

## **Interactive Use of Performance Measurement Systems, Career Development Opportunities, Job Challenge, and Job Satisfactions**

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### **ABSTRACT**

This paper's purpose is to analyze how interactive performance measurement systems (IPMS), career development opportunities, and job challenges can increase job satisfaction—using quantitative and qualitative research through questionnaire surveys and post-survey interviews on respondents' priorities for 69 low-level managers from the human resources, finance, and planning departments in various industries in Indonesian companies. As a result, increased IPMS, career development opportunities, and job challenges achieved job satisfaction. In addition, this paper still lacks a discussion on sustainable career development opportunities and job challenges for lower-level managers to subordinate employees in state-owned enterprises in management accounting practices.

### **ملخص**

الغرض من هذا المقال هو تحليل كيف يمكن لنظم قياس الأداء التفاعلية (IPMS) وفرص التطوير الوظيفي والتحديات الوظيفية أن تزيد من الرضا الوظيفي - باستخدام البحث الكمي والنوعي من خلال استطلاعات الاستبيان والمقابلات اللاحقة للمسح حول أولويات المجيبين لصالح 69 مديرا منخفض المستوى من إدارات الموارد البشرية والمالية والتخطيط في مختلف القطاعات في الشركات الإندونيسية. ونتيجة لذلك، تسجيل قيم مرتفعة على

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مستوى نظم قياس الأداء التفاعلية وفرص التطوير الوظيفي والتحديات الوظيفية يحقق الرضا الوظيفي. بالإضافة إلى ذلك، لا يزال هذا المقال يفتقر إلى نقاش حول فرص التطوير الوظيفي المستدام والتحديات الوظيفية للمديرين من المستوى الأدنى لإخضاع الموظفين في المؤسسات المملوكة للدولة في إطار ممارسات المحاسبة الإدارية.

### ABSTRAITE

L'objectif de cet article est d'analyser comment les systèmes interactifs de mesure des performances (IPMS), les opportunités de développement de carrière et les défis professionnels peuvent accroître la satisfaction au travail - en utilisant des recherches quantitatives et qualitatives utilisant des enquêtes par questionnaire et des entretiens post-enquête sur les priorités des répondants pour 69 cadres subalternes des départements des ressources humaines, des finances et de la planification dans divers secteurs d'activité dans des entreprises indonésiennes. En conséquence, l'augmentation de l'IPMS, des opportunités de développement de carrière et des défis professionnels a permis d'atteindre la satisfaction professionnelle. En outre, ce document n'aborde toujours pas la question des opportunités de développement de carrière durables et des défis professionnels pour les cadres subalternes des entreprises publiques dans le cadre des pratiques de comptabilité de gestion.

**Keywords:** Interactive use of performance measurement systems, Career development program, Job challenge, Job satisfaction

**JEL Classification:** M540

## 1. Introduction

The business world is changing very fast. The globalization of markets, the revolution in information and communication technology, the growing importance (and volatility) of financial markets, and the war for talent are just a few things that can drive the changing business climate of today's world. The challenge is to create new value in a constantly changing world. The global market and its pace of change have rapidly increased the demand for measurement systems in modern enterprises.

Thus, to create further opportunities, a shift is needed from the 'command and control' function (previously served by performance measurement systems) to the need to 'predict and prepare' the organization for the next challenge (Verweire and Lutgart, 2004). The focus of the organizational strategy is on the customer in determining the failure or success of the organization's financial performance, which ultimately impacts the performance measurement system (PMS) (Yuliansyah and Khan, 2015b). That makes the company's non-financial stakeholders (e.g., customers, suppliers, and workers) related to its capital structure decisions attract much attention from academics for further research and practitioners. As for the scarcity of empirical evidence regarding the effect of job satisfaction on firm leverage in emerging markets, the legal and financial systems are generally underdeveloped, and firms obtaining external financing depend on close relationships and reputation (Allen et al., 2005).

There is a view that the control system is only an obstacle to organizational learning, but it turns out to be much more complex than that. A Control system is a different means of control that has a role that gives rise to a conflict between a limiting system and a motivating system, as for the four levers of control in the organization. First, a "belief system" aims to encourage employees to seek new opportunities. The second is the "boundary system," to prevent them from seeking opportunities. Then the third is the "diagnostic control system," as a driver to achieve their goals and get rewarded for the success achieved; and finally, "interactive control systems," focusing on dialogue and the exchange of existing knowledge. Furthermore, the first three systems play a "traditional" role - conveying the organization's values, setting boundaries for actors in the organization, and assessing and rewarding or sanctioning individuals according to their performance. The fourth part is the interactive quality

that encourages organizational learning (Simons, 1991). Finally, top managers use interactive control systems to find new solutions. It started with active dialogue among middle management decision-makers that provoked the formation of a new strategy (Batac and Carassus, 2009).

The previous study of management accounting found that the performance measurement system can improve both the internal organization and its performance in addition to the management control system proposed by Simon (1995) that there are many benefits from opening communication channels interactively from top management to lower management and vice versa, obtained from management control. That can have a broad impact, whereas interactive communication can also increase success in the implementation of GRC is integrated within the internal organization, which in the end will become an anti-corruption tool, or in other words, reduce the possibility of fraud (Siahaan *et al.* 2023b, 2023a).

Managers use PMS to identify new strategic goals and to encourage active involvement in the organization, such as finding actors in interactive systems. That is an advancement of PMS functions, usually used as a lever for diagnostic control systems. They have designed PMS to achieve the predictable goal by adopting the traditional feedback function. (Batac and Carassus, 2009; Kominis and Dudau, 2012). The critical attitude of the actor, in this case, the individual, has a fundamental role in implementing PMS and how it can influence the reforms adopted in an organization. While increasing the ability of managers to learn from events that have occurred and support managers who are inexperienced in dealing with new risk situations is the goal of interactive control systems. Top managers must decide when to use interactive control systems by focusing on and sharing opinions and views on issues. One example is that used budgets can be interactively and that performance measures can support finding new strategies or increasing manager involvement in new areas (Henri, 2006; Kruis *et al.*, 2016). As for the public sector, informal and interpersonal relationship preferences can influence decision-making (Maran *et al.*, 2018). Furthermore, performance management will only provide sustainable success if integrated with each part or individual. The current literature defines integrated as strategically aligned, where all processes and activities (performance management) must be linked and aligned with the organization's strategy. The advantages of an Integrated Performance Management System generate competitive advantage and

long-term growth if it focuses on critical and well-performed activities over the long term (Verweire and Lutgart, 2004).

Inexperienced in new risky situations can be supported by an interactive control system to increase the manager's ability to learn from past events (Maran et al., 2018). so it can be said that knowledge sharing and communication between subordinates and managers create the company's strategy for the future through an interactive performance measurement system (Simons, 1995; Simons, 2000). Talking about IPMS helps workers meet the challenges of their work, not only that but also motivates workers who are facing job challenges (Preenen et al., 2016). Meanwhile, communication and dialogue provide job satisfaction, encouraging self-development, creativity, and problem-solving abilities—daily problems (Moulang, 2013). Employees are motivated by going through the IPMS in achieving their targets, as well as when giving a voice (or at least a vote) to employees, setting an example as a form of promoting positive behavior for personal and work affairs, without ruling out issues related to strategic uncertainty (Sakka et al., 2016; Simons, 1995).

The interactive performance measurement system (IPMS) in a study on lower-level employees is rare. That is due to their relationship only with upper middle managers in an organization, rarely directly involved with lower employees (Abernethy et al., 2013; Aranda and Arellano, 2010; Hall, 2008, 2011; Kruis and Widener, 2014). ; Lau, 2015; Sholihin and Pike, 2009; Sholihin et al., 2010; Yuliansyah et al., 2016b; Yuliansyah and Razimi, 2015). PMS is undoubtedly essential for lower-level employees because most of the services, especially those which are the company's business strategy in the service sector, are performed by lower-level employees. Therefore, the lower level performance undoubtedly strongly influences the overall organizational performance (Yuliansyah and Khan, 2015b; Dahlan, 2020). One of the advantages of IPMS is that employees can discuss many things related to business strategies, find new ideas, and reveal valuable information to their organization, All of which the IPMS achieved (Simons, 1995).

Our study analyzes how interactive performance measurement systems (IPMS), career development opportunities, and job challenges can increase job satisfaction. To answer our research questions, we surveyed 69 low-level managers from the human resources, finance, and planning departments in various industries in Indonesian companies.

Our study makes a significant contribution from both a practical and a social perspective. First, research at the managerial level is mostly in management accounting and at least at the lower middle level (Yuliansyah and Khan, 2015b). Second, there is still not much about management accounting studies related to behavioral aspects that broadly discuss psychological and behavioral factors such as career development opportunities and work challenges to increase employee job satisfaction. Our study fills a gap in that area.

## **2. Theoretical framework and hypotheses**

### **2.1 IPMS and job challenge**

Changes in the business context also change the nature of measurement. Process management that emphasizes customer value and customer service replaces traditional vertical and functional structures. Decision-making is progressively shifted lower in the organization; independent teams rather than individual managers now make decisions (Verweire & Lutgart, 2004)

Within Simons' (1995) framework, interactive control systems coexist and interact with other control systems. Diagnostic systems are designed and used to ensure the predictable achievement of objectives in areas identified as critical to successfully implementing the organization's current strategy (Simons, 2000).

Based on the organizational atmosphere, IPMS allows managers to obtain strategic information and remain actively involved in decision-making by subordinate employees (Bisbe & Otley, 2004; Simons, 1995; Yuliansyah & Khan, 2015a; Yuliansyah & Razimi, 2015). IPMS encourages open communication channels between managers and employees that help people explore valuable ideas and share information for the company's benefit (Yuliansyah et al., 2016a; Dahlan et al., 2020).

*Hypothesis 1: IPMS has a positive effect on job challenge*

### **2.2 IPMS and career development opportunities**

Talking about IPMS certainly has consequences for the organization's character, which cannot be separated from the categories of people's

behavior, organizational abilities, and performance consequences. The IPMS impacts all performance levels by paying attention to how the system is designed, developed, and used and where it is operated (Franco-santos *et al.*, 2012). IPMS is widely adopted to improve individual work performance in organizations because it is proven that IPMS can improve the quality of feedback and team effectiveness, which improves job performance (Antonio *et al.*, 2021). Zhang and Yu (2019) and Baird (2017) found that the interactive use of PMS has a significant positive direct or indirect employee job performance.

Furthermore, talking about job performance, employees with high job performance will undoubtedly open up opportunities to get higher positions. Organizations will appreciate employees' skills, experience, and sincerity and give them more responsibility in their work, so there are career development opportunities (Niati *et al.*, 2021). Besides that, it is also necessary for the organization to improve employee job performance, such as holding pieces of training that can motivate employees to work better to achieve organizational goals. Constantly upgrading employees will improve job performance and ultimately increase career development because career success is strongly influenced by performance evaluations and attributions (Greenhaus *et al.*, 1990; Igbaria and Wormley, 2000).

Based on the above studies, it can be concluded that there is a positive influence of IPMS on job performance and a positive influence of job performance on career development opportunities. So this study wants to know the direct and positive influence of IPMS on career development opportunities because employees in obtaining career development opportunities need factors that support their proof of being worthy and able to occupy higher positions in the organization, one of which is IPMS, where employees must build good communication with all levels in the organization both top and bottom levels, and that can be successful with the effectiveness of IPMS in the organization.

*Hypothesis 2: IPMS has a positive effect on career development opportunities*

### **2.3 Career development opportunities and job challenge**

Two essential things from employees and organizational conditions influence career development opportunities. First, employees who lose

motivation at work or do not develop themselves will reduce career development opportunities. In addition to the conditions of organizations that have to downsize employees will also reduce career development opportunities (Clarke, 2013; Feldman, 1995; Lee and Lee, 2018). The increased career development opportunities will, of course, create challenges for employees in their work. Individuals take advantage of opportunities to improve themselves with everything they have, including their abilities and skills. It was the challenge of J(ones and James, 1979). Hackman and Oldham (1976) used the challenge of work by individuals to motivate themselves to improve work performance.

Several studies have found that people exert more effort when they have clear goals and desires (Adhikari, 2010; Latham and Baldes, 1975; Locke and Latham, 2002). Therefore, job challenges can mediate the job performance of individuals. Career development opportunities can improve job performance by paying attention to who is responsible for career development (Lee and Lee, 2018). Career development opportunities create a motivation to prove employees can improve their positions or get higher positions, therefore deliberately doing challenging jobs. Examining the relationship between career development opportunities and work challenges is necessary.

*Hypothesis 3: CDO has a positive effect on job challenge*

## **2.4 Job challenge and job satisfactions**

According to Preenen et al. (2016), job challenges are challenging tasks for employees that must be completed within a specific time target, where there are findings that the more challenging the task at hand. Consequently, the higher the motivation to complete it successfully (Adhikari, 2010; Latham and Baldes, 1975; Latham and Kinne, 1974; Locke and Latham, 2002). When the challenge of the job has been successful, this creates performance satisfaction. Therefore, the theory that discusses job satisfaction is mainly in the context of individual motivation (Kian et al., 2014) as well as Herzberg's Theory which has been used in exploring job satisfaction among employees in an organization (Lundberg et al., 2009). Herzberg further explained that the theory of motivation applied in the workplace consists of two types of motivation-related factors: 1) satisfaction (motivator), as the primary driver of job satisfaction and includes achievement, recognition,



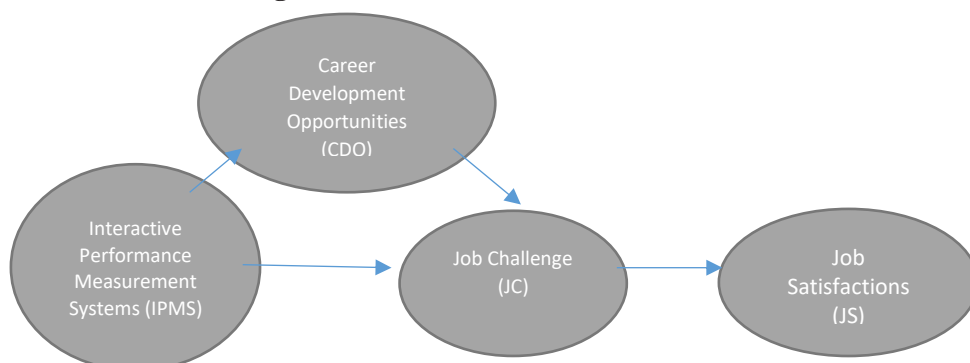
responsibility, and progress towards work, and 2 ) dissatisfaction (cleanliness), as the leading cause of job dissatisfaction (Herzberg, 1966), in addition to other factors such as the work environment situation, salary, relations between co-workers, administrative policies, and also supervision of work.

Job satisfaction is one of the crucial factors affecting organizations' outcomes (Frazier, 2009). Job satisfaction is critical in promoting feelings of fulfillment through promotions, recognition, salaries, and achieving goals (Ausloos and Pekalski, 2007). George and Jones (2008) defined *job satisfaction* as a collection of feelings people have towards their job. Specifically, concerning health workers, job satisfaction is known to influence motivation, staff performance, and retention, which in turn affect the successful implementation of health system reform (Wang *et al.*, 2017).

Much research has been done on job satisfaction, design, and characteristics. Substantial research has reported that enriched and complex jobs improve employees' job satisfaction (Park *et al.*, 2020). A productive environment can be generated by overcoming the factors that affect employee job satisfaction through designing interventions that managers can apply to include and improve these factors (Munyewende *et al.*, 2014).

*Hypothesis 4:* Job challenge has a positive effect on job satisfactions

**Figure 1:** The research framework



### **3. Methods**

#### **3.1 Sample selections**

The sample consisted of 69 low-level managers from human resource, finance, and planning departments within Indonesian's Corporation various industries. The questionnaires are to be returned directly to the researchers. Each participant was sent a questionnaire with a cover letter and a prepaid self-addressed envelope to lower level manager of the human resource, finance, and planning departments, 107 firms from Directory Indonesia Corporations 2020 of 321 questionnaires.

After two weeks, the researcher comes directly to the firm if somewhere enables non-respondents to be traced and follow-up to be executed. Based yielded a response rate of 21,50 percent as usable responses for final data and analysis to test the hypothesis. We used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

#### **3.2 Measurement of variables**

Interactive use performance measurement systems (IPMS) were adopted by Abernethy and Brownell (1999). Interactive use of budgeting would be the extent to which to measure performance measurement within four items of indicators measures. Career development programs (CDP) are challenging opportunities in the manager-leveling job, and we were measured by Berman and West (1999) that are nine items mentioned in a career development opportunity. Job challenging. De Pater *et al.* (2009) and Preenen (2010) said a tasking to improve them-self, motivation, innovation, and individual performance.

In this study, we have used six items to measure job challenges by De Pater *et al.* (2009) and Preenen (2010). Chen *et al.* (2004) adopted the fourth variable, job satisfaction. Job satisfaction is an outcome of motivation innovation and is key to promoting and achieving job goals. Job satisfaction was measured in seven items: skills, new ideas, good job, knowing, quality of performance, different jobs, and in our job, we perform complex tasks.

#### 4. Results and discussions

Descriptive statistics were performed to examine the multiple items. Correlation among variables was tested, and the results confirmed that correlation is significant at the 0.01 level (2 – tailed), revealing that it has positively correlated. Characteristic of respondent from age (years): 25 to 30 = 36, 31 to 40 = 27, and 41 to 60 = 6 participants. Educations matters: undergraduate: 56 and post-undergraduate: 13. Years in employment: 1 to 10 = 7, 11 to 20 = 49, and 21 or more 13.

Descriptive, validity, and reliability level are described below. The most suitable pattern of IPMS, CDO, job challenge, and job satisfaction were all variables in this research, as shown in Table 1.

**Table 1:** Descriptive, validity and reliability level

Loading Factor	KMO-MSA	Cronbach's A	Range	Mean	Std. Dev
IPMS	0.752 – 0.832	0.778	0.788	10.00	14.76812.07325
CDO	0.536 – 0.780	0.816	0.841	21.00	33.02904.25293
Job Challenge	0.435 – 0.720	0.555	0.503	9.00	22.95651.76097
Job Satisfactions	0.464 – 0.806	0.725	0.792	15.00	25.37683.17667

Table 1 shows that the loading factor is 0.435 or more, and the validity of all variables is at an acceptable level (0.40 or higher, Chenhall and Langfield-Smith, 1998). In comparison, the internal reliability of the Cronbach alpha coefficient is 0.503 or more for all variables with an acceptable level of about 0.50 to 0.60 or more (Nunnally and Bernstein, 1994). That is still acceptable with the initial eigenvalue % of the variance for all variables, which is 44.338% or more, and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy, which has a value of 0.555 or more. While validity and reliability can be assumed in general are essential features of latent variables.

**Table 2:** The regression results of latent variables

Variable	value	SE	$R^2$ (Adj. $R^2$ )	t-test	F test
IPMS → CDP	1.312	0.193	0.409 (0.400)	6.810 (0.000)**	46.372 (0.000)**
IPMS → JOBCHALLENGE	0.459	0.087	0.293 (0.282)	5.265(0.000)**	27.720 (0.000)**
CDP → JOBCHALLENGE	0.199	0.044	0.232 (0.220)	4.494 (0.000)**	20.194 (0.000)**
JOBCHALLENGE → JOBSATIS	0.717	0.202	0.158 (0.145)	3.544 (0.001)**	12.558 (0.001)**

n = 69, \*Significant at the 0.05 level and \*\* Significant at the 0.01 level (2 – tailed)

Based on table 2, all hypotheses would likely be acceptable and supported.

*Hypothesis 1: IPMS has a positive effect on job challenge*

IPMS positively affects the Job Challenge. Interacting communication between superiors and employees is needed to improve and motivate employee performance. Employees need to be given active opportunities in carrying out business processes. Employees are challenged to be able to provide productive ideas or ideas in value creation. The involvement of employees in planning and implementing business processes will create conducive conditions and lead to the creation and improvement of work productivity.

The performance measurement system should not only measure the financial aspect. That does not make it easy to correctly identify the factors that trigger actions or decisions and implement policies, which cannot be measured financially. However, those who can contribute to value creation are inevitably human resources. In this case, how can they create good engagement and commitment from superiors, managers, and employees towards efforts to set financial and non-financial targets and achieve them?

The biggest job challenge for superiors (managers) and ordinates (employees) is how companies can be sustainable and have advantages that have implications for achieving financial results. For example, a performance measurement system (IPMS) owned by the company should be able to provide information and evaluation systems as well as feedback related to various activities. Therefore, employees are challenged to increase work productivity by eliminating activities that do not provide added value, creating creativity, and implementing product innovations that will satisfy internal and external consumers. Thus, in the end, it is expected to be able to win a business competition through the advantages of products and services produced and have implications for increasing growth and increasing financial results.

*Hypothesis 2: IPMS has a positive effect on career development opportunities*

The ability to show good performance in carrying out activities by superiors or subordinates, which is the main task and responsibility, provides the potential to obtain a positive assessment in career development. Improving employee performance, of course, needs to be

followed by providing training that can professionally improve their competence and capabilities. In addition, training is needed to improve cognitive aspects, skills, and abilities in mastering science and technology relevant to their field of work.

Mastery and ability to implement the results of training and technology that contribute to value creation and increase efficiency and effectiveness in various activities and stages of business processes can improve employee performance. Productivity in his work has the potential to get an award from his superiors in the form of an opportunity to develop his career. That is under the opinion of Igbaria and Wormley (2022), who stated that the previous employee's performance drove the career opportunity.

*Hypothesis 3: CDP has a positive effect on job challenge*

Opportunities to be able to have a career are determined by the capabilities and professionalism of an employee. With these capabilities and professionalism, a person will be motivated to improve his career through meeting challenges and is expected to be able to overcome various activities that require creativity and innovation.

To overcome various challenges in their field of work, they should pay attention to various aspects of their capabilities. That affects the ease of obtaining career development potential. If someone already has the necessary qualifications and competencies, any demands for changes or adjustments needed to cope with the work can be completed properly. Especially those related to value creation in various aspects can increase product and service productivity in each value chain. They start from activities related to suppliers to distribution to consumers.

In each value chain activity, employees are challenged to identify activities that do not add value compared to which activities will provide added value from the consumer's point of view. Reducing activities that do not provide added value should be eliminated because it will impact inefficiency. On the other hand, consumers also demand to be able to provide products or services with quality standards following consumer preferences. Thus, improving employee performance will have the potential to be able to develop their careers. However, it is also expected

to be able to overcome various obstacles faced both financially and non-financially in creating value and increasing work productivity.

*Hypothesis 4:* Job challenge has a positive effect on job satisfactions

Employees who have high competence and professionalism in carrying out various productive jobs supported by good performance results have the potential to be able to develop their abilities in their field of work, mainly to produce productive activities. Moreover, high ability and motivation to overcome various problems in the field of work in business processes will always provide satisfaction primarily if a conducive environment supports it to take advantage of opportunities to work productively.

Job satisfaction should also be followed by a fair reward and punishment system so that employees can behave positively and not counter-productively. Rewards in the form of intrinsic and extrinsic should be given to employees who are entitled to them. The forms of intrinsic rewards can be participation in decision making, more responsibility, opportunities for personal growth, a fabulous job for freedom and discretion, more exciting work, Etc. On the other hand, extrinsic forms are direct compensation and indirect compensation. And non-financial compensation. Direct compensation includes basic salary and wages, performance bonuses, overtime, holiday premium, Etc. Indirect compensation can be in the protection program, pay for time not worked. Non-financial compensation includes preferred office furnishing, assigned parking space, preferred lunch Hours, Etc.

## **5. Conclusions**

Organizations need information generated by PMS on potential opportunities, such as changes in technology, consumer preferences, government regulations, and industry competition, to deal with the ongoing change and highly competitive environment. Such information can be obtained with the Interactive use of PMS. In addition, improved performance can only be achieved through face-to-face communication at all internal levels of the organization (Zhang and Yu, 2019). Therefore, this study reveals that top management and chief executive officers should be able to open communication channels to subordinates and lower-level managers to increase individual career opportunities that lead to increased

job challenges to produce excellent performance and ultimately impact employee satisfaction.

## **6. Limitations and future research**

This research contributes to and enriches knowledge about human resources in organizations, especially the interaction between superiors and employees, by using an interactive performance measurement system, increasing job satisfaction and automatically affecting firm performance. However, this research is limited to the direct effect between variables without examining the indirect effect or interaction between variables that can strengthen or weaken the effect on other variables.

Future research: Based on this study's results, IPMS has positively affected job challenges. The research on the interactive use of PMS positively affects job satisfaction. Therefore, it is fascinating to know whether the job challenge can mediate the effect of IPMS on job satisfaction or moderate the interaction between the two variables. Further research can also be in the form of job performance, which can be an exogenous or endogenous variable from career development opportunities concerning IPMS and job challenges.



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