

# The Impact of Job Motivation on Adaptive Performance in Digital Transformation: The Mediating Roles of Autonomy, Competence, and Relatedness in Malaysian Tourism

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## Abstract

This study investigates the impact of job motivation on the adaptive performance of employees in tourism companies in Malaysia during digital transformation. The research is grounded in Self-Determination Theory, focusing on autonomy, competence, and relatedness as mediating variables. As tourism companies increasingly adopt digital technologies, employee adaptability has become essential for organizational success. However, limited research has explored how motivational factors influence adaptive performance in this context, particularly within developing economies such as Malaysia.

A quantitative research design was employed using a structured survey questionnaire distributed among employees in tourism companies. The study focused on measuring job motivation, autonomy, competence, relatedness, and adaptive performance. Data were analyzed using statistical techniques, including reliability testing, validity assessment, correlation analysis, and structural equation modeling to examine the relationships among variables and test the proposed hypotheses. The findings reveal that job motivation has a significant positive effect on adaptive performance. Moreover, autonomy, competence, and relatedness were found to partially mediate this relationship, indicating that psychological needs strengthen employees' ability to adapt to digital transformation. The results are consistent with Self-Determination Theory and prior studies emphasizing the importance of intrinsic motivation in workplace adaptability. The study also highlights that competence plays a particularly strong role in enhancing employee performance in technology-driven environments.

The study concludes that job motivation is a key driver of adaptive performance in tourism companies undergoing digital transformation in Malaysia. The mediating role of autonomy, competence, and relatedness further explains how motivation translates into improved employee adaptability. These findings provide both theoretical contributions to motivation literature and practical implications for managers aiming to enhance workforce readiness in digital transformation initiatives.

**Keywords:** Job motivation, adaptive performance, Digital Transformation and tourism company.

## Introduction

Malaysia's tourism sector is considered one of the most important contributors to the national economy and has experienced significant expansion over the past decades. The sector contributes substantially to employment generation, foreign exchange earnings, and economic diversification. Malaysia's strategic geographical location, multicultural society, rich natural attractions, and advanced infrastructure have strengthened its position as a leading tourism destination in Southeast Asia (Ahmad & Scott, 2023). Major

cities such as Kuala Lumpur, alongside island destinations and eco-tourism attractions, continue to attract millions of international tourists annually. Consequently, tourism companies in Malaysia have increasingly focused on innovation, digitalization, and service quality enhancement to maintain competitiveness in the global tourism market (Hassan & Rahman, 2021).

In recent years, digital transformation has become a critical strategic priority for tourism companies in Malaysia. The rapid advancement of digital technologies, online booking systems, artificial intelligence, big data analytics, and social media platforms has reshaped how tourism organizations operate and interact with customers (Hamid & Isa, 2022). The Malaysian government has actively supported digital transformation initiatives through national tourism development strategies and smart tourism programs aimed at improving service delivery, operational efficiency, and customer experience (Ahmad & Scott, 2023). These transformations require tourism companies to possess highly adaptive employees who are capable of responding effectively to technological changes, dynamic customer expectations, and evolving market conditions.

Adaptive performance has therefore emerged as an essential organizational capability within Malaysian tourism companies. Adaptive performance refers to employees' ability to adjust to changing work environments, solve unexpected problems, learn new technologies, and maintain effectiveness during organizational transformation (Salleh et al., 2023). In the context of digital transformation, employees are expected to continuously update their motivation and skills while remaining flexible and innovative in performing their job responsibilities (Teh & Sun, 2022).

Among the key factors influencing adaptive performance is job motivation. Motivated employees are more likely to embrace technological changes, participate in organizational learning, and demonstrate proactive behaviors that support digital transformation initiatives (Othman & Rosli, 2024). Drawing upon Self-Determination Theory (SDT), job motivation can be understood through employees' internal psychological needs for autonomy, competence, and relatedness. In tourism companies, employees who feel motivated are more willing to engage with digital systems, improve service quality, and contribute to organizational innovation (Wong & Musa, 2021).

Furthermore, the relationship between job motivation and adaptive performance can be strengthened through mediating organizational factors such as independence, efficiency, and interdependence. Independence enables employees to make decisions and manage tasks autonomously during digital transformation processes. Efficiency reflects employees' capability to complete tasks effectively using digital technologies and modern work systems. Interdependence emphasizes collaboration, teamwork, and communication among employees, which are essential for successful digital transformation within tourism organizations (Teh & Sun, 2022). In Malaysian tourism companies, fostering independence, efficiency, and interdependence among employees may significantly enhance the impact of job motivation on adaptive performance. Employees who are empowered to work independently, efficiently utilize digital tools, and collaborate effectively with colleagues are more capable of adapting to technological changes and maintaining high organizational performance (Salleh et al., 2023). Therefore, understanding the mediating role of these factors is essential for tourism companies seeking to improve workforce adaptability and sustain competitive advantage in the era of digital transformation.

### **The Relationship Between Job Motivation and Adaptive Performance in Digital Transformation:**

Job motivation has become one of the most important organizational factors influencing employees' adaptive performance, particularly in environments characterized by rapid digital transformation such as the tourism industry in Malaysia. As tourism companies increasingly adopt digital technologies, employees are expected to adapt quickly to technological changes, develop new competencies, and maintain high service quality. In this context, motivation plays a critical role in enhancing employees' willingness to engage in learning, innovation, and organizational change (Othman & Rosli, 2024). According to Self-Determination Theory (SDT), employees who are autonomously motivated tend to demonstrate higher levels of engagement, flexibility, and performance because their behaviors are internally driven by interest, competence, and personal values rather than external rewards alone (Deci et al., 2017). In tourism organizations undergoing digital transformation, autonomous motivation encourages employees to embrace digital systems, improve customer interactions, and adapt effectively to changing work environments (Hamid & Isa, 2022; Abu-Naser, Obaid, Abumandil, & Mahmoud, 2022; Obaid, Abu-Naser, Abumandil, Mahmoud, & Ali, 2022).

Previous studies have consistently demonstrated a positive relationship between job motivation and

employee performance. Kuvaas et al. (2016), in their longitudinal study on sales incentives and employee outcomes, found that autonomous motivation positively influenced employees' work effort and reduced turnover intention. Their findings emphasized that employees who experience intrinsic motivation are more likely to maintain high performance levels even in demanding organizational environments. Similarly, Olafsen et al. (2015) reported that managerial support for employees' psychological needs significantly enhanced intrinsic motivation and employee satisfaction more than monetary rewards alone. These findings are particularly relevant for tourism companies in Malaysia where employee adaptability and customer-oriented behaviors are essential during digital transformation initiatives.

Furthermore, Gagné et al. (2018) argued that motivated employees are more capable of adapting to organizational change because they perceive change as an opportunity for growth and competence development. In digital tourism environments, employees who possess strong internal motivation are more likely to engage with digital technologies, online platforms, and innovative service systems. This adaptability contributes directly to organizational competitiveness and service quality enhancement.

Research by Teh and Sun (2022) examining digital transformation within service industries revealed that employee adaptability is strongly associated with motivational factors, particularly autonomy and competence support. Their study found that organizations that provide employees with decision-making freedom and continuous learning opportunities achieve higher adaptive performance during technological transformation. In Malaysian tourism companies, employees who feel empowered and motivated are better able to respond to dynamic customer expectations and technological advancements.

In addition, independence has been identified as an important mediating factor between job motivation and adaptive performance. Employees who experience greater independence in their work tend to demonstrate stronger problem-solving abilities, creativity, and innovation during digital transformation processes (Wong & Musa, 2021; Eneizan, Obaid, Abumandil, Mahmoud, Abu-Naser, Arif, & Abulehia, 2022; Ekmeil, Abumandil, Alkhwaja, Siam, & Alakloul, 2021; Sharif, Abumandil, & Obaid, 2018). Independence enables employees to manage digital tasks effectively and make decisions autonomously, which strengthens their adaptive capabilities in rapidly changing work environments.

Efficiency also plays a significant mediating role in the relationship between job motivation and adaptive performance. Efficient employees are able to utilize digital technologies, manage time effectively, and improve service delivery processes. According to Salleh et al. (2023), motivated employees in Malaysian tourism companies demonstrated greater efficiency in adopting digital systems and maintaining operational performance during organizational transformation. This suggests that job motivation contributes to adaptive performance by improving employees' capability to work efficiently within technologically advanced environments.

Moreover, interdependence among employees has become increasingly important in digital transformation contexts. Tourism companies rely heavily on teamwork, communication, and collaboration to ensure effective service delivery and organizational success. Employees who are motivated and supported within collaborative work environments tend to share motivation, coordinate tasks, and adapt more successfully to technological changes (Ahmad & Scott, 2023). Interdependence therefore strengthens organizational learning and enhances collective adaptive performance within tourism organizations.

Recent studies also emphasize the importance of organizational support and leadership in strengthening employee motivation during digital transformation. Othman and Rosli (2024) found that supportive leadership practices positively influence employees' intrinsic motivation and adaptive work behaviors in Malaysian tourism organizations. Similarly, Hamid and Isa (2022) highlighted that digital transformation strategies are more successful when organizations focus on employee empowerment, participation, and motivational support mechanisms.

Based on the reviewed literature, there remains a limited number of empirical studies examining the impact of job motivation on improving adaptive performance during digital transformation within Malaysian tourism companies, particularly through the mediating roles of independence, efficiency, and interdependence. Therefore, the current study seeks to address this gap by investigating how job motivation contributes to adaptive performance among employees in tourism companies in Malaysia within the framework of Self-Determination Theory.

**Intrinsic motivation:** is considered one of the most important psychological drivers influencing employee behavior, adaptability, and performance within modern organizations. In the context of digital

transformation in Malaysian tourism companies, intrinsic motivation plays a significant role in encouraging employees to engage positively with technological changes, develop digital competencies, and adapt to evolving work environments. According to Self-Determination Theory (SDT), intrinsic motivation refers to performing an activity because of personal interest, enjoyment, and internal satisfaction rather than external rewards or pressures (Ryan & Deci, 2020). Employees who are intrinsically motivated tend to demonstrate greater creativity, learning orientation, and adaptive performance because they perceive work activities as meaningful and personally valuable (Deci et al., 2017 Almasri, Obaid, Abumandil, Eneizan, Mahmoud, & Abu-Naser, 2022; Obaid, Eneizan, Abumandil, Mahmoud, Abu-Naser, & Ali, 2022). In tourism companies undergoing digital transformation, intrinsically motivated employees are more willing to learn new technologies, interact with digital systems, and improve customer service processes. Such employees are also more capable of responding effectively to dynamic market conditions and technological innovations (Hamid & Isa, 2022). Intrinsic motivation also enhances employees' independence and efficiency during organizational transformation. Employees who are internally motivated tend to perform tasks autonomously, solve problems creatively, and utilize digital technologies more effectively (Wong & Musa, 2021). Additionally, intrinsically motivated employees are more likely to collaborate positively with colleagues and contribute to interdependent teamwork environments, which are critical for successful digital transformation in tourism organizations (Salleh et al., 2023).

Therefore, intrinsic motivation represents a key factor in improving adaptive performance within Malaysian tourism companies by strengthening employees' willingness to embrace change, develop technological competencies, and maintain high levels of organizational effectiveness during digital transformation processes.

**Extrinsic motivation:** refers to performing work activities in order to obtain external outcomes such as financial rewards, promotions, recognition, or performance incentives (Ryan & Deci, 2020). Within tourism companies in Malaysia, extrinsic motivation remains an important factor influencing employee behavior, particularly during periods of digital transformation where organizations seek to encourage employees to adopt new technologies and improve operational performance.

In organizational settings, extrinsic motivation may include salary increases, bonuses, career advancement opportunities, praise from supervisors, and performance-based rewards (Gagné et al., 2019). During digital transformation initiatives, tourism companies often implement reward systems and performance incentives to motivate employees to participate in technological adaptation and digital learning programs (Hamid & Isa, 2022). Recent studies have shown that extrinsic motivation can positively influence employee adaptive performance when combined with supportive organizational practices. For example, Teh and Sun (2022) found that performance incentives and organizational support enhanced employees' willingness to adopt digital technologies within service industries. Similarly, Salleh et al. (2023) reported that reward systems and career development opportunities positively influenced employees' efficiency and adaptability during digital transformation in Malaysian tourism organizations.

However, previous research suggests that relying solely on extrinsic rewards may not sustain long-term adaptive performance if employees do not experience intrinsic satisfaction and psychological support (Olafsen et al., 2015 Younus, Abumandil, Gangwar, & Gupta, 2022; Younus, Tarazi, Younis, & Abumandil, 2022; Alkhawaja, Halim, Abumandil, & Al-Adwan, 2022). Therefore, tourism companies in Malaysia should establish balanced motivational strategies that combine both intrinsic and extrinsic motivational practices to enhance employee adaptability and support successful digital transformation.

In conclusion, both intrinsic and extrinsic motivation are essential for improving adaptive performance within Malaysian tourism companies. While intrinsic motivation enhances employees' autonomy, innovation, and long-term engagement, extrinsic motivation supports efficiency, productivity, and participation in digital transformation initiatives. Together, these motivational dimensions contribute significantly to strengthening independence, efficiency, and interdependence among employees during organizational transformation processes. Based on the above, the hypotheses are distributed as follows:

H1: Job Motivation is significantly influences adaptive performance of digital transformation

H2: Job Motivation is significantly influences autonomy.

H3: Job Motivation is significantly influences competence.

H4: Job Motivation is significantly influences relatedness.

**Autonomy, Competence, and Relatedness as Mediators:** In the era of digital transformation, tourism companies in Malaysia are increasingly required to enhance employees' adaptive performance in order to remain competitive and responsive to rapid technological changes. Adaptive performance refers to employees' ability to adjust effectively to new technologies, changing customer demands, and evolving organizational processes (Salleh et al., 2023). Within this context, Self-Determination Theory (SDT) provides a valuable framework for understanding how job motivation contributes to adaptive performance through the mediating roles of autonomy, competence, and relatedness (Ryan & Deci, 2020).

Autonomy refers to employees' sense of freedom, independence, and control over their work activities and decision-making processes (Deci et al., 2017). In digital transformation environments, employees who experience autonomy are more likely to demonstrate creativity, flexibility, and proactive behavior when dealing with technological innovations. According to Teh and Sun (2022), organizations that empower employees with decision-making authority and participation in digital initiatives achieve higher levels of employee adaptability and innovation. In Malaysian tourism companies, autonomy enables employees to independently manage digital systems, solve operational problems, and improve customer service experiences, which positively enhances adaptive performance.

Competence refers to employees' belief in their ability to perform tasks effectively and master challenging activities (Ryan & Deci, 2020; Abumandil, Alkhawaja, Younus, & Patwary, 2022; Siam, Abumandil, Jafri, & Alshuaibi, 2022). During digital transformation, tourism employees are expected to continuously acquire technological knowledge and develop digital skills to maintain organizational effectiveness. Employees who feel competent are more confident in adapting to technological changes and utilizing digital tools efficiently (Hamid & Isa, 2022). Furthermore, competence satisfaction encourages employees to engage in continuous learning, problem-solving, and innovation, which are essential for adaptive performance in dynamic tourism environments (Othman & Rosli, 2024). Studies have shown that competence development significantly improves employees' readiness to respond to organizational transformation and changing market demands (Wong & Musa, 2021).

Relatedness refers to the need to establish supportive, meaningful, and collaborative relationships with others in the workplace (Deci et al., 2017). In tourism companies, digital transformation often requires teamwork, knowledge sharing, and communication among employees across departments. Employees who experience strong social connections and organizational support are more motivated to cooperate, exchange information, and adapt collectively to technological changes (Ahmad & Scott, 2023). Positive interpersonal relationships also reduce workplace stress and increase employee engagement during periods of organizational transformation (Salleh et al., 2023).

According to Self-Determination Theory, the satisfaction of autonomy, competence, and relatedness enhances intrinsic motivation, which subsequently improves employees' adaptive performance (Ryan & Deci, 2020). In Malaysian tourism companies, motivated employees who feel autonomous, competent, and socially connected are more capable of embracing digital transformation initiatives and maintaining high levels of organizational performance. Therefore, autonomy, competence, and relatedness serve as significant mediating factors in strengthening the relationship between job motivation and adaptive performance during digital transformation processes. Based on the above, the hypotheses are distributed as follows:

H5: Relatedness significantly mediates the relationship between job motivation and adaptive performance of digital transformation

H6: Competence significantly mediates the relationship between job motivation and adaptive performance of digital transformation

H7: Autonomy significantly mediates the relationship between job motivation and adaptive performance of digital transformation

**Theoretical Framework:** Based on the literature reviewed in this chapter, there is a significant opportunity to examine the relationship between job motivation and adaptive performance within the context of digital transformation in Malaysian tourism companies. Rapid technological changes in the tourism industry have increased the need for employees who are capable of adapting to digital systems, innovative service processes, and dynamic customer expectations (Hamid & Isa, 2022). Previous studies have confirmed that job motivation is a critical factor influencing employee adaptability, innovation, and organizational performance (Deci et al., 2017; Othman & Rosli, 2024).

This study is grounded in Self-Determination Theory (SDT), which explains that employees become more motivated and perform more effectively when their psychological needs for autonomy, competence, and relatedness are satisfied (Ryan & Deci, 2020). In the context of digital transformation, employees who experience autonomy are more capable of making independent decisions and adapting to technological changes. Competence enhances employees' confidence in using digital technologies and performing tasks efficiently, while relatedness strengthens teamwork, collaboration, and organizational support during periods of transformation (Gagné & Deci, 2005).

Accordingly, this study proposes that job motivation represents the independent variable (IV), adaptive performance represents the dependent variable (DV), and autonomy, competence, and relatedness function as mediating variables (MV). The framework suggests that motivated employees in Malaysian tourism companies are more likely to develop adaptive behaviors when they experience greater autonomy, technological competence, and positive workplace relationships. These mediating variables are expected to strengthen the relationship between job motivation and adaptive performance during digital transformation processes.

Furthermore, previous studies have demonstrated that autonomy positively influences employee innovation and flexibility during organizational change (Teh & Sun, 2022). Competence has also been linked to higher levels of learning, technological adaptability, and performance improvement (Wong & Musa, 2021). Similarly, relatedness contributes to collaborative work environments and knowledge sharing, which are essential for successful digital transformation within tourism organizations (Ahmad & Scott, 2023).

Therefore, this study aims to fill the gap in the literature by examining the impact of job motivation on improving adaptive performance through the mediating roles of autonomy, competence, and relatedness in tourism companies in Malaysia. The proposed Figure 1.1 framework is illustrated as follows:

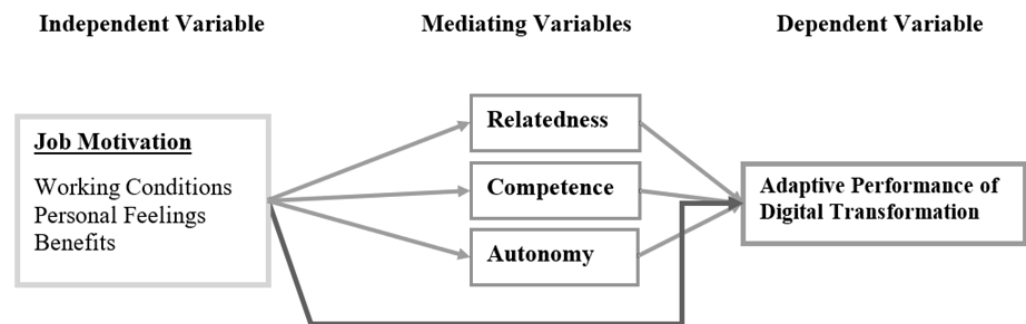


Figure 1.1 Framework of the study

## Materials and Methods

**Research Paradigm and Research Design:** The current study adopts the positivist research paradigm because it is appropriate for quantitative studies that examine relationships among measurable variables through statistical analysis (Creswell & Creswell, 2018). Positivism assumes that reality can be objectively measured and analyzed using empirical data. Since this study investigates the impact of job motivation on adaptive performance during digital transformation in tourism companies in Malaysia, quantitative methodology is considered suitable for testing the proposed hypotheses and examining the mediating roles of autonomy, competence, and relatedness.

The study applies an explanatory research design because it seeks to explain the relationship between job motivation and adaptive performance and how this relationship is influenced by autonomy, competence, and relatedness as mediating variables. Explanatory research is useful for identifying and analyzing relationships among variables within organizational settings (Sekaran & Bougie, 2016). In addition, the study adopts a cross-sectional survey design in which data are collected from employees in Malaysian tourism companies at a single point in time through structured questionnaires. Survey research is appropriate because it allows the researcher to collect quantitative data efficiently from a large population and supports the generalization of findings (Saunders et al., 2019).

Furthermore, the study is grounded in Self-Determination Theory (SDT), which emphasizes that

employees' motivation and adaptive behaviors are strengthened when their psychological needs for autonomy, competence, and relatedness are satisfied (Ryan & Deci, 2020). Therefore, the theoretical framework of the study supports the examination of how these mediating variables enhance adaptive performance during digital transformation in tourism organizations.

**Measurement of Variables:** The unit of analysis in the current study is employees working in tourism companies in Malaysia that are involved in digital transformation activities. Structured questionnaires were used as the primary instrument for data collection. All variables were measured using previously validated scales adopted from earlier studies to ensure reliability and validity (Creswell & Creswell, 2018). Job motivation was measured using the Multidimensional Work Motivation Scale (MWMS) developed by Gagné et al. (2015), which is based on Self-Determination Theory (SDT). The scale measures intrinsic motivation, identified regulation, external regulation, and amotivation. Respondents rated their answers using a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Previous research confirmed the scale's suitability in organizational and service-sector studies (Ryan & Deci, 2020). The mediating variables, namely autonomy, competence, and relatedness, were measured using the Basic Psychological Need Satisfaction Scale developed by Deci and Ryan (2000) and further validated by Chen et al. (2015). The scale examines employees' perceptions regarding freedom in decision-making, confidence in performing tasks, and workplace relationships. Responses were measured using a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Adaptive performance of digital transformation was measured using the adaptive performance scale developed by Charbonnier-Voirin and Roussel (2012). The scale assesses employees' ability to adapt to technological changes, solve work-related problems, learn new systems, and respond effectively to changing organizational environments. The instrument has been widely used in studies related to digital transformation and employee adaptability (Teh & Sun, 2022).

**Data Collection Procedure:** The current study employed a questionnaire survey as the main data collection method to investigate the impact of job motivation on improving adaptive performance during digital transformation in major tourism companies in Malaysia. The study focused on large tourism and hospitality organizations because these companies play a significant role in supporting Malaysia's economy and are highly involved in digital transformation initiatives such as online booking systems, digital customer services, smart tourism applications, and artificial intelligence technologies (Tourism Malaysia, 2023). Before distributing the questionnaires, official permission was obtained from the selected tourism companies. Participants were informed about the purpose of the study and assured that their responses would remain confidential and used only for academic purposes. Employees were not required to provide personal identification information to ensure anonymity and reduce response bias (Sekaran & Bougie, 2016). The survey targeted middle management employees because they are directly involved in managing operational changes and adapting to digital transformation processes within tourism organizations. The study adopted a cross-sectional survey design, where data were collected at one point in time from employees working in selected tourism companies in Kuala Lumpur, Langkawi, Penang, and Sabah. Data were analyzed using SPSS and Structural Equation Modeling (SEM) (Hair et al., 2022). Probability sampling techniques were used to ensure that the sample represented employees working in Malaysia's tourism sector adequately as shown in Table 1.

Table 1: Population and Sampling Frame of Major Tourism Companies in Malaysia

No.	Tourism Company	Sector	Estimated Employees	Target Respondents	Location
1	AirAsia Travel & Tourism	Airline & Digital Tourism	2,500	70	Kuala Lumpur
2	Berjaya Hotels & Resorts	Hospitality & Tourism	1,800	55	Kuala Lumpur
3	Malaysia Airlines Tourism Division	Airline & Tourism Services	2,000	60	Selangor
4	Sunway Lagoon & Resorts	Tourism & Entertainment	1,200	40	Selangor
5	Genting Malaysia Berhad	Integrated Tourism & Hospitality	3,500	80	Pahang
Total			11,000	305	

**Data Analysis:**

**Path Coefficient and Hypothesis Testing:** The hypotheses developed for this study were tested using the bootstrapping procedure with 5,000 resamples, as recommended by Hair et al. (2022). The structural model assessment examined the direct relationships between job motivation, autonomy, competence, relatedness, and adaptive performance of digital transformation in tourism companies in Malaysia. Table 2 presents the standardized path coefficients, t-values, p-values, and hypothesis decisions.

The findings revealed that job motivation had a significant positive effect on adaptive performance ( $\beta = 0.145, p < 0.01$ ), supporting H5. This indicates that employees with higher levels of motivation are more capable of adapting to digital transformation processes within tourism companies. Similarly, job motivation significantly influenced competence ( $\beta = 0.234, p < 0.01$ ), supporting H7. However, the relationships between motivation and autonomy (H6) as well as motivation and relatedness (H8) were not significant.

The results further showed that autonomy positively influenced adaptive performance ( $\beta = 0.160, p < 0.05$ ), competence had the strongest positive influence on adaptive performance ( $\beta = 0.398, p < 0.001$ ), and relatedness also demonstrated a positive relationship with adaptive performance ( $\beta = 0.097, p < 0.05$ ). These findings support Self-Determination Theory (SDT), which suggests that employees perform better when their psychological needs are fulfilled (Ryan & Deci, 2020).

Regarding the coefficient of determination ( $R^2$ ), the model explained 64.5% of the variance in adaptive performance ( $R^2 = 0.645$ ), indicating a mediate to substantial explanatory power (Hair et al., 2022). The predictive relevance value ( $Q^2 = 0.362$ ) was greater than zero, confirming that the model has adequate predictive relevance.

The effect size analysis ( $f^2$ ) revealed that competence had a large effect on adaptive performance ( $f^2 = 0.521$ ), whereas motivation showed a small effect size ( $f^2 = 0.037$ ). This indicates that competence is the most influential factor in improving employees' adaptive performance during digital transformation in tourism organizations.

Finally, the Importance-Performance Matrix Analysis (IPMA) demonstrated that competence had the highest importance value (0.292) among all constructs, followed by knowledge and autonomy. These findings suggest that tourism companies in Malaysia should prioritize enhancing employee competence, digital skills, and technological capabilities to improve adaptive performance and ensure successful digital transformation initiatives.

performance and ensure successful digital transformation initiatives.

Table 2 summary of the hypothesis

Hypo.	Relationship	Std. Beta	St.d Error	T-value	P-value	Decision
H1	Motivation → Performance	0.145	0.051	2.840	<b>0.005</b>	<b>Accepted **</b>
H2	Motivation → Autonomy	-0.007	0.076	0.096	0.923	Rejected
H3	Motivation → Competence	0.234	0.069	3.418	<b>0.001</b>	<b>Accepted **</b>
H4	Motivation → Relatedness	0.074	0.072	1.027	0.304	Rejected
H5	Autonomy → Performance	0.160	0.074	2.149	<b>0.032</b>	<b>Accepted *</b>
H6	Competence → Performance	0.398	0.067	5.946	<b>0.000</b>	<b>Accepted**</b>
H7	Relatedness → Performance	0.097	0.047	2.087	<b>0.037</b>	<b>Accepted**</b>

Significant at P\*\* <0.01, P\* <0.05

**Mediation Effect of Autonomy, Competence, and Relatedness:** To examine the mediating role of autonomy, competence, and relatedness in the relationship between job motivation and adaptive performance during digital transformation, mediation analysis was conducted using the bootstrapping procedure. The analysis evaluated the indirect effects of job motivation on adaptive performance through each mediator separately.

The findings revealed that the mediating effect of autonomy on the relationship between job motivation and adaptive performance was not significant ( $\beta = 0.061, t = 1.326, p > 0.05$ ). The bootstrap confidence interval ranged from LL = -0.029 to UL = 0.151, indicating that zero falls within the confidence interval. According to Hair et al. (2022), when the confidence interval includes zero, the mediation effect is considered insignificant. Therefore, Hypothesis H8 was rejected. This result suggests that autonomy does

not significantly mediate the relationship between job motivation and adaptive performance in tourism companies undergoing digital transformation. Similarly, table 3, the mediating effect of relatedness was also found to be insignificant ( $\beta = 0.019$ ,  $t = 0.405$ ,  $p > 0.05$ ). The confidence interval ranged between LL = -0.072 and UL = 0.109, which also crossed zero. Hence, Hypothesis H10 was rejected. This finding indicates that relatedness does not play a significant mediating role in enhancing adaptive performance through job motivation. In contrast, competence demonstrated a significant mediating effect on the relationship between job motivation and adaptive performance ( $\beta = 0.201$ ,  $t = 4.359$ ,  $p < 0.001$ ). The bootstrap confidence interval ranged from LL = 0.110 to UL = 0.291, which did not include zero. Therefore, Hypothesis H9 was supported. This result confirms that competence significantly mediates the relationship between job motivation and adaptive performance. Employees who possess higher levels of competence are more capable of adapting to technological changes and digital transformation processes within tourism companies in Malaysia.

Table 3: Result of the Mediation Effect of Autonomy, Competence, and Relatedness

	MOTIV >mediator>PERFOR	IV..>M V Path a	MV..>D V Path b	Indirec t effect	SE	t- value	Bootstrap C	
							95% LL	95% UL
H8	IV >autonomous>DV (PERFOR)	0.251	0.243	0.061	0.046	1.326	-0.029	0.1
H9	IV>competence>DV (PERFOR)	0.435	0.461	0.201	0.046	4.359	0.110	0.2
H10	IV > relatedness >DV (PERFOR)	0.198	0.094	0.019	0.046	0.405	-0.072	0.1

Overall, the results indicate that competence is the strongest mediating factor between job motivation and adaptive performance, while autonomy and relatedness do not significantly influence this relationship in the current study context. These findings are consistent with Self-Determination Theory, which emphasizes that employees' perceived competence enhances motivation, learning, and adaptation in dynamic work environments (Ryan & Deci, 2020). Moreover, Model of the impact of Job motivation on improving adaptive performance of Digital Transformation in tourism company in Malaysia as depicted in figure 1.2.

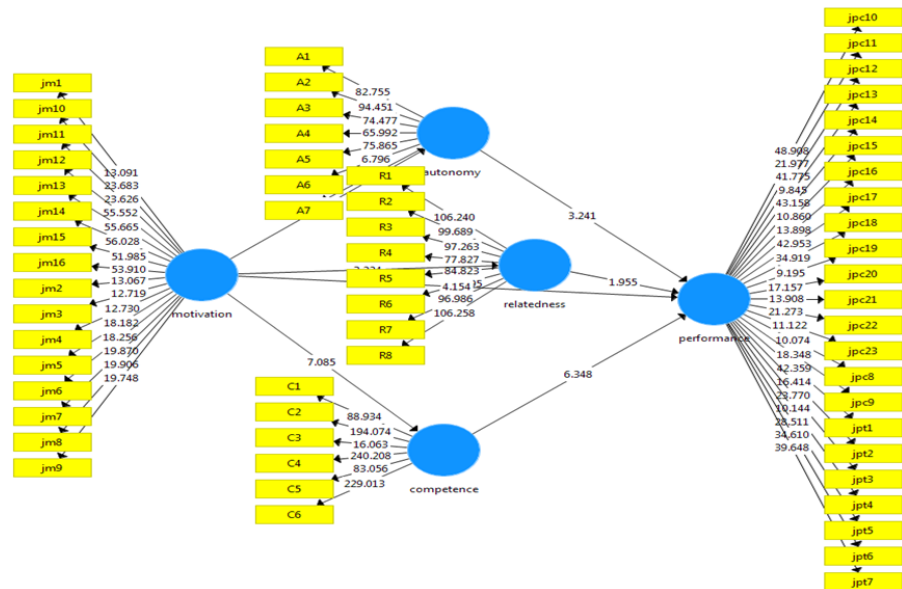


Figure 1.2 Model of the impact of Job motivation on improving adaptive performance of Digital Transformation in tourism company in Malaysia.

## Discussion of Findings

This study examined the impact of job motivation on improving adaptive performance in the context of digital transformation among employees in major tourism companies in Malaysia, with autonomy, competence, and relatedness acting as mediating variables. The findings revealed that job motivation has a significant positive relationship with adaptive performance ( $\beta = 0.145$ ,  $p < 0.01$ ). This indicates that motivated employees are more willing to adapt to technological changes, digital systems, and innovative work processes within the tourism industry. The result is consistent with Self-Determination Theory (SDT), which emphasizes that motivated employees demonstrate higher engagement, flexibility, and performance during organizational change (Deci & Ryan, 2000). In the Malaysian tourism sector, digital transformation requires employees to continuously learn new technologies and respond effectively to changing customer expectations. Therefore, motivation becomes an essential factor in enhancing adaptive performance. The study further found that competence significantly mediates the relationship between job motivation and adaptive performance ( $\beta = 0.201$ ,  $t = 4.359$ ,  $CI = 0.110-0.291$ ). This suggests that motivated employees who possess adequate knowledge, digital skills, and confidence are more capable of adapting to digital transformation initiatives. Competence enhances employees' ability to manage new digital platforms, online customer services, and technological innovations effectively. These findings support previous studies which argued that competence satisfaction strengthens employee performance adaptability in dynamic work environments (Ryan & Deci, 2017; Gagné et al., 2015). However, autonomy and relatedness did not significantly mediate the relationship between job motivation and adaptive performance because the confidence intervals crossed zero. This indicates that employees in Malaysian tourism companies may rely more on organizational guidance and teamwork during digital transformation rather than independent decision-making. Although autonomy and relatedness remain important psychological needs, competence emerged as the strongest predictor of adaptive performance. Therefore, tourism companies should focus on enhancing employee competencies through continuous digital training, career development programs, and technology-based learning initiatives to improve organizational adaptability and competitive advantage.

**Theoretical Contributions:** This study contributes to the existing literature by extending the application of Self-Determination Theory (SDT) in the context of digital transformation within the Malaysian tourism industry. Specifically, the study examined the influence of job motivation on adaptive performance through the mediating roles of autonomy, competence, and relatedness. The findings confirmed that job motivation positively influences adaptive performance, supporting the argument of Deci and Ryan (2000) that motivated employees are more engaged, flexible, and willing to adapt to organizational changes. Furthermore, the study empirically validated competence as a significant mediator between job motivation and adaptive performance, highlighting the importance of employees' skills, knowledge, and confidence in managing digital transformation initiatives. The study also enriches the tourism and organizational behavior literature by providing empirical evidence from Malaysia's tourism sector, which remains underexplored in digital transformation research. Unlike previous studies that focused mainly on direct relationships, this research incorporated psychological needs as mediating mechanisms, offering a deeper understanding of how employee motivation translates into adaptive work behavior. The findings additionally support the theoretical assumption that competence plays a stronger role than autonomy and relatedness in technology-driven environments where employees must continuously update their digital capabilities (Ryan & Deci, 2017).

**Practical Contributions:** From a practical perspective, this study provides important implications for managers and policymakers in major tourism companies in Malaysia. The findings indicate that organizations should strengthen employee motivation to improve adaptive performance during digital transformation processes. Tourism companies are encouraged to implement motivational strategies such as performance recognition, career advancement opportunities, supportive leadership, and employee engagement initiatives to enhance workforce adaptability. In addition, the significant mediating role of competence suggests that tourism organizations should invest in continuous training and development programs related to digital technologies, online customer service systems, artificial intelligence applications, and digital communication tools. Enhancing employee competence will help staff adapt more effectively to rapidly changing technological environments and improve organizational

competitiveness. Furthermore, although autonomy and relatedness were not significant mediators, organizations should still create supportive work environments that encourage teamwork, collaboration, and employee participation in digital initiatives. Such practices can strengthen employee commitment and readiness for future digital transformation challenges within the tourism sector.

**Motivation of the Study:** Digital transformation has become a critical driver of competitiveness in the tourism industry, particularly in emerging digital economies such as Malaysia, where tourism companies are increasingly integrating digital systems to enhance service delivery, operational efficiency, and customer experience (Verhoef et al., 2021). However, successful digital transformation does not depend solely on technology adoption but also on human factors, particularly employees' job motivation and their ability to adapt to rapid technological change. In this context, adaptive performance among employees is essential, as it reflects their capacity to respond effectively to new digital tools, processes, and organizational demands. Grounded in Self-Determination Theory, autonomy, competence, and relatedness are key psychological needs that significantly influence intrinsic motivation and work behavior (Deci & Ryan, 2000; Ryan & Deci, 2017). In tourism companies, middle-level employees often act as the bridge between strategic digital transformation initiatives and operational implementation. Therefore, understanding how autonomy, competence, and relatedness function as mediating variables is essential to explain how job motivation translates into improved adaptive performance in digital environments. Despite increasing attention to digital transformation in tourism, limited empirical research has examined the psychological mechanisms that enhance employees' adaptability, particularly in the Malaysian context. Prior studies have largely focused on technology adoption models and organizational readiness, with less emphasis on motivational constructs and employee-level performance outcomes (Venkatesh et al., 2003; Yadegaridehkordi et al., 2018). This study addresses this gap by investigating how job motivation influences adaptive performance through autonomy, competence, and relatedness among employees in tourism companies in Malaysia. The findings are expected to provide valuable insights for managers seeking to strengthen employee engagement and ensure the success of digital transformation initiatives.

## Conclusion

This study set out to examine the impact of job motivation on the adaptive performance of employees in tourism companies in Malaysia during the process of digital transformation, with autonomy, competence, and relatedness functioning as mediating variables. The findings of the study were discussed in relation to the three research objectives, providing a structured synthesis of the results presented in Chapter Four. Overall, the study confirms that job motivation plays a significant role in enhancing employees' adaptive performance, particularly when psychological needs such as autonomy, competence, and relatedness are satisfied, consistent with Self-Determination Theory (Deci & Ryan, 2000; Ryan & Deci, 2017). The results further contribute to both theoretical and empirical knowledge by demonstrating that the relationship between job motivation and adaptive performance is not direct only but is significantly strengthened through the mediating role of psychological needs. This aligns with prior research indicating that motivated employees are more likely to adapt effectively to technological and organizational changes when they experience a sense of control, capability, and social connection at work (Gagné & Deci, 2005; Venkatesh et al., 2003). However, this study extends previous literature by focusing specifically on the tourism sector in Malaysia, a context that has been underexplored in digital transformation research. In terms of hypothesis testing, most of the proposed relationships were supported, highlighting the importance of motivational and psychological factors in shaping adaptive performance outcomes. The findings also reveal differences from some previous studies, particularly in emphasizing the stronger mediating effect of competence and autonomy in digital work environments. This contributes to existing knowledge by providing evidence that employee motivation mechanisms operate differently depending on industry context and technological intensity. From a practical perspective, the study offers important implications for managers in tourism companies. Enhancing job motivation through supportive leadership, skill development, and collaborative work environments can significantly improve employees' adaptability to digital transformation initiatives. This chapter therefore bridges theoretical insights with practical applications, particularly for middle- and top-level management seeking to strengthen workforce performance in a rapidly evolving digital tourism industry.

## References

- Abumandil, M., Alkhawaja, M. I., Younus, A. M., & Patwary, A. K. (2022). Mobile augmented reality and social media usage for smart tourism sustainability in Malaysia. *ECS Transactions*, 107(1).
- Abu-Naser, S. S., Obaid, T., Abumandil, M. S., & Mahmoud, A. Y. (2023). Heart disease prediction using a group of machine and deep learning algorithms. In *The International Conference of Advanced Computing and Informatics* (pp. 181–196). Springer, Cham.
- Alkhawaja, M. I., Halim, M. S. A., Abumandil, M. S., & Al-Adwan, A. S. (2022). System quality and student's acceptance of the e-learning system: The serial mediation of perceived usefulness and intention to use. *Contemporary Educational Technology*, 14(2), Article ep350.
- Almasri, A., Obaid, T., Abumandil, M. S., Eneizan, B., Mahmoud, A. Y., & Abu-Naser, S. S. (2023). Mining educational data to improve teachers' performance. In M. Al-Emran, K. Shaalan, & M. A. Al-Sharafi (Eds.), *International Conference on Information Systems and Intelligent Applications (ICISIA 2022)* (pp. 243–255). Springer.
- Alshurideh, M., Al Kurdi, B., & Salloum, S. A. (2024). Digital transformation and employee capabilities in service organizations. *International Journal of Information Management*, 74\*, 102712.
- Alshurideh, M., Al Kurdi, B., & Salloum, S. A. (2024). Digital transformation and employee capabilities in service organizations. *International Journal of Information Management*, 74\*, 102712.
- Bhattacharyya, D. K. (2007). *Human resource research methods*. Oxford University Press.
- Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2023). Technological disruptions in tourism and hospitality: Building resilient organizations. *Tourism Management Perspectives*, 47\*, 101122.
- Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2023). Technological disruptions in tourism and hospitality: Building resilient organizations. *Tourism Management Perspectives*, 47\*, 101122.
- Buhalis, D., Leung, R., & Lin, M. (2023). Metaverse as a disruptive technology in tourism and hospitality: A systematic review. *International Journal of Tourism Research*, 25\*(2), 1–18.
- Buhalis, D., Leung, R., & Lin, M. (2023). Metaverse as a disruptive technology in tourism and hospitality. *International Journal of Tourism Research*, 25\*(2), 1–15.
- Charbonnier-Voirin, A., & Roussel, P. (2012). Adaptive performance: A new scale to measure individual performance in organizations. *Canadian Journal of Administrative Sciences*, 29\*(3), 280–293.
- Charbonnier-Voirin, A., & Roussel, P. (2012). Adaptive performance: A new scale to measure individual performance in organizations. *Canadian Journal of Administrative Sciences*, 29\*(3), 280–293.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 4\*, 19–43.
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 19–43.
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4\*, 19–43.
- Dover, P. A. (2016). The impact of job knowledge on organizational performance. *Journal of Workplace Learning*, 28\*(5), 276–289.
- Dover, P. A. (2016). The impact of job knowledge on organizational performance. *Journal of Workplace Learning*, 28\*(5), 276–289.

- Ekmeil, F. A. R., Abumandil, M. S. S., Alkhawaja, M. I., Siam, I. M., & Alaklouk, S. A. A. (2021). Augmented reality and virtual reality revolutionize business transformation in digital marketing tech industry analysts and visionaries during Coronavirus (COVID-19). *Journal of Physics: Conference Series*, 1860(1), 012012.
- Eneizan, B., Obaid, T., Abumandil, M. S., Mahmoud, A. Y., Abu-Naser, S. S., Arif, K., & Abulehia, A. F. (2023). Acceptance of mobile banking in the era of COVID-19. In M. Al-Emran, K. Shaalan, & M. A. Al-Sharafi (Eds.), *International Conference on Information Systems and Intelligent Applications (ICISIA 2022)* (pp. 29–42). Springer.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362.
- Gagné, M., Deci, E. L., & Ryan, R. M. (2015). Self-determination theory applied to work motivation and organizational behavior. In M. Gagné (Ed.), *The Oxford handbook of work engagement, motivation, and self-determination theory* (pp. 97–118). Oxford University Press.
- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2019). Smart tourism: Foundations and developments. *Electronic Markets*, 29(3), 407–422.
- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2019). Smart tourism: Foundations and developments. *Electronic Markets*, 29(3), 407–422.
- [7\]\(https://doi.org/10.1007/s12525-019-00375-7\)](https://doi.org/10.1007/s12525-019-00375-7)
- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2019). Smart tourism: Foundations and developments. *Electronic Markets*, 29(3), 407–422.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Hair, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121.
- Judge, T. A., Weiss, H. M., Kammeyer-Mueller, J. D., & Hulin, C. L. (2021). Job attitudes, job satisfaction, and job affect: A century of continuity and change. *Journal of Applied Psychology*, 106(2), 163–189.
- Laelawati, K., & Yulianah, Y. (2025). Managing Employees in the Digital Era: Adaptation Strategies and Competency Development. *Jurnal Ilmiah Multidisiplin Indonesia (JIM-ID)*, 4(10), 1356-1365.
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ). *Journal of Applied Psychology*, 91(6), 1321–1339.
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321–1339.

Obaid, T., Abu-Naser, S. S., Abumandil, M. S., Mahmoud, A. Y., & Ali, A. A. A. (2023). Age and gender classification from retinal fundus using deep learning. In *The International Conference of Advanced Computing and Informatics* (pp. 171–180). Springer, Cham.

Obaid, T., Eneizan, B., Abumandil, M. S., Mahmoud, A. Y., Abu-Naser, S. S., & Ali, A. A. A. (2023). Factors affecting students' adoption of e-learning systems during COVID-19 pandemic: A structural equation modeling approach. In M. Al-Emran, K. Shaalan, & M. A. Al-Sharafi (Eds.), *International Conference on Information Systems and Intelligent Applications (ICISIA 2022)* (pp. 227–242). Springer.

Osabiya, B. J. (2015). The effect of employees' motivation on organizational performance. *Journal of Public Administration and Policy Research*, 7\*(4), 62–75.

Page, N. (2008). Human resources management and organizational behavior. *International Journal of Human Resource Studies*, 2\*(1), 45–57.

Park, S., & Kim, E. J. (2024). Employee adaptability and digital transformation in service industries. *Service Industries Journal*, 44\*(2), 145–163.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40\*(3), 879–891.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing mediation effects. *Behavior Research Methods*, 40\*(3), 879–891.

Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85(4), 612–624.

Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85\*(4), 612–624.

Rahman, M. K., Hossain, M., & Islam, M. A. (2023). Smart tourism technologies and employee adaptability in hospitality organizations. *Tourism Review*, 78\*(4), 1012–1028.

Rahman, M. K., Hossain, M., & Islam, M. A. (2023). Smart tourism technologies and employee adaptability in hospitality organizations. *Tourism Review*, 78(4), 1012–1028.

Rahman, M. K., Hossain, M., & Islam, M. A. (2023). Smart tourism technologies and employee adaptability in hospitality organizations. *Tourism Review*, 78\*(4), 1012–1028.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55\*(1), 68–78.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in knowledge, development, and wellness\**. Guilford Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness\**. Guilford Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness\**. Guilford Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness\**. Guilford Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness\**. Guilford Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness\**. Guilford Press.

Sharif, Z. M., Abumandil, M. S., & Obaid, T. F. (2018). Centralization and complexity moderating the relationship between information quality and decision-making effectiveness: A study of banks in Palestine. *AIP Conference Proceedings*, 2016(1), 020084.

Siam, I., Abumandil, M., Jafri, A. R., & Alshuaibi, M. (2022). A systematic review on human capital investment: The context of Jordan. *ECS Transactions*, 107(1), 11029–11038.

Sousa, M. J., & Rocha, Á. (2022). Digital learning and knowledge management in organizations. *Future Business Journal*, 8\*(1), 1–14.

Sousa, M. J., & Rocha, Á. (2022). Digital learning and knowledge management in organizations. *Future Business Journal*, 8\*(1), 1–14.

sPark, S., & Kim, E. J. (2024). Employee adaptability and digital transformation in service industries. *Service Industries Journal*, 44(2), 145–163. <https://doi.org/10.1080/02642069.2023.2267812>

Spector, P. E. (2022). *Job satisfaction: Application, assessment, causes, and consequences\** (2nd ed.). SAGE Publications.

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122\*, 889–901.

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122\*, 889–901.

Yadegaridehkordi, E., Nilashi, M., Nasir, M. H. N. B. M., & Ibrahim, O. (2018). Predicting determinants of hotel success and development using structural equation modelling. *Journal of Hospitality and Tourism Technology*, 9\*(1), 124–143.

Yadegaridehkordi, E., Nilashi, M., Nasir, M. H. N. B. M., & Ibrahim, O. (2018). Predicting determinants of hotel success and development using structural equation modelling. *Journal of Hospitality and Tourism Technology*, 9\*(1), 124–143.

Younus, A. M., Abumandil, M. S., Gangwar, V. P., & Gupta, S. K. (2022). AI-based smart education system for a smart city using an improved self-adaptive leap-frogging algorithm. In *AI-Centric Smart City Ecosystems* (pp. 231–245). CRC Press.

Younus, A. M., Tarazi, R., Younis, H., & Abumandil, M. (2022). The role of behavioural intentions in implementation of bitcoin digital currency factors in terms of usage and acceptance in New Zealand: Cyber security and social influence. *ECS Transactions*, 107(1), 10847–10856.

Zhang, Y., Li, X., & Chen, J. (2023). Digital competence and employee adaptability in technology-intensive industries. *Technological Forecasting and Social Change*, 187, 122134.

Zhang, Y., Li, X., & Chen, J. (2023). Digital competence and employee adaptability in technology-intensive industries. *Technological Forecasting and Social Change*, 187\*, 122134.

Zhang, Y., Li, X., & Chen, J. (2023). Digital competence and employee adaptability in technology-intensive industries. *Technological Forecasting and Social Change*, 187\*, 122134.

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