



THE IMPORTANCE-PERFORMANCE MAP ANALYSIS OF PERFORMANCE-BASED PAY MANAGEMENT AND PROCEDURAL JUSTICE IN MALAYSIAN GOVERNMENT-LINKED COMPANY

Mohd Ridwan Abd Razak^{a,b*}, Enah Ali^c, and
Subramaniam Kolandan^{a,d}

^a*Department of Business Management and Entrepreneurship, Sultan Idris Education University, Malaysia. (Email: mridwan@fpe.upsi.edu.my, subramaniam@fpe.upsi.edu.my)*

^c*Education Policy Planning and Research Division, Ministry of Education, Putrajaya, Malaysia. (Email: enah.ali@moe.gov.my)*

ABSTRACT

Performance-based pay management (PBPM) is a strategic approach in human resource management to achieve organizational sustainability in a competitive business landscape. This research aimed at assessing the relationship between PBPM's components (i.e. communication, participation, and performance evaluation) and procedural justice, and to evaluate the importance and performance of each element using Importance-Performance Map Analysis (IPMA). A cross-sectional approach was used to collect usable data through questionnaire survey on 400 employees from Malaysian Government-Linked Companies. SmartPLS software version 4 was used to analyze the survey data. Consistent PLS-SEM Bootstrapping analysis indicates three important findings. First, the relationship between communication and procedural justice was significant. Second, the relationship between participation and procedural justice was non-significant. Lastly, the relationship between performance appraisal and procedural justice was significant. Further, IPMA analysis indicates that performance evaluation is the most critical and well-executed component, followed by communication, and participation. This study provides empirical evidence on the importance of effective communication, participation, and systematic performance evaluation in managing performance-based pay to enhance employee perception of procedural justice. The findings of this study contribute significant insights to the theory, research methodology,

*Corresponding author: mridwan@fpe.upsi.edu.my

practitioner, and social aspects of Performance-based Pay Management (PBPM).

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1. INTRODUCTION

Performance-based pay management (PBPM) is a strategic approach in human resource management that ties employee compensation directly to their performance (Ulfsdotter, Larsson, and Adolfsson, 2021). This system aims to align employees' incentives with organizational goals, thereby driving higher productivity, motivation, and overall performance (Kryscynski, Coff, and Campbell, 2021). PBPM includes various practices such as merit-based pay raises, bonuses, and other forms of performance-related compensation designed to reward employees who contribute most significantly to the organization's success (Sutrisno and Muslim, 2024). By directly linking pay to performance, organizations seek to create a more dynamic and responsive workforce that is motivated to achieve higher levels of efficiency and effectiveness.

Procedural justice refers to the perceived fairness of the processes used to make decisions within an organization. It encompasses the methods and practices through which outcomes are determined, ensuring that they are unbiased, consistent, transparent, and based on accurate information (Colquitt, Hill, and De Cremer, 2023). Procedural justice is crucial in fostering a sense of fairness among employees, which in turn can enhance their commitment, satisfaction, and trust in the organization (Pathardikar, Mishra, and Sahu, 2023). When employees believe that the procedures used to evaluate their performance and determine their compensation are fair, they are more likely to exhibit positive attitudes and behaviors, such as higher job satisfaction and organizational commitment.

The connection between PBPM and procedural justice is significant, as the effectiveness of performance-based pay systems (PBPS) largely depends on employees' perceptions of fairness in the procedures used to evaluate and determine the type and the amount of pay (Shah and Jabeen, 2021). When employees perceive the process

as just, they are more likely to accept the outcomes, even if they are not entirely favorable (Newman, Fast, and Harmon, 2020). This acceptance can lead to increased motivation and engagement, reinforcing the positive effects of PBPM. Conversely, if the processes are perceived as unfair, it can lead to dissatisfaction, reduced motivation, and even counterproductive work behaviors (De Clercq et al., 2021).

The recent literature on PBPM and procedural justice highlighted several challenges. In many organizations, the processes for determining employee pay are not always transparent or consistent, leading to perceptions of bias and unfairness (Ugarte and Rubery, 2021). Such issues can undermine the intended benefits of PBPM, resulting in decreased employee morale and productivity. Additionally, the complexity of accurately measuring performance in various job roles further complicates the implementation of fair pay management practices (Bajaj, 2021). For instance, subjective performance evaluations can be influenced by personal biases, while objective metrics may not fully capture the discrepancies of different job functions. Therefore, the objectives of this research are to assess the relationship between PBPM's components (i.e. communication, participation, and performance evaluation) and procedural justice, and to evaluate the importance and performance of each component using Importance-Performance Map Analysis (IPMA). This analytical approach will provide a comprehensive understanding of which components of PBPM are most critical to enhancing procedural justice and where improvements are needed.

This study is expected to contribute significantly to both theoretical and practical aspects of human resource management. Theoretically, it will enhance the understanding of how PBPM influences procedural justice and employee perceptions of fairness (Hardwicke et al., 2023). Practically, the findings will provide actionable insights for human resource practitioners and organizational leaders to design and implement more effective and fair performance-based pay systems (Park et al., 2021). By identifying the most important components of PBPM and evaluating employee performance, organizations can make targeted improvements that foster a more motivated and engaged workforce, ultimately leading to better organizational outcomes.

2. LITERATURE REVIEW

2.1 PERFORMANCE-BASED PAY MANAGEMENT

Performance-based pay management (PBPM) has gained significant prominence in recent years as organizations continuously seek innovative ways to align employee incentives with their overarching strategic goals. By linking pay directly to performance outcomes, this approach aims at motivating employees to reach higher levels of productivity and efficiency. According to Ulfsdotter et al. (2021), the fundamental premise of PBPM is that financial rewards are tied to actual employee performance. This situation can drive employees to perform better and contribute more effectively to organizational success.

However, the effectiveness of a PBPS extends beyond the mere provision of financial rewards. While financial rewards are a key component, the perceived fairness of the evaluation and compensation processes plays an equally, if not more, critical role. As Rasheed et al. (2020) highlighted, employees' perceptions of fairness significantly influence their motivation and overall job satisfaction. If employees believe that the processes for evaluating their performance and determining their rewards are biased or opaque, the motivational benefits of financial rewards can be substantially diminished.

For a PBPS to be truly successful, it must ensure that the criteria and processes for performance evaluation are transparent, consistent, and equitable. Employees need to understand how their performance is measured and how it directly impacts their compensation. This transparency helps build trust in the system and reassures employees that their efforts will be fairly recognized and rewarded (Brown et al., 2022). For instance, detailed performance metrics should be communicated clearly to all employees, along with regular feedback sessions to discuss their progress and areas for improvement. This level of clarity and openness can significantly enhance employees' perceptions of procedural justice (Ha and Moon, 2023).

Moreover, the evaluation process must be consistent across all levels of the organization to prevent any perceptions of favoritism or bias. Standardized evaluation criteria and regular calibration sessions among managers can help ensure that all employees are assessed on a level playing field. When employees see that everyone is held to the same standards, it fosters a sense of fairness and equity, which is

crucial for maintaining high levels of morale and motivation (Purandare and Kumar, 2021).

In addition to transparency and consistency, the perceived equity of the compensation process is also vital. Employees need to feel that their compensation reflects their performance accurately. This involves not only fair base pay but also equitable distribution of bonuses and other performance-related rewards. Organizations should regularly review their compensation policies to ensure that they remain competitive and fair, taking into account market trends and internal equity (Kang and Lee, 2021).

Understanding how these processes are perceived by employees is critical for enhancing organizational effectiveness. When employees feel that their hard work and contributions are fairly evaluated and rewarded, they are more likely to be engaged, motivated, and committed to their roles. This, in turn, can lead to higher levels of productivity, lower turnover rates, and a more positive organizational culture (Murtiningsih, 2020).

Although financial incentives are an important aspect of PBPM, their success hinges on the perceived fairness of the evaluation and compensation processes. By ensuring transparency, consistency, and equity in these processes, organizations can enhance employee motivation and satisfaction, ultimately leading to improved organizational performance.

2.2 COMMUNICATION

Effective communication is a very important aspect of PBPM as it ensures that employees understand the criteria, the processes, and the reasons for performance evaluation and pay decisions. Sahay and Kaur (2021) point out that clear communication helps employees know what is expected of them and how performance will be appraised. This is a vital understanding that aligns and connects employees with organizational objectives and creates a sense of ownership and responsibility.

Transparent communication implies the frequency with which employees are updated concerning the standards used during performance appraisal (Sahay and Kaur, 2021). Through detailed explanations of how performance is measured and how these measurements affect decisions regarding pay, it builds trust and

credibility for an organization (Amini and Kemal, 2021). This will enable the employee to understand what criteria affect his or her pay and hence regard the evaluation process as fair and unbiased.

Consistency in communication is also very important. Consistent messages from management indicate that the information being given out is reliable. Such a communication is free or less subject to perceived biases or favoritism that would mostly take place in case the provision of information is done consistently or sporadically. Frequent and consistent communication means that all employees receive the same information at the same time, therefore, understanding the performance evaluation process uniformly (Brown et al., 2022).

Besides, effective communication will promote a culture of feedback and continuous improvement. The organizations can encourage employees to ask questions, seek clarifications, and provide feedback by setting open channels of communication. Such a two-way communication process can help in identifying and overcoming any concerns the employees might have in relation to the evaluation process, ensuring procedural justice at the highest level possible (Milesi, 2022). The feedback sessions can also shed light on the requirements to make the performance-based pay system more efficient for the organization and the employees.

This communication can also be customized to suit the different nature of workers in the organization. Different workers have different levels of understanding and are familiar with the performance-based pay system (Ulfsdotter et al., 2021). By using a number of different communication channels and methodologies all employees, irrespective of their position or background, can be reached and understand the information (Deepa and Baral, 2022). This may be in the form of emails, newsletters, workshops, and one-to-one sessions.

Ultimately, performance-based pay management communication effectiveness lies not only in informing but also in an environment that assures the employees of being informed, valued, and involved. If evaluation processes in matters of compensation are made transparent and fair, employees will equate this to trust developed within the organization. Trust further translates into heightened motivation, job satisfaction, and hence overall performance. The end result is a harmonious workplace with increased productivity (Tse, 2023).

2.3 PARTICIPATION

The other pillar of effective pay management based on performance is participation in decision-making processes. This feature gives the employee a say in those matters that most affect his or her way of working and how he or she will be paid, increasing ownership, commitment, and fairness (Strine and Smith, 2020). According to Van et al. (2021), when employees are given opportunities to participate, it results in their feeling valued and respected, and hence builds satisfaction and engagement at work.

A significant and successful way that leads to this end is when employees are involved in setting performance goals. The employee gains a better understanding of what is expected of them through this collaboration with management in setting performance objectives (Salas-Vallina, Alegre, and López-Cabrales, 2021). This goal-setting, collaboratively set, assures realistic and achievable goals that are aligned with employee capability and organizational strategy (Van, 2020). This is because participation means employees will tend to agree more with the goals because they had a role in setting them.

Employee evaluation of performance outcomes enhances feelings of fairness and justice. Employees should be invited to contribute in setting of the criteria for appraising themselves and also getting an opportunity to provide feedback on their performance (Varma et al., 2020). This involvement helps to create a more transparent and objective appraisal process, thus reducing the opportunity for biases and misconceptions (Hardwicke and Wagenmakers, 2023). Those employees who are involved in such evaluations will view this as a fair means of appraisal since they get a chance to air their views and influence the results.

Furthermore, participative decision-making creates a culture of trust and teamwork within the organization (Silla, Gracia, and Peiró, 2020). Employees are more willing to place their trust in management and be loyal to an organization that takes into consideration and values their opinions. This creates trust and a supportive working environment under which staff feel at liberty and motivated to give their best.

Participation also has potential for generating better outcomes in decision-making. Those involved in doing the direct work may have better insights and perspectives which the management tends to

overlook. In this regard, participative decision-making through employee feedback and suggestions in the decision-making process would lead to more informed and effective decisions that are probable to develop higher performance and productivity in organizations (Galeazzo, Furlan, and Vinelli, 2021).

Thereby, employee participation in the decision-making process is an essential ingredient of pay management based on performance. This increases employees' feeling of ownership and fairness, their trust and collaboration, and eventually organizational results. Organizations can increase their level of procedural justice by encouraging a participative culture, thus creating a more motivated and engaged workforce.

2.4 PERFORMANCE EVALUATION

Performance evaluation is a critical component of performance-based pay management, involving the systematic assessment of employee performance against established criteria. This process is essential for ensuring that performance-based pay management is both effective and just. Accurate performance evaluations are foundational to the integrity of performance-based pay systems, as they provide the basis for determining compensation and other rewards (Jamaiudin, 2021).

Organizations should develop clear, objective, and relevant criteria to reflect the real duties and of the employees. The criteria should be developed from the strategic goals of the organization and differentiated across responsibilities roles and functions that are different from one organization to another (Wong, 2020). In this way, it would be possible to put in place a method by which evaluation could measure employee contributions and performance outcomes in a realistic way.

Likewise, there should be consistency in performance appraisals. Employees must be evaluated uniformly to avoid bias and ensure fair evaluations (Chan, 2024). This means that the same standards and criteria need to be applicable to each employee regardless of position or tenure. Regular training on how to apply such criteria fairly can maintain consistency among the managers and evaluators (Ibarra-Sáiz, Rodríguez-Gómez, and Boud, 2020). Moreover, such tools and evaluation processes standardized also could improve consistency and reliability.

Thus, performance evaluations are key determinants in making pay management performance-sensitive so that pay decisions mirror true employee performance. By underlining accuracy,

consistency, and transparency, fair appraisals will be held that support procedural justice and improve overall employee satisfaction and motivation.

2.5 PROCEDURAL JUSTICE

Procedural justice, anchoring the theory of organizational justice, is the fairness of processes by which decisions are made and resources are allocated in an organization (Rueda et al., 2024). Procedural justice, being practiced, emphasizes the fair methods and practices leading to these outcomes. As argued by the procedural justice theory, employees are more likely to accept and support the outcomes of decisions they perceive to have a fair procedural process, whether the outcome is favorable or unfavorable to the employees concerned (Newman et al., 2020). Such a perception is important in engendering employee trust, commitment, and positive work attitudes.

Key elements of procedural justice include consistency, bias suppression, accuracy, correctability, representativeness, and ethicality. Consistency implies that the rules and procedures applied are used equally on all subjects. Suppression of bias eliminates personal bias and prejudice in decision-making and ensures decisions are objective and made based on relevant criteria. The term accuracy means being based on good information with some amount of analysis, and correctability means the availability of a means to address the wrongs or injustices that are inevitably made in decision-making (Vosen, 2021). When employees feel there is procedural justice within organizations, they will have a high level of commitment to organizations, be satisfied with their jobs, and in a general way, perform at work. This is because the employees feel respected, esteemed, and appreciated, thereby being motivated to reciprocate with positive behaviors and attitudes at work.

Therefore, procedural justice is one of the dimensions of organizational justice with regard to the fairness of the processes used in reaching decisions. If consistency, bias, correctness, correctability, representativeness, and ethicality can be guaranteed with respect to fairness, then the view of the employees is bound to be affected, making it possible to have a more committed, satisfied, and hence productive workforce.

2.6 THE RELATIONSHIP BETWEEN COMMUNICATION AND PROCEDURAL JUSTICE

Procedural justice is greatly enhanced through effective communication, particularly in the context of performance-based pay management. Recent empirical studies tend to furnish the same with crucial support. For example, clear and open communication regarding criteria for performance appraisal and pay decisions significantly enhances perceived levels of procedural justice on part of employees themselves. The research has shown that when employees are aware of the process and criteria by which their performance will be reviewed, the processes tend to be seen as fair. Further, according to De Clercq and Pereira (2023), consistent and transparent communication helps to reduce uncertainty and ambiguity among employees. It enhances a sense of fairness and trust in organizational procedures. The study also uncovers that higher perceived procedural justice can be attained when employees are informed of all changes in the assessment procedures and changes in criteria constantly and in a timely manner. Also, Pichler, Beenen, and Wood (2020) highlight one critical factor, two-way communications; they believe that if employees can ask questions and respond to the performance appraisal, it would make them view it as being fair. This kind of engagement ensures that procedural justice becomes more prevalent for employees, and they feel their voices are heard and valued. The evidence from the empirical study thus gives weight to the importance of effective communication in fostering procedural justice for performance-based pay management. Clear, transparent, and two-way communication is reassuring and reduces uncertainty, as well as being aligned with key theoretical frameworks highlighting the importance of good communication to shape perceptions of fairness. Thus, it was hypothesized that:

H1: There is a significant relationship between communication and procedural justice.

2.7 THE RELATIONSHIP BETWEEN PARTICIPATION AND PROCEDURAL JUSTICE

Procedural justice is significantly influenced by participation in decision-making processes, especially when it comes to performance-based salary management. The association between employee engagement and perceptions of procedural justice is well supported by recent empirical research. Rasheed et al. (2020) found that employees'

opinion of fairness is greatly improved when they are involved in creating performance goals and reviewing outcomes. According to their research, workers who took part in these procedures were more likely to think that the performance-based pay structure was fair and just. Additional research by Govender and Bussin (2020) showed that employees' engagement and trust are increased when they participate in decision-making processes. The results of their study showed that employees become more engaged when they are given the opportunity to contribute to decisions that impact their job and pay. This is because they come to trust that organizational procedures are fair. Furthermore, the Porumbescu, Piotrowski, and Mabillard (2021) study clarified that participation lessens the impression of bias in performance reviews. Involving employees in the review process increases the likelihood that they will view the results as impartial and fair, which is essential for procedural fairness. Thus, in the context of performance-based pay management, the relationship between employee engagement and procedural justice is substantially supported by empirical evidence. Participation in decision-making processes improves feelings of empowerment, fairness, and trust which are critical for preserving procedural justice. Thus, it was hypothesized that:

H2: There is a significant relationship between participation and procedural justice.

2.8 THE RELATIONSHIP BETWEEN PERFORMANCE EVALUATION AND PROCEDURAL JUSTICE

An essential part of performance-based pay management is performance evaluation, which has a strong empirical background supporting its connection to procedural justice. Employee perceptions of procedural justice are greatly influenced by the efficacy and fairness of performance reviews. This, in turn, affects employees' motivation, job satisfaction, and general organizational commitment. According to a study by Tran, Lepistö, and Järvinen (2021), fair and accurate performance evaluation are essential to procedural justice. The study's findings indicate that employees are more likely to view the evaluation process as just and fair when it is founded on precise, objective criteria. Their belief in the organization's fairness and its management

techniques is strengthened by this perspective. Rubin and Edwards (2020) emphasize how crucial consistency is when assessing performance. According to their findings, appraisal procedures that are implemented consistently to every employee lessen the perception of bias and partiality. Procedural fairness requires that all employees believe they are being evaluated fairly, and this uniformity is crucial to achieving that goal. A study by Tran et al. (2021) found that employees' perceptions of procedural justice are greatly improved by open communication regarding the performance review process. According to the study, employees are more likely to believe in the process and think it is fair if they are aware of the evaluation criteria and how their performance will be evaluated. These results demonstrate that, in the context of performance-based pay management, empirical data clearly supports the link between procedural justice and performance appraisal. To sustain high levels of employee motivation and engagement, perceptions of fairness and trust must be fostered through accurate, open, and consistent performance evaluation. Thus, it was hypothesized that:

H3: There is a significant relationship between performance evaluation and procedural justice.

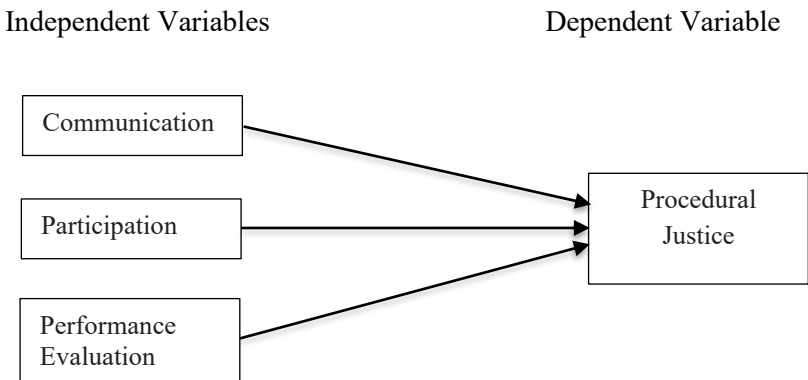
2.9 CONCEPTUAL FRAMEWORK

Figure 1 presents the conceptual framework of the study, which illustrates the relationship between the independent variables and the dependent variable. The framework is grounded in Procedural Justice Theory, which emphasizes employees' perceptions of fairness in organizational processes and decision-making. In this study, communication, participation, and performance evaluation are identified as the independent variables representing the components of Performance-Based Pay Management (PBPM), while procedural justice serves as the dependent variable.

The framework proposes that effective communication, employee participation, and fair performance evaluation practices positively influence employees' perceptions of procedural justice within Malaysian Government-Linked Companies (GLCs). Communication refers to the clarity and transparency of information related to PBPM practices. Participation reflects the extent to which employees are involved in decision-making processes concerning performance-based pay, whereas performance evaluation concerns the fairness and accuracy of assessing employees' work performance.

Furthermore, the framework supports the objective of this study, which is to examine the relationship between PBPM components and procedural justice, as well as to evaluate the importance and performance of each component using Importance-Performance Map Analysis (IPMA). The directional arrows in the framework indicate that each PBPM component is expected to contribute directly to procedural justice perceptions among employees.

FIGURE 1
Research Conceptual Framework



3. RESEARCH METHODOLOGY

3.1 RESEARCH APPROACH

This study employed a cross-sectional research approach which allows the researchers to integrate the PBPM literature and the actual survey to collect data for this study. According to Creswell (2015) and Sekaran and Bougie (2016), using this data collection procedure may help the researchers to gather accurate data, decrease bias and increase quality of data being collected. This study was conducted at Malaysian Government-Linked Companies. At the initial stage of this study, the questionnaire was developed based on the PBPM literature. Further, a

back-to-back translation technique was employed to translate the survey questionnaires. Thus, there are English and Malay versions in order to increase the validity and reliability of research findings (Creswell, 2015; Sekaran and Bougie, 2016).

3.2 MEASURES

The survey questionnaire used in this study consists of four components. First, communication has 11 items adapted from Azman, Mohd Sani, and Mohamad Mahmood (2014) and Marasi (2014). Second, participation has 10 items adapted from Milkovich et al. (2014). Third, performance evaluation has 13 items adapted from Thurston and McNall (2010). Finally, procedural justice has six items adopted from the Lambert et al. (2020). All these items were measured using a 7-item scale ranging from “strongly disagree/dissatisfied” (1) to “strongly agree/satisfied” (7).

3.3 SAMPLE

A convenient sampling technique was employed to collect 400 usable data from employees of the selected organization. This sampling technique was applied because the management of the organization had not given the list of registered employees to the researchers and this situation has prevented the researchers from utilizing a random technique in choosing respondents for this study. The participants gave their consent prior to answering the survey questions, and it was on a voluntary basis.

3.4 DATA ANALYSIS

SmartPLS software version 4 was used to assess the validity and reliability of the instrument and test the research hypotheses. The main advantage of using this method is because it may provide latent variable scores, avoid small sample size problems, estimate every complex model with many latent and manifest variables, hassle stringent assumptions about the distribution of variables and error terms, and handle both reflective and formative measurement models (Hair et al., 2017). The SmartPLS path model was employed to assess the path coefficients for the structural model using the standardized beta (β), t-statistics, and p-value. The value of R^2 was used as an indicator of the overall predictive strength of the model. The value of R^2 is interpreted as follows: 0.02 (weak), 0.13 (moderate), and 0.26 (substantial) (Cohen, 1988). Next, the Important-Performance Map

Analysis (IPMA) as suggested by Hair et al. (2017) was employed to ascertain the importance and performance of each component in PBPM toward enhancing the perception of procedural justice among employees in the studied organization.

4. RESEARCH FINDINGS AND DISCUSSION

4.1 RESPONDENT CHARACTERISTICS

The majority of the respondents are male, constituting 84.8% of the sample, while females make up 15.3%. Most respondents are married, accounting for 86.8%, while 13.3% are single. The majority of respondents work at branch offices (71.8%), followed by state offices (22.0%) and headquarters (6.3%). A large portion of the respondents (75.0%) have completed MCE/SPM, with smaller percentages holding higher educational qualifications. The age distribution is skewed toward the younger demographic, with nearly half (49.8%) of the respondents aged 25-34 years. The majority of respondents belong to the non-executive group, making up 77.2% of the sample, whereas the executive group comprises 22.8%.

4.2 CONVERGENT VALIDITY TEST

Table 1 presents the findings of convergent validity test. The construct communication has outer loadings ranging from 0.704 to 0.807, a Cronbach's alpha of 0.933, composite reliability of 0.934, and an average variance extracted (AVE) of 0.561. This indicates good internal consistency and acceptable convergent validity, as the AVE exceeds the 0.50 threshold. The participation construct shows outer loadings between 0.719 and 0.907, with a Cronbach's alpha of 0.953, composite reliability of 0.955, and an AVE of 0.670, reflecting high internal consistency and strong convergent validity. For performance evaluation, outer loadings range from 0.703 to 0.869, with a Cronbach's alpha of 0.961, composite reliability of 0.962, and an AVE of 0.655, indicating very high reliability and good convergent validity. Lastly, procedural justice exhibits outer loadings between 0.839 and 0.888, a Cronbach's alpha of 0.945, composite reliability of 0.945, and an AVE of 0.740, demonstrating excellent internal consistency and

convergent validity. These findings affirm that the constructs used in the study are both reliable and valid, ensuring the robustness of the measurement model.

TABLE 1
The Convergent Validity Test Findings

Constructs	Outer Loading	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Communication	0.704 – 0.807	0.933	0.934	0.561
Participation	0.719 – 0.907	0.953	0.955	0.670
Performance Evaluation	0.703 – 0.869	0.961	0.962	0.655
Procedural Justice	0.839 – 0.888	0.945	0.945	0.740

4.3 DISCRIMINANT VALIDITY TEST

Table 2 presents the findings of discriminant validity test. The Heterotrait-Monotrait ratio (HTMT) values indicate the ratio of between-construct correlations to within-construct correlations, providing a more stringent assessment of discriminant validity. The HTMT value between Communication and Participation is 0.780, between Communication and Performance Evaluation is 0.764, and between Communication and Procedural Justice is 0.712. The HTMT value between Participation and Performance Evaluation is 0.761, and between Participation and Procedural Justice is 0.663. Lastly, the HTMT value between Performance Evaluation and Procedural Justice is 0.769. To establish discriminant validity, HTMT values should be below the threshold of 0.90, and ideally below 0.85, as values above these thresholds suggest a lack of discriminant validity. In this analysis, all HTMT values are below the threshold of 0.90, indicating that discriminant validity is established for all constructs. This demonstrates that each construct is distinct and measures different aspects of the conceptual model, thus affirming the discriminant validity of the measurement model.

TABLE 2
The Discriminant Validity Test Findings

Constructs	Communi- cation	Participa- -tion	Performance Evaluation	Procedural Justice
Communication				
Participation	0.780			
Performance Evaluation	0.764	0.761		
Procedural Justice	0.712	0.663	0.769	

4.4 RESEARCH HYPOTHESES TESTING

TABLE 3
The Research Hypotheses Test Findings

Research Hypotheses	Beta (β)	T statistics	p value	R ²
H1: The relationship between communication and procedural justice	0.268	2.996	0.003	0.633
H2: The relationship between participation and procedural justice	0.061	0.665	0.506	
H3: The relationship between performance evaluation and procedural justice	0.521	6.568	0.000	

Table 3 presents the findings of the research hypotheses test. The inclusions of communication, participation, and performance evaluation in the analysis had explained 63.3 percent of the variance in procedural justice. This result indicates that the overall predictive strength of the model is substantial (Hair et al., 2017). The research hypotheses testing reveals three important findings. First, communication significantly associated with procedural justice ($\beta = 0.268$; $T = 2.996$). Thus, H1 is supported. Second, participation non-significantly associated with procedural justice ($T = 0.665$; $T = 0.506$). Thus, H2 is not supported. Lastly, performance evaluation

significantly associated with procedural justice ($\beta = 0.521$; $T = 6.568$). Thus, H3 is supported. These findings indicate that communication and performance evaluation significantly contribute to procedural justice, with performance evaluation having the strongest influence, while participation does not show a significant relationship with procedural justice in this studied organization.

4.5 IMPORTANT-PERFORMANCE MAP ANALYSIS

TABLE 4
The Important-Performance Map Analysis (IPMA) Findings

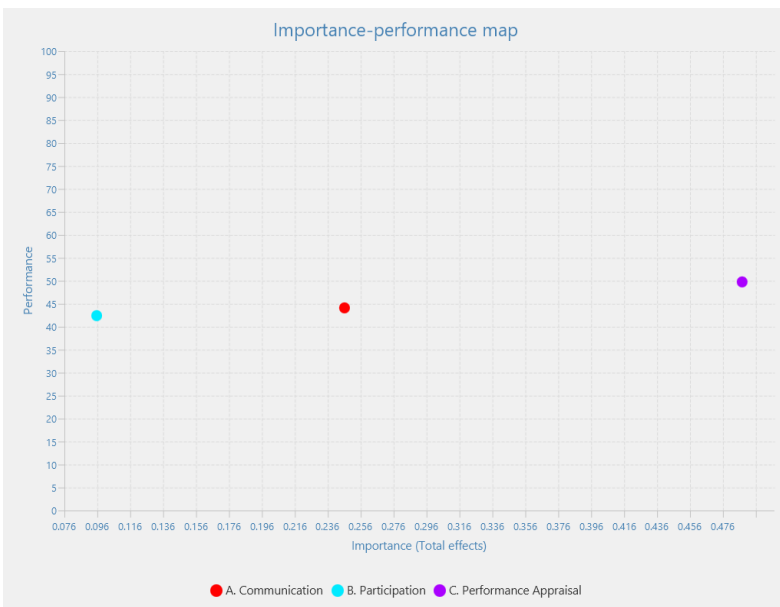


Table 4 presents the findings of the Important-Performance Map Analysis. The Important-Performance Map Analysis indicates that performance evaluation is the most critical factor for enhancing procedural justice, with the highest value of importance (0.476) and performance (50), suggesting it is both essential and well-executed. Communication holds moderate to high importance (0.256) with moderate performance (45), indicating it is crucial but needs substantial improvement. Conversely, Participation is the least important (0.116) and shows lower performance (43), suggesting it is less critical for procedural justice and is currently underperforming. These findings emphasize prioritizing improvements in

communication to enhance procedural justice, while performance evaluation remains a key strength.

5. CONCLUSION

This study investigated the relationship between key components of PBPM and procedural justice. It utilized the consistent PLS-SEM Bootstrapping and Importance-Performance Map Analysis procedure to achieve the research objectives. The findings revealed that communication and performance evaluation have a significant relationship with procedural justice. Therefore, communication and performance evaluation significantly enhance procedural justice, with performance evaluation having the strongest influence. In contrast, participation did not show a significant relationship with procedural justice. Additionally, the Importance-Performance Map Analysis highlighted performance evaluation as the most critical and well-executed component, followed by communication, and participation, which was the least critical and underperforming.

The results contribute to the theoretical understanding of procedural justice by highlighting the significant roles of communication and performance evaluation. This study underscores the necessity of integrating effective communication channels and robust performance evaluation systems to foster perceptions of fairness in organizational settings. Methodologically, the use of PLS-SEM provided a robust analytical framework to assess the relationships between PBPM components (communication, participation, and performance evaluation) and procedural justice. This approach allowed for a comprehensive examination of the direct effects and provided insights into the relative importance and performance of each component, which are crucial for both theoretical and practical advancements.

From a practical perspective, these findings suggest that organizations should prioritize enhancing the communication and performance evaluation processes to improve procedural justice. Effective communication facilitates transparency and trust, which are essential for fair treatment perceptions among employees. Meanwhile, performance evaluation systems that provide structured feedback, recognition, and developmental opportunities play a crucial role in reinforcing procedural justice. Organizations are encouraged to invest

in training and development programs that enhance managers' communication skills and improve the design and implementation of performance evaluation systems.

The study's findings have important social implications, particularly in promoting fair and equitable workplace practices. Enhancing procedural justice through effective communication and performance evaluation can lead to a more inclusive and just work environment, contributing to higher employee morale, job satisfaction, and overall organizational commitment. This, in turn, can reduce workplace conflicts and improve employee well-being, thereby fostering a positive organizational culture that values fairness and transparency. Such an environment is likely to attract and retain talent, further contributing to the organization's long-term success.

Despite its contributions, this study has several limitations. First, the research was conducted within a specific organizational context, which may limit the generalizability of the findings to other settings or industries. Second, the cross-sectional nature of the study does not allow for causal inferences to be made about the relationships between performance-based pay management components and procedural justice. Third, the reliance on self-reported data may introduce biases, such as social desirability bias, which could affect the accuracy of the findings. Future research should address these limitations to enhance the robustness and applicability of the results.

Future research should consider longitudinal studies to better understand the causal relationships between performance-based pay management components and procedural justice. Exploring these relationships across different organizational contexts and industries can provide more generalizable insights. It would also be beneficial to examine the role of other potential mediators and moderators, such as organizational culture or leadership styles, in the relationship between performance-based pay management and procedural justice. Further, employing mixed-method approaches, including qualitative data, could offer deeper insights into the underlying mechanisms and employee perceptions related to procedural justice.

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