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Creativity as a Mediator between Emotional Intelligence and Innovation

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Abstract
This study explores how emotional intelligence (EI) impact innovation through creativity in Malaysia's multigenerational workforce. Using survey data from 132 financial sector employees in Kuala Lumpur, the research found that only the Use of Emotions (UOE) dimension fully mediated the relationship between EI and innovation through creativity. Employing SPSS with SmartPLS tool other EI dimensions, such as Self-Emotional Appraisal (SEA), Regulation of Emotion (ROE), and Others' Emotions Appraisal (OEA), showed no significant effects. These findings highlight UOE's critical role in fostering innovation, offering valuable insights for HR practices. Future research could examine organizational culture and leadership influences.

Keywords: Emotional Intelligence; Multigenerational Workforce; Creativity;Innovation

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1.0 Introduction

A report by the World Health Organization (2024) highlights that global life expectancy increased from 66.8 years in 2000 to 73.4 years in 2020. Similarly, the Department of Statistics Malaysia (2020) noted a 2.8% decline in live births in 2019. With rising life expectancy, organizations face a shift toward multigenerational workforces, necessitating changes in policies to address diverse beliefs, attitudes, and work styles. According to Harvard Business Review (2014), workplace productivity is influenced by employers' ability to create supportive environments. Generational differences can lead to workplace conflicts, impacting productivity, emphasizing the need for fostering creativity and innovation.

In Malaysia, the multigenerational workforce presents unique challenges. Despite growing recognition of emotional intelligence (EI) in driving creativity and innovation, research on dimensional impact of EI within Malaysia's workforce remains limited. Previous studies (Wang et al., 2013) explore the relationship between EI, creativity, and innovation but observe specific dimensions. This study bridges this gap by examining the effects of EI dimensions—self-emotional appraisal (SEA), regulation of emotions (ROE), use of emotions (UOE), and others' emotions appraisal (OEA)—on creativity and innovation, with age as a moderating factor. Findings aim to guide organizations in enhancing innovation, and overall performance, offering valuable insights for recruitment and training practices to boost competitiveness.

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2.0 Literature Review

Previous research established a positive relationship between self-emotional appraisal (SEA) and employee creativity (Ding et al., 2022; Tsai & Lee, 2014). Employees with higher SEA levels tend to exhibit greater creativity (Wang et al., 2021). Wong and Law (2002) defined SEA sub-dimension as the ability of employees to understand and naturally express their emotions, encapsulated in the statement: "I always know clearly about the reasons for some of my specific feelings." Tsai and Lee's (2014) findings further confirmed that employees with high SEA and emotional awareness demonstrate enhanced creativity. Based on this, the following hypothesis was developed.

H1: Creativity mediates the relationship between the SEA and Innovation

Research has indicated a positive relationship between the use of emotions (UOE) and employee creativity (Park et al., 2015). Tsai and Lee (2014) found that employees who effectively manage relationships and demonstrate high UOE tend to exhibit greater creativity. Additionally, Park et al. (2015) revealed that emotion regulation enhances employees' ability to facilitate positive emotions, which they can harness to boost their creativity. According to Wong and Law (2002), the UOE sub-dimension involves an employee's ability to leverage their emotions to enhance performance and energy. Based on these findings, the following hypothesis was developed.

H2: Creativity mediates the relationship between the UOE and Innovation

Research indicates that the regulation of emotions (ROE) is positively linked to employee creativity (Toscano et al., 2023). Toscano et al. (2023) found that emotional regulation, or the ability to manage one's emotions effectively, correlates with employees' creative styles and innovative behaviors. Similarly, Sandro et al. (2023) demonstrated that employees with strong emotion management skills are more likely to exhibit creativity and innovation. A key sub-component of ROE is optimism; employees with strong self-regulation tend to remain positive and resilient, even under pressure. Mishra et al. (2016) further established that optimism significantly contributes to positive employee outcomes. Accordingly, the following hypothesis was developed.

H3: Creativity mediates the relationship between the ROE and Innovation

Past studies have shown that other emotional appraisal (OEA) is positively associated with employee creativity (Serrat and Serrat, (2017; Tsai and Lee, 2014). The 'appraisal of others' emotions' sub-dimension refers to employees' ability to recognize other employees' emotions and empathize with them. To to better understand other emotional appraisals is 'I can always infer my friends' emotions from their words and behavior.' As highlighted by Serrat and Seerat, (2023), employees with higher levels of social awareness will willingly help, provide positive criticism, and make excellent mentors. Therefore, those who are socially conscious are said to be characteristically able to recognize the needs and expectations of others (Maheshwaran et al., 2018). The results of a study by Tsai and Lee (2014) specifically revealed that employees with higher levels of others' emotional appraisal ability also show higher levels of creativity. The following hypothesis was developed.

H4: Creativity mediates the relationship between the OEA and Innovation

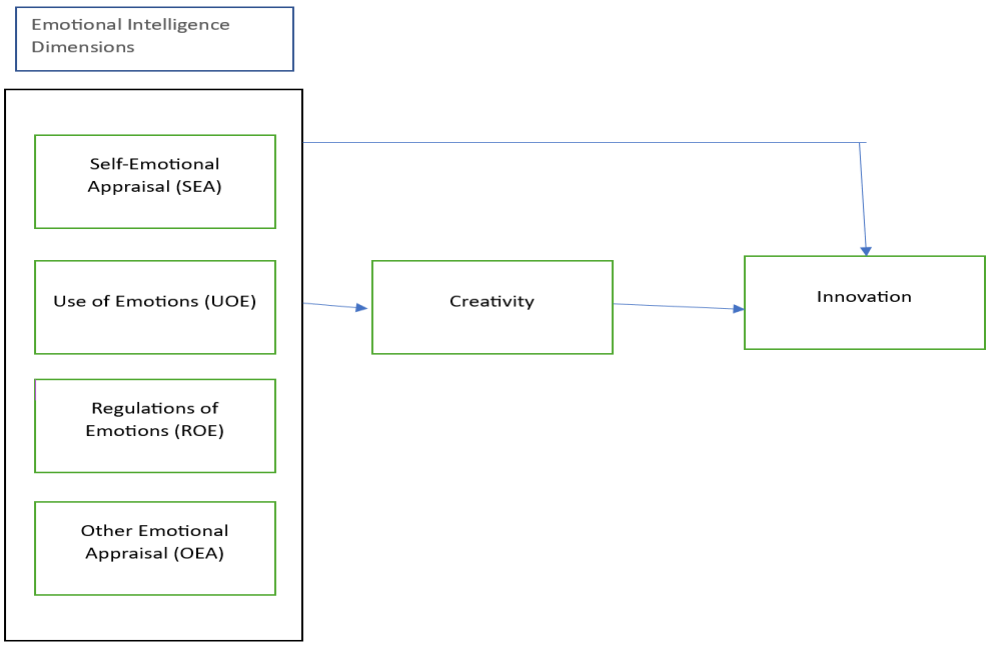

Figure 1: Research Framework

3.0 Research Methodology

This study investigate the relationships depicted in Figure 1 by examining interactions between independent and dependent variables. The target population consisted of multigenerational employees in financial sectorin Kuala Lumpur. A survey method was employed, following the approach used by Kin, Liang, and Shgam (2022), with self-administered questionnaires utilizing a Likert scale. Questions on EI dimensions were adapted from the Wong and Law Emotional Intelligence Scale (WLEIS) developed by Wong and Law (2002), covering four EI dimensions. Creativity items were adapted from Lussier et al. (2017), while innovativeness items were drawn from Hurt et al. (1977) and Pallister & Foxall (1998).

Kline (2016) suggested that a sample size of 100–200 is appropriate for analyzing structural equation models, so this study targeted 100–200 respondents, ultimately including 132 participants through convenience sampling. Data analysis was conducted using SPSS and SmartPLS, with rigorous testing of validity, reliability, multicollinearity, correlation coefficients, and moderation in accordance with established research standards (Hair et al., 2021).

4.0 Findings

4.1 Demographic

Among the respondents, the largest age group was 41–50 years, comprising 53 individuals (40.1%). This was followed by the 31–40 age group, with 49 respondents (37.1%). Another 23 respondents (17.4%) were under 30 years old, while the smallest group consisted of individuals aged 51–60, with 7 respondents (5.4%).

4.2 Internal Consistency Reliability

Table 1 demonstrates the Internal Consistency Reliability test results. The acceptable value for acceptable for Internal Consistency Reliability test must be higher than 0.7 (Garson, 2016; The results in Table 1 show that Cronbach's alpha, Composite reliability (rho_a), and Composite reliability (rho_c) of all the variables are above the cut-off value of 0.7 and therefore reliability of data is established.

Table 1: Internal Consistency Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Creative	0.942	0.942	0.958
Innovative	0.928	0.935	0.938
OEA	0.840	0.870	0.891
ROE	0.922	0.987	0.942
SEA	0.879	0.918	0.917
UOE	0.914	0.918	0.939

4.3 Convergent Validity

The statistical requirement for an ideal threshold of average variance extracted (AVE) should be more than 0.50, which simply means, the latent construct explains no less than 50 percent of variances of the observed indicators (Hair et al., 2021). Table 2 shows the convergent validity results for all the variables. is above the threshold value of 0.5.

Table 2: Convergent Validity

	Average variance extracted (AVE)
Creative	0.851
Innovative	0.582
OEA	0.673
ROE	0.802
SEA	0.734
UOE	0.795

4.4 Discriminant Validity

This was to ensure that the construct was empirically distinct from the other constructs in the study. (Hair et al., 2021). The discriminant validity test can tested based on Heterotrait-monotrait ratio (HTMT). The HTMT is an improved criterion for establishing discriminant validity (Henseler et al., 2015). The acceptable value for HTMT results should be at a threshold of 0.9 or below. As shown in Table 3, all the values are below 0.9..

Table 3: Heterotrait-Monotrait Ratio (HTMT) Matrix

	Creative	Innovative	OEA	ROE	SEA	UOE
Creative						
Innovative	0.870					
OEA	0.502	0.433				
ROE	0.505	0.604	0.446			
SEA	0.615	0.605	0.617	0.652		
UOE	0.777	0.754	0.463	0.572	0.747	

4.5 Correlation Coefficient

Bootstrapping was done using 5000 sub-samples to test the significance of the path coefficients. In cases where the coefficient is a positive number, the variables are directly related. Statistically, T-values should be more than 1.960, and P-value results should be less than 0.05, to fulfill the intended significant relationship (Hair et al., 2021).

Table 4: Correlation Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Creative -> Innovative	0.641	0.661	0.093	6.918	0.000
OEA -> Creative	0.155	0.160	0.103	1.503	0.133
OEA -> Innovative	-0.038	-0.030	0.070	0.547	0.585
ROE -> Creative	0.104	0.119	0.103	1.012	0.311
ROE -> Innovative	0.188	0.177	0.090	2.075	0.038
SEA -> Creative	0.041	0.012	0.169	0.241	0.810
SEA -> Innovative	0.003	0.021	0.104	0.026	0.979
FUOE -> Creative	0.574	0.582	0.139	4.136	0.000
UOE -> Innovative	0.149	0.112	0.127	1.175	0.240

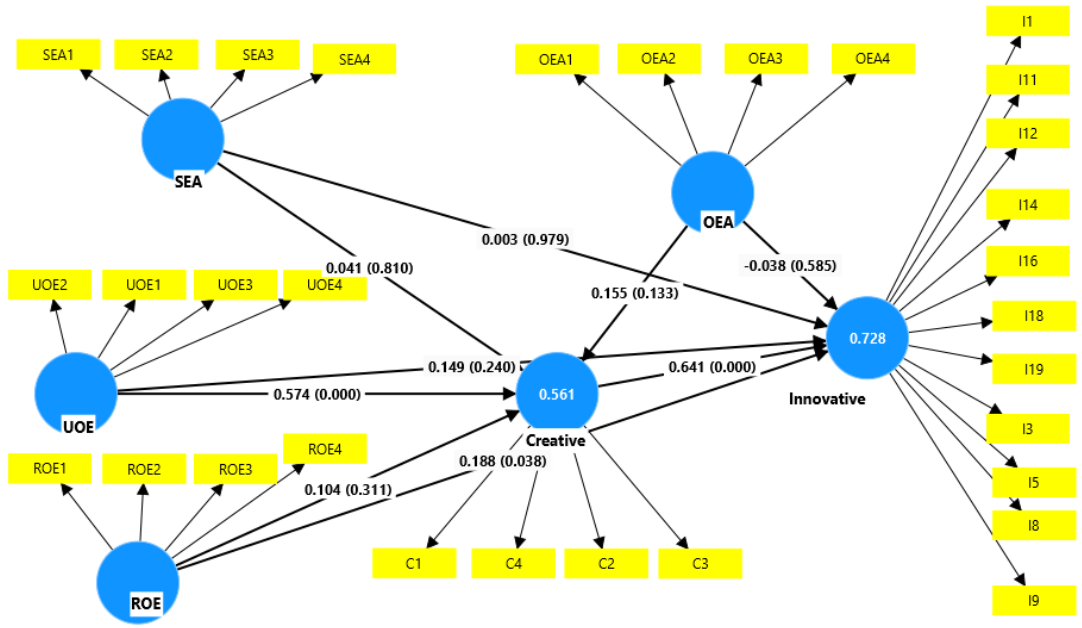

Figure 2: Diagram after Bootstrapping

Table 6 :Specific Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
OEA -> Creative -> Innovative	0.099	0.106	0.070	1.411	0.158
ROE -> Creative -> Innovative	0.067	0.079	0.069	0.962	0.336

SEA -> Creative -> Innovative	0.026	0.003	0.113	0.231	0.817
UOE -> Creative -> Innovative	0.368	0.389	0.124	2.963	0.003

4.6 Mediation test

Figure 2 shows diagram after boostrapping. This model highlights the significant role of UOE in fostering innovation via creativity.

H1: Creativity mediates the relationship between the SEA and Innovation.

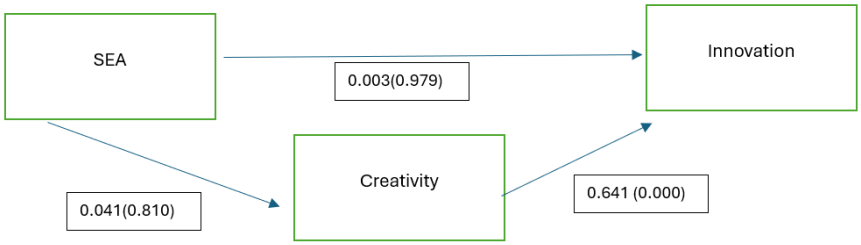

Figure 3: Mediation for H1

In H1, the p-value from the independent variable (IV) to the dependent variable (DV) is not significant, and the p-value from the IV to the mediator is also not significant, there is no mediation.

1. Non-significant IV to Mediator Path: For mediation to occur, the IV must significantly influence the mediator. If this path is not significant, it means the IV does not affect the mediator, which is essential for establishing mediation.
2. Non-significant Direct Effect (IV to DV): If the direct effect from the IV to the DV is not significant, it suggests that the IV does not have a direct impact on the DV.
3. Significant Mediator to DV Path: While the mediator significantly affects the DV, this alone does not establish mediation if the IV does not significantly affect the mediator.

In summary, without a significant path from the IV to the mediator and a significant direct effect from the IV to the DV, mediation cannot be established. The relationship between the IV and DV is neither direct nor mediated in this case.

H2: Creativity mediates the relationship between the UOE and Innovation

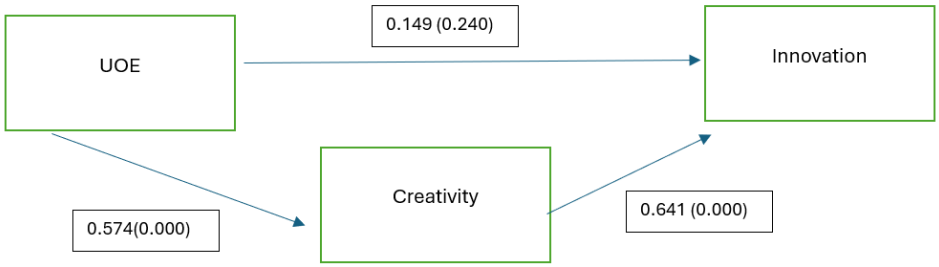

Figure 4: Mediation for H2

In H2 the p-value from the independent variable (IV) to the dependent variable (DV) is not significant, but the p-values for the paths from the IV to the mediator and from the mediator to the DV are both significant, this suggests **full mediation**. Here's why:

1. Significant IV to Mediator Path: The IV significantly influences the mediator, indicating that the IV has an effect on the mediator.
2. Significant Mediator to DV Path: The mediator significantly influences the DV, showing that the mediator has an effect on the DV.
3. Non-significant Direct Effect (IV to DV): The non-significant direct effect from the IV to the DV suggests that the IV does not have a direct impact on the DV when the mediator is included in the model.

In this case, the mediator fully explains the relationship between the IV and the DV. The IV affects the DV only through the mediator, which is why the direct effect is not significant.

This type of mediation is called **full mediation** because the entire effect of the IV on the DV is transmitted through the mediator.

H3: Creativity mediates the relationship between the ROE and Innovation

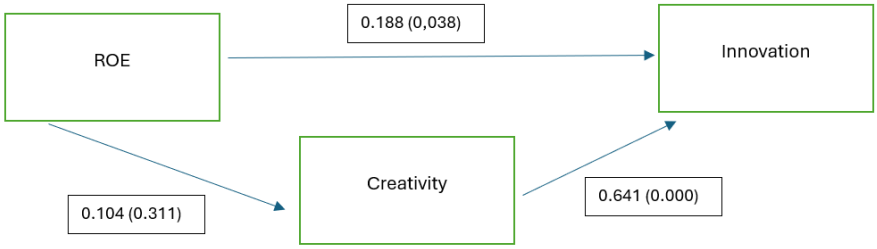

Figure 5: Mediation for H3

In the scenario where the p-value from the independent variable (IV) to the dependent variable (DV) is significant, but the p-value from the IV to the mediator is not significant, there is still **no mediation**. Here's a breakdown:

1. Non-significant IV to Mediator Path: For mediation to occur, the IV must significantly influence the mediator. If this path is not significant, it means the IV does not affect the mediator, which is essential for establishing mediation.
2. Significant Direct Effect (IV to DV): The significant direct effect from the IV to the DV indicates that the IV has a direct impact on the DV.
3. Significant Mediator to DV Path: While the mediator significantly affects the DV, this alone does not establish mediation if the IV does not significantly affect the mediator.

In summary, without a significant path from the IV to the mediator, mediation cannot be established. The significant direct effect suggests that the relationship between the IV and DV is direct rather than mediated.

H4: Creativity mediates the relationship between the OEA and Innovation

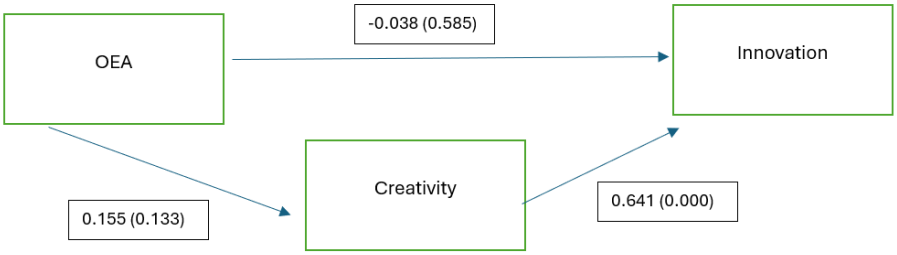

Figure 6: Mediation for H4

In the scenario where the p-value from the independent variable (IV) to the dependent variable (DV) is significant, but the p-value from the IV to the mediator is not significant, there is still **no mediation**. Here's a breakdown:

1. Non-significant IV to Mediator Path: For mediation to occur, the IV must significantly influence the mediator. If this path is not significant, it means the IV does not affect the mediator, which is essential for establishing mediation.
2. Significant Direct Effect (IV to DV): The significant direct effect from the IV to the DV indicates that the IV has a direct impact on the DV.
3. Significant Mediator to DV Path: While the mediator significantly affects the DV, this alone does not establish mediation if the IV does not significantly affect the mediator.

In summary, without a significant path from the IV to the mediator, mediation cannot be established. The significant direct effect suggests that the relationship between the IV and DV is direct rather than mediated.

5.0 Discussion

The first hypothesis examined whether creativity mediates the relationship between the Self-Emotional Appraisal (SEA) dimension of Emotional Intelligence (EI) and innovation. The results indicate that this hypothesis was not supported, suggesting that creativity does not act as a mediating factor in the relationship between SEA and innovation. This finding contrasts with prior research that has highlighted the role of SEA in fostering creativity, which in turn is often linked to innovation (Ding et al., 2022; Tsai & Lee, 2014).

One possible explanation for the lack of mediation could be that while SEA enables individuals to understand and manage their emotions, this understanding alone may not directly translate into innovative outcomes through creativity. Other factors, such as organizational support, team dynamics, or external environmental influences, may play a more significant role in linking SEA to

innovation. Additionally, it is possible that the specific workplace context or cultural factors within Malaysia's financial sector might have influenced the relationship.

The second hypothesis explored whether creativity fully mediates the relationship between the Use of Emotions (UOE) dimension of Emotional Intelligence (EI) and innovation. The findings supported this hypothesis, revealing a full mediation effect of creativity in the UOE-innovation relationship. This suggests that individuals who effectively use their emotions to guide actions and maintain vitality are more likely to exhibit innovative behaviors, with creativity acting as the critical mechanism linking UOE to innovation.

These results align with prior research emphasizing the role of UOE in fostering creativity and innovation (Tsai & Lee, 2014; Park et al., 2015). UOE enables employees to channel their emotions into productive outcomes, enhancing their ability to think creatively and generate novel ideas. Through creativity, these ideas are further transformed into innovative behaviors and solutions, demonstrating the importance of UOE in driving innovation via a creative process.

The findings also highlight the potential for organizations to focus on developing employees' UOE abilities as part of their emotional intelligence training programs.

The third hypothesis sought to determine whether creativity mediates the relationship between the Regulation of Emotions (ROE) dimension of Emotional Intelligence (EI) and innovation. The findings indicated that this hypothesis was not supported, showing no mediation effect of creativity in the ROE-innovation relationship. This result suggests that while ROE plays a role in managing emotions effectively, this ability does not necessarily translate into innovative outcomes through creativity.

These findings diverge from previous studies that have highlighted ROE's potential to foster positive emotional states conducive to creativity and innovation (Toscano et al., 2023; Sandro et al., 2023). One possible explanation is that while ROE helps employees maintain emotional stability and resilience under pressure, it may not directly stimulate the cognitive processes required for creative ideation, which serves as a precursor to innovation. External factors, such as organizational culture, leadership styles, or the availability of resources, may have a stronger influence in this context.

The fourth hypothesis aimed to examine whether creativity mediates the relationship between the Others' Emotions Appraisal (OEA) dimension of Emotional Intelligence (EI) and innovation. The results indicated that this hypothesis was not supported, showing no mediation effect of creativity in the OEA-innovation relationship. This suggests that while the ability to recognize and understand others' emotions is a key component of EI, it does not directly foster innovation through creativity.

This finding contrasts with previous studies suggesting that OEA can enhance interpersonal dynamics and collaboration, which are often precursors (Wong & Law, 2002; Sandro et al., 2023). A possible explanation for the lack of mediation is that while OEA improves social understanding and emotional connections, these skills may not necessarily stimulate the cognitive processes required for creativity or the subsequent translation of creative ideas into innovative practices. Instead, OEA may influence innovation through pathways such as teamwork, conflict resolution, or relationship-building, which were not the focus of this study.

6.0 Conclusion and Recommendation

This study examined the mediating role of creativity in the relationship between EI dimensions and innovation, revealing mixed outcomes. While creativity fully mediated the relationship UOE and innovation, no mediation effect was observed for SEA, ROE, and OEA. These findings underscore the importance of UOE in driving innovation through creativity while highlighting the complex interplay of EI dimensions with innovation. Previous studies may have been conducted in different cultural or organizational settings where emotional intelligence dimensions like SEA, ROE, and OEA had stronger relationships with creativity and innovation. For instance, in collectivist cultures, interpersonal dynamics and social harmony (linked to OEA) may play a more significant role in fostering innovation. In contrast, Malaysia's specific cultural or organizational context may emphasize other factors, such as leadership styles or external influences, over individual emotional competencies. Future research should explore alternative pathways and contextual factors, such as organizational culture and leadership, to better understand how different EI dimensions influence innovation. However, this study did not address certain dimensions of EI, such as social and spiritual intelligence. Future research should explore these dimensions within other EI models. Additionally, mediators like employee engagement could be included to provide a more comprehensive understanding.

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Paper Contribution to Related Field of Study

The findings of this study provide key recommendations for organizations to improve their recruitment, selection, and employee development processes, with a focus on fostering creativity and enhancing emotional intelligence (EI).

References

Department of Statistics, Malaysia, (2020),www.dosm.gov.my/v1/index

Ding, H., Yu, E., & Li, Y. (2022). Exploring the relationship between core self-evaluation and employee innovative behavior: The role of emotional factors. *Journal of Psychology in Africa*, 32(5), 474-479.

Garson, G. D. (2016). *Partial Least Squares (PLS-SEM): 2016 Edition*. Statistical Associates Publishing, Asheboro.

Ghosh, K. (2020). Developing organizational creativity and innovation: Toward a model of self-leadership, employee creativity, creativity climate and workplace innovative orientation", *Management Research Review*, 38(11), 1126-1148. https://doi.org/10.1108/MRR-01-2014-0017

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM)*

Harvard Business Review (2014). Managing People from Five Generations https://hbr.org/2014/09/managing-people-from-5-generations

Henseler, J., Ringle, C.M. (2015). Criterion for assessing discriminant validity in variance-based SEM *Journal of the Academy of Marketing Science*, 43(1), 1-21.
Hurt, H. T., Joseph, K., & Cook, C. . (1977). Scales for the measurement of innovativeness. *Human Communication Research*, 4(1), 58–65

Keen, C. C., Liang, C. H., & Sham, R. (2022). The effectiveness of parcel lockers that affects the delivery options among online shoppers in Kuala Lumpur, Malaysia. International Journal of Logistics Systems and Management, 41(4),485-502

Lussier, B., Grégoire, Y., & Vachon, M. A. (2017). The role of humor usage on creativity, trust and performance in business relationships: An analysis of the salesperson-customer dyad. *Industrial Marketing Management*, *65*, 168-181. https://doi.org/10.1016/j.indmarman.2017.03.012

Maheshwaran, M. S., Soniya, K., & Krishnaraj, S. (2018). A Study on Emotional Quotient Among new Generation Employees. I*nternational Journal of Trend in Scientific Research and Development*. 6(2), 2456 - 6470

Mishra, U. S., Patnaik, S., & Mishra, B. B. (2016). Role of optimism on employee performance and job satisfaction. *Prabandhan: Indian journal of management*, 9(6), 354

Pallister, J. G., & Foxall, G. R. (1998). Psychometric Properties of Innovativeness. *Technovation*, *18(11)*, 663–675. https://doi.org/10.1016/S0166-4972(98)00070-4

Park, M. R., Seo, M. G., & Sherf, E. N. (2015). The role of emotional intelligence in maintaining and using affect for creativity. Journal of Applied Psychology, 100(3), 917

Sandro, P. (2023). Book Chapter, The Cambridge Handbook of Creativity and Emotions. 205-220. doi: 10.1017/9781009031240.014

Serrat, O., & Serrat, O. (2017). Understanding and developing emotional intelligence. *Tools, methods, and approaches to drive organizational performance*, 329-339.

Toscano, F., Giusino, D., Diana, R., & Rahimi Pordanjani, T. (2023). The Role of Emotional Regulation in the Relationship between Nurses' Creative Style and Innovation Behaviors: A Cross-Sectional Study. *Nursing Reports*, 13(2), 811-822.

Tsai, C. T., & Lee, Y. J. (2014). Emotional intelligence and employee creativity in travel agencies. *Current Issues in Tourism*, 17(10), 862-871.

Wang, P., Rode, J. C., Shi, K., Luo, Z., & Chen, W. (2013). A workgroup climate perspective on the relationships among transformational leadership, workgroup diversity, and employee creativity. *Group & Organization Management*, 38(3), 334-360.

Wang, Z., Bu, X., & Cai, S. (2021). Core self-evaluation, individual intellectual capital and employee creativity. *Current Psychology*, 40, 1203-1217.

Woods, S.A., Mustafa, (2018). Innovative work behavior and personality traits *Journal of Managerial Psychology*, 33(1), 29-42. https://doi.org/10.1108/JMP-01-2017

World Health Organization (2024). GHE: Life expectancy and healthy life expectancy. https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-life-expectancy-and-healthy-life-expectancy