

## TOO CONSCIENTIOUS TO BE INNOVATIVE? DIGITAL LEADERSHIP AND EMPLOYEE SERVICE INNOVATIVE BEHAVIOR

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### Abstract

*For any organization to restrict new activities and get an advantage over rivals via digital transformation, service innovative behavior is essential. Despite a considerable study on the relation between leadership and innovation service behavior, it is still unclear how digital leadership fosters innovative behavior. In this context, research looks at how conscientiousness influences the innovative behavior of frontline leadership and digital leadership in the hospitality sector. The upper echelon hypothesis supports this correlation. We evaluated the theoretical model in Malaysia's hotel industry. Our research has a three-wave design with a four-month break time-lagged design (N=370). According to the study's results, conscientiousness has a strong moderating influence on the relationship between service innovation behaviour and digital leadership. Regarding the boundary condition of employee conscientiousness, the research has important ramifications for applying the impact of digital leadership on crucial workers' outcomes. The study's limitations and future directions for further research are studied.*

**Keywords:** Upper Echelon Theory, Digital Leadership, Conscientiousness, and Service Innovative Behavior

### Introduction

Organizational innovation is recognized as a pivotal strategy for companies to navigate complicated and dynamic situations while securing a durable competitive edge (Lin & Yi, 2022). Digital transformation is increasingly vital for organizations' innovation (Curzi et al., 2019). Thus, as a fundamental element of innovation, employee innovative behavior progressively contributes to organizations' innovation through digitization. (Deng et al., 2022). Consequently, stimulating employee innovative behavior has been increasingly important and essential in the era of digital technology (Korzynski et al., 2019). Leadership has consistently been regarded as a vital precursor in fostering innovative behavior among several external factors. Former study has emphasized the significance of several leadership styles in fostering innovative behavior; however, it has predominantly overlooked the examination of digital leadership, a newly recognized leadership style, in enhancing innovative behavior. So, digital transformation has transformed the efficacy and nature of leadership, necessitating the usage of a new leadership style—specifically, digital leadership—that enables organizations to achieve competitive edge. Digital leadership is perceived as collection of behaviors competencies, and standards that encourage and encourage people to carry on digital transformation (Braojos et al., 2024). While firms have acknowledged the significance of digital leadership, scholars' interest in this crucial phenomenon has only recently been stimulated (Gao & Gao, 2024). Research on digital

leadership delineates its roots, attributes concepts, and other pertinent subjects associated with digitalization.

Furthermore, leadership and its engagement with employees are essential for the processes of innovation and change, particularly regarding digital transformation. (Baptista et al., 2020). Nevertheless, researches investigating the nexus between digital leadership (DL) and innovative behavior (IB) remain limited (Gao & Gao, 2024). The present study seeks to fill multiple research gaps regarding DL. Digital transformation is a nascent domain, with limited studies addressing the effect of DL on the process of digital transformation (Philip, 2021). While several researches have examined that leadership regarding digital and employees' outcomes, including job motivation (Mohamed et al., 2022) and workforce performance (Muniroh et al., 2022). Nonetheless, the repercussions of DL at the individual level are insufficient (Gao & Gao, 2024). Secondly, while several studies have validated that digital leadership influences employee outcomes, the underlying mechanisms and routes remain unexamined (Gao & Gao, 2024). Research thus far has mainly focused on the relation between leadership behaviors aimed at digital transformation and innovative performance. Moreover, Weber, Büttgen, et al. (2022) examine the impact of E-leadership on employee innovative behavior. Nonetheless, the current literature fails to offer a comprehensive and unequivocal response of how DL cultivates innovative behavior particularly for service sector. Thirdly, while previous research has identified certain benefit of digital leadership that produce individual outcomes, there remains a lack of studies investigating the correlation between leadership regarding digital and individual outcomes as service innovative behavior (SIB) (Sagbas et al., 2023; Yopan et al., 2022). Service innovation behavior refers to employees' proactive actions in developing new goods and processes, as well as enhancing current ones, to foster innovation at workplace (De Jong & Den Hartog, 2007). The formulation of innovative concepts is a multifaceted process encompassing the creation, advocacy, and execution of original methodologies (Janssen, 2003). This digital transformation process involves numerous risks, obstacles, and dilemmas; thus, effective navigation necessitates digital leadership, typically linked to digital expertise, communication, and innovative concepts (Tigre et al., 2023). Certain researches have investigated how digital leader cultivates the behavior towards innovation particularly in service sector (Sagbas et al., 2023; Zia et al., 2024). Fourthly, prior study has established that inventive behavior depends on various interrelated individual, group, and organizational characteristics (AlEssa & Durugbo, 2022). Limited research exists on how digital leader cultivates the behavior towards innovation particularly in service sector and even fewer studies examine the moderating influence of other variables (Gao & Gao, 2024). Nonetheless, there is negligible information of the boundary conditions of the positive correlation between DL and SIB. This lacuna in the literature constrains our comprehension of the timing and mechanisms by which leaders' digital behavior enhances service innovation within organizations. We present our initial research question: in what ways do digital leaders augment service innovative behavior within the hospitality sector? Limited research exists that demonstrates the correlation how digital leadership boost the innovative behavior (Erhan et al., 2022; Gao & Gao, 2024). If digital leader fosters a favorable association with behavior regarding service innovation, so, the next question to consider is: under what circumstances does this relationship manifest? Research regarding employee behavior suggests that employees exhibiting high levels of conscientiousness are more probable to respond positively to a leader's encouragement of innovation, since they tend to be accountable, organized, and motivated. (Abdullah & Gull, 2024; Aman-Ullah et al., 2024). This input establishes a more robust how digital leadership increase innovative behavior in service sector.

In the study we suggest model. We provide significant additions to the literature by formulating and evaluating this model. The study focuses on how digital leader cultivates the behavior towards innovation particularly in-service sector is still nascent, with limited research exploring this significant relationship, predominantly through cross-sectional studies. We analyze this significant link using a thorough moderated model with a time-lagged research methodology. These initiatives also enhance our conceptual comprehension of the digital leader and the behavior towards innovation particularly in-service sector relationship. Third, we investigate a crucial yet neglected domain of research within the hospitality sector, where behavior regarding innovation forms one of the most significant determinants of employees' customer service performance (Rasheed et al., 2024). Ultimately, we investigate the moderating influence of a significant trait, conscientiousness. This signifies a distinctive contribution, particularly concerning the nexus between digital leader and the behavior towards innovation particularly in the hospitality industry. Our research on conscientiousness provides significant insights for managers, individuals, and organizations aiming to enhance innovative behavior in the workplace.

### **Theoretical Framework and Hypothesis Development**

Digital leadership is essential for fostering innovation within organizations. Digital leadership might improve innovative performance, bolster service innovation capability, facilitate open innovation, stimulate responsible innovation, and advance innovative green innovation. Furthermore, digital leadership can significantly enhance the impact of digital technology utilization and innovative capacity (Borah et al., 2022). Consequently, we assert that a favorable correlation exists between digital leader and the behavior towards innovation. Certain research indicate that digital leaders need to assume various tasks essential for fostering employee innovative behavior throughout digital transformation. The digital transformation leadership framework, grounded on the competing values framework, has delineated seven functions for digital leaders (Weber, Krehl, et al., 2022). These distinct tasks necessitate that leaders exhibit related behaviors, such as identifying new opportunities, analyzing changes, exploring innovative methods, enabling people to experiment, disseminating pertinent information, among others. Another study similarly examined five functions of digital leaders, emphasizing that they should facilitate employees in expanding their perspectives, fostering innovation, and collaborating with others (Magesa & Jonathan, 2022). A recent study found a thorough analysis of pertinent literature and acknowledged eight functions of digital transformation leaders, emphasizing the necessity for leaders to endorse innovative services and develop digital solutions to enhance employee skill in the digital workplace (McCarthy et al., 2022). Simultaneously, certain studies have documented the innovative behavior of digital leaders. So, digital leader fosters innovative behavior and serves as a technique that prioritizes innovation, accelerates change implementation, and promotes the adoption of new methodologies, encourages employee collaboration, and embraces innovation. The distinctive behavior of digital leaders can enhance staff innovation. Digital leadership may provoke people to investigate ore innovative technologies and contemplate alternative methods of problem-solving. Digital leadership offers resources and implements structural changes while directing employees towards creative work practices. Digital leadership can create an effective digital working environment which fosters employee creativity (Zulu & Khosrowshahi, 2021).

The influence of digital leader to cultivate the behavior towards innovation particularly in-service sector was determined to be as anticipated. This evolution can be elucidated through the Upper Echelon Theory (Braojos et al., 2024), which posits that organizational

outcomes are shaped by the attributes of top managers. This theory posits that the attributes of the top management, including opinions values, attitudes, and professional competence, significantly influence organizational decision-making (Dimitrov, 2018). The outcome is elucidated by the correlation between one of the constructs and innovative behavior, highlighting the attributes of top management and the necessity for managers to adapt to technological transition for innovation (Mischel & Shoda, 1995). Moreover, current empirical data have shown that digital leadership is essential for enhancing employee innovation (Öngel et al., 2023; Zhu et al., 2022).

(H1): Digital leadership positively affects service innovative behavior.

### **Moderating Role of Conscientiousness**

Conscientiousness is a comprehensive personality attribute that indicates the extent to which an individual is disciplined and reliable, as opposed to reckless and impetuous (McCrae & Costa Jr, 2013). Elevated ratings in conscientiousness generally indicate an individual possessing significant self-discipline, organization, reliability, and goal orientation (McCrae, 2010).

According to Sadat Mousavi and Ebrahimi (2024), conscientiousness is oriented towards self-discipline and aspiration to achieve the success against the external actions or expectations are connected with the way individuals control, regulate and direct their impulses and they think that employees who possess conscientious personalities are more innovative and oriented to innovations (George and Zhou, 2001). Conscientious employees are out to restructure their working life, think of possible future scenarios, and are never shy to explore a new experience. Conscientiousness may in fact create hinderance creative behavior (Feist, 1998; Walker et al., 1995). Adhering to norms, regulating impulses, obeying regulations, and pursuing established objectives may contradict the pursuit of altering the current situation quo and innovating improved methodologies. From an interacting perspective, conscientiousness tends to inhibit creative activity only in contexts that prioritize conformity, adherence to rules, diligence, self-discipline to fulfill established their expectations, particularly the maintenance of the existing status quo. Conscientiousness may inhibit creative behavior alone when the environment promotes the expression of specific inclinations associated with the attribute (George & Zhou, 2001). When bosses meticulously observe subordinates' actions and colleagues are hostile, individuals with high conscientiousness are inclined to manifest their conventional and regulated tendencies, resulting in diminished creative activity.

The effect of conscientiousness on digital leadership is important that outcome increase the innovative behavior, since it influences their skill to provide support and implement digital initiatives. Conscientious employees are more probable to grow indispensable digital skills to contribute to digital activities (Ahmed & Rasheed, 2020). Conscientious employees stimulate to cultivate digital innovations, develop growth and productivity (Bode et al., 2019). Conscientious individual commit to the enhancement of digital skill, to remain supportive to digital leaders (Duan & Deng, 2023). Conscientious workers acclimatize to digital changes, espousal new technologies and developments, and supportive digital leaders in facing challenges (Diller et al., 2020). Conscientious employees establish appropriate digital behavior, upholding security and moral standards (Saerang & Nelwan, 2024).

Drawing on UET, the researcher theorizes that the characteristics of digital leadership foster employees' creativity-centered efficacy that assists to make a vibrant vision and mission provides employees with the confidence in developing skills and ability to enhance behavior regarding innovation (Erhan et al., 2022; Hambrick & Mason, 1984; Mihardjo, Sasmoko, Alamsjah, et al., 2019). Drawing theory of planned behavior (TPB) for the

moderating role of conscientiousness. How conscientious employee act as a well-disciplined, organized, perseverance and diligence to obtain productive outcomes. The role of employee's conscientiousness boosts employee's innovative behavior (Ajzen, 1991; Arifin et al., 2022; Song et al., 2023). Further, TPB also validates that digital leadership causes bring values as innovative behavior significantly while employee conscientious support that act of digital leadership (Ajzen, 1991; Arifin et al., 2022).

H2: The significant effect of conscientiousness on service innovative behavior

H3: The moderating effect of conscientiousness between the association of digital leadership and service innovative behavior; as such the stronger relationship exists when level of conscientiousness high.

## Methodology

To empirically assess our model, we employed a time-lagged research approach in our analysis. We administered an online survey via the Prolific data collecting service to gather data from hospitality professionals in Malaysia. This survey was executed in three stages, with a four-month interval between each phase; prior research in the leadership domain has advocated for a four-month hiatus between every data collection session (Rasheed et al., 2024). At T1, we gathered data from 387 respondents concerning their supervisors' digital leadership techniques. After four months (at T2), we requested these 387 participants to supply data on the conscientiousness scores. At T2, 381 respondents supplied the needed data, and subsequently, four months following the conclusion of the T2 phase, we solicited the same 381 participants to evaluate their own service creative behavior. At T3, 378 individuals participated, and we excluded 3 responses identified as multivariate outliers, resulting in 375 valid responses for subsequent analyses. We employed the respondents' Prolific IDs as distinctive codes to correlate and consolidate the data they submitted throughout the three waves. Among the 237 responses, 62% were female. Additionally, 47% were aged 20 to 29 years, while 22% were aged 30 to 39 years. Furthermore, 46% possessed a graduate degree, while 59% had between four and six years of working experience in the hospitality sector.

## Measures

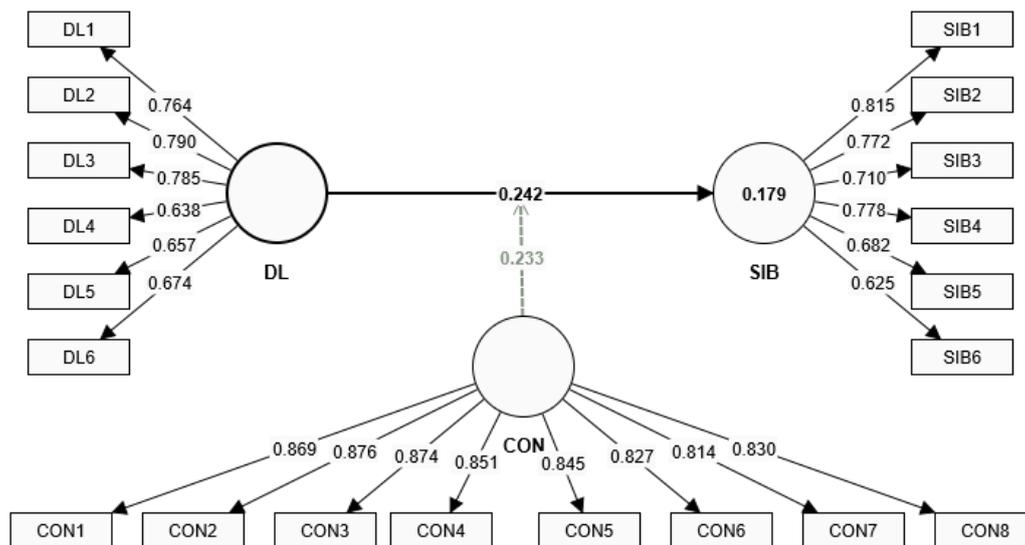
In our study, the Informatics Leadership Scale, established by Ulutaş and Arslan (2017) is applied to assess digital leadership (DL) based on employee perceptions. The other researchers used this scale to assess digital leadership (Artüz & Bayraktar, 2021; Batur et al., 2024). This scale comprises a total of eighteen items for three dimensions, with six items allocated to each dimension. These dimensions include information, communication, and orientation. The present study adapted six orientation items to assess digital leadership. For the followers' perspective regarding their supervisor's digital activity is the most suitable scale. Subsequently a six-item scale created by Hu et al. (2009) was adapted to assess service innovative behavior. The researcher used eight items established by (Costa Jr et al., 1991).to measure conscientiousness. A five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) was applied.

## Data Analysis

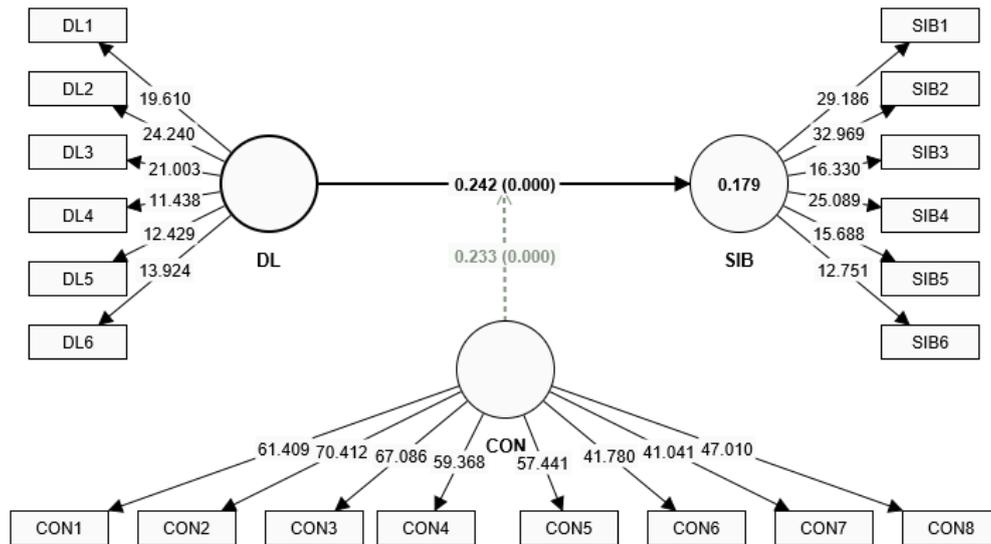
This study assessed the technique of measurement model for internal consistency, reliability ( $\alpha$ ), composite reliability (CR) as well as average variance extracted (AVE) of the constructs. To assess the internal consistency, we applied Cronbach alpha ( $\alpha$ ) and CR. Those items are retained which has the value greater than 0.50 (Byrne, B.M. (2016). The results for

alpha, composite reliability and convergent validity, AVE values are obtained. Table 1 presents for digital leadership ( $\alpha =0.817$ ,  $CR=0.866$ ,  $AVE=0.519$ ), conscientiousness ( $\alpha =0.944$ ,  $CR=0.954$ ,  $AVE=0.720$ ), service innovative behavior ( $\alpha=0.828$ ,  $CR=0.874$ ,  $AVE=0.538$ ) respectively. Further, Hair et al. (2013) suggest that CA and CR values would be  $> 0.70$ , so, we found the values are in suitable range. Then the study evaluated the Fornell Larcker and heterotrait –monotrait (HTMT) ratio to evaluated the discriminant validity (DV) (Henseler et al., 2015). The HTMT ratio results should be  $< 0.090$  in Table 2. The values of kurtosis and skewness are in the range of  $+1.96$  and  $-1.96$  in Table 1 that designate the normality distribution of the sample (Hair, 2010). Moreover, the study assessed the variance inflation factor (VIF) to evaluate the multicollinearity issue in the data. Diamantopoulos and Siguaw (2006) suggeste the values of VIF should be  $<3.3$  and we found them in acceptable range, so, in the data, no problem of multicollinearity (Table 2). The values of determination of coefficient ( $R^2$ ) should be  $>0.1$  (Chin, 1998). So, table 2 presents  $R^2=0.17$ , which is weak level of predictive accuracy (Chin, 1998).

The  $f^2$  values falls in the recommended range in the current study suggested by (Cohen, 2016). The study found that these values of 0.030 and 0.028 show the small impacts of exogenous and endogenous constructs in Table 2.



Note; DL; digital leadership, service innovative behavior, CON; Conscientiousness  
**Figure 1: Internal Consistency**



Note; DL; digital leadership, service innovative behavior, CON; Conscientiousness

**Figure 2: Path Coefficients**

**Table 1. Internal Consistency and Normality Results**

Construct	Items	Factor Loadings	A	CR	AVE	Skewness	Kurtosis
T1-DL	DL1	0.764	0.817	0.866	0.519	-0.360	-0.821
	DL2	0.790				-0.324	-0.991
	DL3	0.785				-0.350	-0.785
	DL4	0.638				-0.260	-1.093
	DL5	0.657				-0.331	-1.024
	DL6	0.674				-0.099	-0.745
T2-CON	CON1	0.869	0.944	0.954	0.72	-0.504	-0.786
	CON2	0.876				-0.309	-1.038
	CON3	0.874				-0.204	-1.040
	CON4	0.851				-0.224	-1.184
	CON5	0.845				-0.322	-1.011
	CON6	0.827				-0.347	-0.790
	CON7	0.814				-0.498	-1.006
	CON8	0.830				-0.455	-0.815
T3-SIB	SIB1	0.815	0.828	0.874	0.538	-0.023	-0.809
	SIB2	0.772				-0.219	-0.474
	SIB3	0.710				-0.172	-0.692
	SIB4	0.778				-0.022	-1.031
	SIB5	0.682				-0.058	-0.867
	SIB6	0.625				-0.088	-0.962

Note: N=370; T1; Time 1, T2; Time 2, T3; Time 3, DL; digital leadership, SIB; service innovative behavior, CON; Conscientiousness

**Table 2. Discriminant validity (HTMT ratio), Effect Sizes and Results of Variance**

	CON	DL	R <sup>2</sup>	VIF	f <sup>2</sup>
T2-				2.788	0.030

CON				
T1-DL	0.844			2.568 0.028
T3-SIB	0.364	0.401	0.179	

Note: N=370; T1; Time 1, T2; Time 2, T3; Time 3, DL; digital leadership, SIB; service innovative behavior, CON; Conscientiousness.

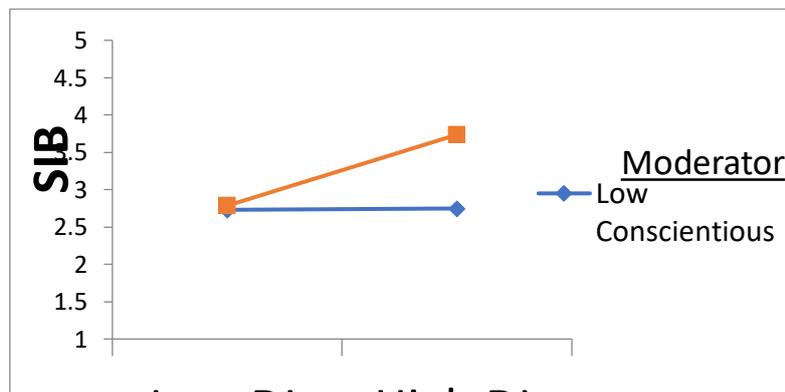
Streukens and Leroi-Werelds (2016) recommend Bootstrapping procedure with 5000 samples was utilized to examine relationships between exogenous constructs (digital leadership) and moderating construct (conscientiousness) and endogenous construct (service innovative behavior).

The significance testing results also display that digital leadership at Time 1 had a significant and positive relationship with service innovative behavior at Time 3 ( $\beta = 0.242$ ,  $t=3.931 > 1.96$ ,  $p=0.001 < 0.05$ ) in Table 3. So, the result accepts the hypothesis. Another significance testing result also shows that conscientiousness at Time 2 has a significant and positive nexus with service innovative behavior at Time 3 ( $\beta = 0.261$ ,  $t=3.431 > 1.96$ ,  $p=0.001 < 0.05$ ) in Table 3. So, the result accepts the hypothesis. The moderating effect of conscientiousness at Time 2 between the association of digital leadership at Time 1 and service innovative behavior at Time 3 is significant such as the relationship is stronger when level of conscientiousness high ( $\beta = 0.233$ ,  $t=4.904 > 1.96$ ,  $p=0.000 < 0.05$ ) in Table 3.

**Table 3. Path Coefficient**

Relationships	B	t values	P values
T1-DL -> T3-SIB	0.242	3.931	0
T2-CON ->T3-SIB	0.261	3.431	0.001
T2-CON x T1-DL ->T3-SIB	0.233	4.904	0

Note: N=370.  $t > 1.96$  &  $p < 0.05$ ; T1; Time 1, T2; Time 2, T3; Time 3, DL; digital leadership, SIB; service innovative behavior, CON; Conscientiousness



Note: DL; digital leadership, SIB; service innovative behavior

**Figure 3: Moderating role of mindfulness between DL and SIB**

Figure 3 demonstrates that the moderating effect of mindfulness robust the positive nexus between DL and SIB

In Table 4, the SRMR value is 0.103, which proposes a relatively good fit, but not excellent (Byrne, 2013). The NFI value is 0.782 in Table 4, which is in the range between 0 and 1 whereas the value standard value is suggested by (Hu & Bentler, 1999). The table 4 displays a value for the NFI 0.782 represents a good model fit.

**Table 4. Assessment Model Fit**

	Saturated model	Estimated model
SRMR	0.103	0.103
d_ ULS	2.209	221
d_ G	0.539	0.531
Chi-square	1171.784	1171.769
NFI	0.782	0.782

## Discussion

This study was undertaken to assess how and when digital leadership fosters behavior regarding innovative in the hospitality sector. Validating UET (Erhan et al., 2022; Hambrick & Mason, 1984; Mihardjo, Sasmoko, Alamsjah, et al., 2019). We also investigated how conscientiousness moderates the indirect association between digital leadership and service innovative behavior. Drawing TPB, the role of employee's conscientiousness boosts employee's innovative behavior (Ajzen, 1991; Arifin et al., 2022; Song et al., 2023). Further, TPB also validates that digital leadership causes bring values as innovative behavior significantly while employee conscientious support that act of digital leadership (Ajzen, 1991; Arifin et al., 2022).

This result elucidates how digital leadership fosters innovative behavior. Frontline personnel have varying responses in cultivating innovative behaviors within the hospitality sector. They offer innovative digital quality services and introduce more efficient food packing procedures, delivering unique and timely solutions for diner and lunch table setting, room management, and cleaning. The findings of the current research corroborate the direct relationship between digital leader and the behavior towards innovation particularly in service sector (Cai et al., 2024; Sagbas et al., 2023). Nonetheless, the majority of prior studies on digital leadership and innovative behavior employed a cross-sectional approach (Erhan et al., 2022; Sagbas et al., 2023). Unlike prior investigations, this research derived more accurate results through a three-wave time-lagged approach. This study addresses the infrequent time-lagged design on the nexus of DL and IB.

Digital leadership significantly influenced innovative behavior, therefore supporting H1. The finding on how digital leadership cultivate innovative behavior was consistent (Benitez et al., 2022; Mihardjo, Sasmoko, Alamsyah, et al., 2019; Niu et al., 2022). Simultaneously, the research is elucidated by UET. The leader's prior experience and competencies influence their decisions, as posited by the theory. Considering this, these attributes facilitate the development of employees' innovative behavior (Topcuoglu et al., 2023; Wang et al., 2022). This idea posits that the attributes of the top management, including views, beliefs, values, attitudes, and professional skill, significantly influence decision-making (López-Muñoz & Escribá-Esteve, 2017). This outcome is elucidated by the relationship between a specific characteristic and innovative behaviors, suggesting that a manager cannot embrace innovation without undergoing technological transformation (Benitez et al., 2022).

Furthermore, the study identified a strong moderating influence of conscientiousness on the association between digital leader and the behavior towards innovation particularly in-service sector in the service industry. In our model, conscientiousness serves as a boundary condition that enhances the indirect relationship between digital leadership and innovative behavior, resulting in stronger relationships for employees with elevated levels of conscientiousness. Frontline staff are effectively managed, organized, and disciplined to service customers innovatively, particularly in the hospitality business. Drawing TPB, the role of employee's conscientiousness boosts employee's innovative behavior (Ajzen, 1991;

Arifin et al., 2022; Song et al., 2023). Further, TPB also validates that digital leadership causes bring values as innovative behavior significantly while employee conscientious support that act of digital leadership (Ajzen, 1991; Arifin et al., 2022). Thus, H2 received approval.

### **Theoretical Implication**

By discussing the significant effect of digital leadership, our findings for this study convey significant theoretical implications for the employee's innovative behavior in the service innovation. Preceding researches has established that several leadership styles effect on innovative behavior (Braojos et al., 2024; Munawar et al., 2024). Yet, the significant leadership style the digital leadership and its outcome have been explored (AlNuaimi et al., 2022). In this regard, our research delivers empirical indication of the how digital leadership foster individual consequences, particularly innovative behavior. Further, we empirically examined to the drive for more study the implications of mechanism digital leadership (Tigre et al., 2023).

First, we use the new theoretical framework of UET (Erhan et al., 2022; Hambrick & Mason, 1984; Mihardjo, Sasmoko, Alamsjah, et al., 2019) to examine how digital leadership upsurges innovative behavior in service sector. So, our findings are in line with some current empirical researches viewing the nexus of digital leadership and behavior regarding innovation in service sector (Cai et al., 2024; Erhan et al., 2022; Sagbas et al., 2023). Previous studies on digital leadership has also highlighted that supervisors' innovative mindset can strengthen workers' innovative behavior (Cai et al., 2024). These studies also based on theories of social learning (Iqbal et al., 2022), leadership theory (Erhan et al., 2022) and (JD-R) theory (Zia et al., 2024) which could not validate the whole perspective of digital leadership and its role on innovative behavior. Therefore, UET validates this association with a new perspective, which posits that individual outcomes are shaped by the attributes of leader. Further, we empirically examined the drive for more study the - Impacts of mechanism digital leadership (Tigre et al., 2023).

Moreover, results of our study make potential contributions to the role of moderating personality trait, conscientiousness between digital leadership that boost to improve innovative behavior in hospitality industry. Conscientiousness employees provide the support with flexible cognition that encourage their colleagues to create new perspectives (Wang et al., 2012). The TPB approves the finding that conscientiousness as an influential construct to stimulate innovative behavior in the hospitality industry. Since the lack of evidence in previous literatures, the findings exhibit that employees conscientious play the pivotal role in cultivating innovating behavior by cooperating with digital leader.

This study highlights the significant effect of digital leadership, indicating important theoretical implications for employees' innovative behavior in service innovation. Initially, we employ the novel theoretical framework of UET (Erhan et al., 2022; Hambrick & Mason, 1984; Mihardjo, Sasmoko, Alamsjah, et al., 2019) to explore how digital leadership cultivates innovative behavior within the service industry. Our findings align with recent empirical studies examining the how digital leadership through digital transformation promote behavior in service innovation (Cai et al., 2024; Erhan et al., 2022; Sagbas et al., 2023). Prior research on digital leadership has emphasized that a supervisor's creative perspective can enhance employees' inventive behavior (Cai et al., 2024).

Furthermore, the findings of our study recommend that the moderating personality trait of conscientiousness may enhance how digital leadership foster innovative behavior within a hospitality business. Conscientious employees offer support through flexible cognition,

which encourages their colleagues to develop novel perspectives (Wang et al., 2012). The TPB endorses the conclusion that conscientiousness is a significant factor in promoting innovative behavior within the hospitality sector. Due to the absence of evidence in prior literature, the findings indicate that employees' conscientiousness is crucial in fostering innovative behavior through collaboration with digital leaders.

### **Practical Implications**

The present study holds considerable empirical significance for workers, supervisors, and organizations. Initially, digital leadership encourages supervisors to appropriately assess their digital conduct to foster innovative behavior within the hospitality sector. Innovative behavior is valued by organizations for its significant outcomes. According to our findings, supervisors' digital conduct promotes innovative behavior. Consequently, organizations need to endorse and appreciate leaders' digital conduct to enhance innovative behavior inside the service industry. Supervisors may enhance digital behavior by promoting open communication, providing digital tools, and maintaining strong interpersonal relationships with staff.

Secondly, our findings should encourage management to implement relevant training and diligent programs designed to help supervisors in fostering productive behaviors that motivate staff to apply their skills and knowledge in enhancing creative practices within the hospitality business. Conscientious employees are more likely to develop essential digital abilities, enhancing their ability to engage in digital tasks. These efforts may involve overseeing training sessions aimed at fostering supervisors' innovative mentality to motivate employees to share their skills and knowledge in promoting innovative behavior through incentives and sanctions.

### **Limitations and Future Research Directions**

This research possesses few limitations that could be examined in future researches. Foremost, based on Upper echelon theory, this research assessed the impacts of digital leadership on service innovative behavior and the based on other theory, TPB explained the role as a boundary condition, conscientiousness between the nexus of how digital leadership cultivate the service innovative behavior. Therefore, future researchers may focus on other framework from several theoretical perspectives, like SET, social cognitive theory and social learning theory.

We conducted an inclusive moderated analysis using a three-wave time-lagged research methodology to investigate the association between digital leadership and service innovative behavior in the hospitality industry. Though this study assessed the moderating effect of a personality trait, conscientiousness, current study suggested that, beside individual characteristics, work characteristics, LMX, and leaders' characteristics affect the efficacy of leadership (Bodolica & Spraggon, 2021). Future researchers may examine other robust moderators, like task creativity, power sharing or distance, or LMX. We may also consider additional relevant organizational and HRM factors that could significantly influence innovative behavior in the hotel and other service sectors. Subsequent research may investigate these dimensions.

We examined digital leadership in relation to staff perspectives within the hospitality sector. Future research may assess leadership perspectives to motivate employees by imparting digital knowledge to enhance their skills in fostering innovative behavior. We conducted the survey online to gather data (Prolific Academic). This service has several deficiencies, such as responder biases (Rice et al., 2017). Consequently, future researchers may evaluate our model with alternative survey techniques.

## Conclusion

Service innovative behavior is highly valued and considered a significant outcome, particularly within the hospitality business. Employing UET (Hambrick & Mason, 1984; Mihardjo, Sasmoko, Alamsjah, et al., 2019), we ascertain that the attributes of digital leadership foster innovative behavior within the hospitality industry. Drawing TPB, the role of employee's conscientiousness boosts service innovative behavior with the support of digital leadership (Ajzen, 1991; Arifin et al., 2022; Song et al., 2023). Further, TPB also validates that digital leadership causes bring values as positive innovative behavior significantly while conscientious employee support the role of digital leadership (Ajzen, 1991; Arifin et al., 2022). Employees' conscientious, however, the role as a boundary condition how digital leadership foster the innovative behavior particularly in the hospitality industry.

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