutions, predictive maintenance, machine learning, blockchain, robotics, edge computing, IoT-enabled communication, augmented reality, and quality control sensors), EthC, and OCP from the mainstream of China. It was assumed in hypothesis one that IoT technologies positively impact OCP. A structural approach confirmed a positive linkage between IoTs and OCP at ($\beta = 0.112$***; 0.001). Therefore, hypothesis one is supporting which assures a direct relationship of IoTs toward OCP. On the other side, the results support past studies in which experts suggested a positive connection between various IoT-based technologies and competitive

performance from numerous perspectives, worldwide (Bayer et al., 2021; Collymore, 2017; Laghari et al., 2021; Lala, 2014; Madakam et al., 2015; Xia et al., 2012).

Second, it was proposed in hypothesis two (H2) that EthC moderates the relational strength between IoT and OCP. A structural approach confirmed a positive moderating linkage of EthC between IoT and OCP at ($\beta = 0.350$***; 0.000). Therefore, hypothesis two is supporting which confirms a moderating connection at the present analysis. The results support several past studies in which experts suggested a positive connection between EthC in terms of sustainable performance from numerous perspectives, worldwide (Brydon, 2006; Fried, 2003; Greenwood and Van Buren, 2010; Jalil et al., 2010; Li and Tsui, 2000; Reamer, 2017; Sonnentag, 2015; Waheed and Zhang, 2022; Yu et al., 2020).

6 Implications

From a theoretical standpoint, this work adds to the body of literature by showing insights into ICTs, trust, financial risk, and e-CRM from the mainstream of China. This study additionally adds to the literature by showing practical consequences regarding trust and financial risk on how it moderates the connection between ICTs and e-CRM. From the managerial domain, IoT technologies offer organisations a competitive edge by enhancing operational efficiency, real-time data analysis, and predictive maintenance. It is advised that managers must invest in IoT integration to optimise processes, reduce costs, and stay agile. In addition, going for the 'IoT' means adopting an advanced mode in terms of catering to market demands; which eventually facilitates innovativeness and long-term sustainability. In addition, the managers ought to place a lot of weight on areas of data security measures that would ensure secure transmission throughout IoT networks. IoT integration in strategic processes of decision-making enables organisations to be agile and quickly respond to changes in the market as well as customers' dictate, thus being one step ahead of their competitors. The relationships with IoT solution providers, constant staff training, and an innovative culture together become integral parts of effective implementation. Such a proactive approach also increases competitiveness and therefore makes the organisation to be leader in technologies thus they attract talent and affirm their lead market position as a business environment is dynamic.

Compliance with ethics is inherent in organisational competitiveness, therefore managers have the laborious task of making ethical standards a priority in order to build consumer trust as well as employees' goodwill. However, adopting practices that are ethical and undertaken duly in a transparent manner not only brings it within the bounds of what it ought to be legal but also helps enhance the reputation of an organisation. Meanwhile, ethical conduct encourages brand loyalty and socially concerned consumers promote a sustainable competitive position. To be successful in the long run, a consistent strategy of conducting ethical training programs and robust monitoring mechanisms must take place for both legal consequences on an individual or organisational level as well that implies reputational damage along with loss of market share. More importantly, EthC promotes the workplace environment which in turn increases the morale of employees and boosts productivity. The companies who hold to ethics are showing an ethical commitment which leads them towards sustainability encouraging strong relationships and unsteadiness of their abilities in the context of changing market situations.

Employing ethics in the structures of operations of business is necessary to create trust, be above reproach or gradient and get the heart of the people. It is also envisaged that a culture of practicing ethical values in an organisation contributes to employee morale, productivity and retention. Hence a standing one. Ethical conduct can not only avoid legal liabilities and protect reputation, but it is crucial for managers to be successful in the long run. Training across the board together with strict monitoring backed by clear communications finishes the list of demands for ethical practice. Eventually, ethical businesses are the ones that make stakeholders contented and have continuous brand loyalty from customers, eventually gaining competitive advantage in a conscience market.

7 Conclusion

It is concluded that an organisation will have no choice but to welcome IoT in order to stay competitive in this age. Achieving operational effectiveness, gaining immediate insights and being adaptive helps businesses move forward to the next level. The managers have to maximise the use of IoTs for optimisation of process, innovation, and for achieving a sustainable edge via digital tools in the competitive and dynamic environment. However, the transformative power of IoT is far beyond efficiency as it also affects strategic decisions. Organisations that harness IoT not only adapt to change but lead in innovation, reinforcing their position and competitiveness in today's evolving business environment. It is concluded that EthC is indispensable for businesses, safeguarding trust, reputation, and long-term success. Emphasising ethical conduct fosters positive relationships with stakeholders, attracts socially conscious consumers, and establishes a resilient foundation. Embracing ethical values is not just a legal necessity but a strategic imperative for sustained growth in the ethical landscape of contemporary commerce. This study reached the above decision by concluding a positive connection between IoTs and OCP. Similarly, a positive moderation of EthC was found in the relationships between IoT and OCP. On the other hand, there are certain limitations of the study that future researchers can consider in understanding insights into IoTs, EthC, and OCP. First, the sample size was small which restricts its generalisation. Second, only one developing country was focused on that is China. Third, the study ignored considering any mediation variable among the connections among IoTs, EthC, and OCP. Therefore, with consideration of these drawbacks, researchers may carry out additional studies to validate the current outcome from other nations with different assumptions by focusing on IoTs, EthC, and OCP.

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