

The Role of performance management practices in fostering workforce agility: An empirical investigation

Hala Abdel Meguid Omar Khalil

Ph.D. Candidate, Faculty of Commerce, Cairo University, Egypt

Supervisor

Prof. Dr. Kamel Ali Metwali Omran

**Professor of Human Resource Management, Faculty of Commerce,
Cairo University, Egypt**

Abstract

People are key drivers of organizational success in a business environment marked by unprecedented challenges and ongoing change. Undoubtedly, human resource management practices play a significant role in shaping employee behaviors. This study aimed to empirically investigate how performance management practices influence the development of an agile workforce. A sample of 392 respondents from different managerial levels in the information and communication technology sector in Egypt was surveyed. The results showed a positive and statistically significant relationship between performance management practices and workforce agility. This research provides important insights for both theoretical and practical implications.

Keywords: Human resource management, performance management practices, workforce agility, proactivity, adaptability, resilience

الملخص

يعتمد النجاح التنظيمي في بيئة الأعمال التي تتميز بالتحديات غير المسبوقة والتغيير المستمر على الأفراد. مما لا شك فيه أن ممارسات إدارة الموارد البشرية تلعب دورا هاما في تشكيل سلوكيات الموظفين. تهدف هذه الدراسة التطبيقية على دراسة تأثير ممارسات إدارة الأداء على تطوير رشاقة العاملين. تم استخدام عينة مكونة من ٣٩٢ مشاركا من مختلف المستويات الإدارية في قطاع تكنولوجيا المعلومات والاتصالات في جمهورية مصر العربية. وأظهرت النتائج وجود علاقة إيجابية وذات دلالة إحصائية بين ممارسات إدارة الأداء ورشاقة العاملين. يقدم هذا البحث رؤى مهمة لكل من الآثار النظرية والعملية.

الكلمات المفتاحية: إدارة الموارد البشرية، ممارسات إدارة الأداء، رشاقة العاملين، الاستباقية، القدرة على التكيف، الإصرار

1. Introduction

People are pivotal in driving agility and enhancing an organization's capacity to meet the dynamic changes in the business environment. This highlights the significance of workforce agility as a key determinant of organizational success (Salmen & Festing, 2021). Given that human resource management practices significantly influence employees' behaviors, it could be argued that these practices are vital for fostering agility (Harsch & Festing, 2019; Salmen & Festing, 2021). Despite the critical nature of these practices, current research falls short in exploring the link between human resource management practices and workforce agility (Salmen & Festing, 2021).

Performance management practices, as a cornerstone for human resource management practices (Dash & Lenka, 2024), play a pivotal role in achieving organizational success (Sardi et al., 2020; Nudurupati et al., 2021). There is growing concern regarding the effectiveness of conventional control-oriented performance management practices in adapting to the dynamics of a rapidly changing global business environment (Shields et al., 2023; Saritha & Murthy, 2024), leading to increased research in this area (Saritha & Murthy, 2024). Since the mid-1980s, there has been a shift towards performance measurements and management models that emphasize and prioritize learning and decision support over control. In this sense, scholars started to interconnect performance measurement with performance management process. Scholars have started to develop models that integrate performance measurement and management. These contemporary performance management systems concentrate on what to measure, how to measure, and how to utilize these measurements to enhance organizational performance (Sardi et al., 2020; Nudurupati et al., 2021). Consequently, the focus of these systems evolved from being solely evaluative or controlling tools to becoming instruments for learning and development (Sardi et al., 2020; Garengo et al., 2021; Shields et al., 2023).

It is evident that there is an increasing necessity to analyze the influence of performance management practices on enhancing workforce agility. This is particularly crucial in the

information and communication technology industry in Egypt due to its recording the highest annual growth rate in 2020/21 (MCIT, 2023). Subsequently, the subsequent sections of the research paper will present an literature review on of the research variables (performance management practices and workforce agility) in conjunction with its theoretical basis (job demands-resources model). Following this, the proposed theoretical framework and its empirical examination will be discussed. The concluding segment of this academic paper will focus on deliberating the research outcomes, implications, constraints, and potential future research avenues.

1.1 Research gap and question

An investigation of previous research revealed that performance management systems were mostly investigated at the firm -level (Maley et al., 2020). Additionally, there is paucity in researching the influence of human resource management practices on employee agility. More specifically, there is limited research that investigates the impact of performance management practices on workforce agility (Salmen & Festing, 2021). Furthermore, most of the research that examining the impact of human resource management practices on workforce agility was conducted in the manufacturing sector while conducting very few empirical studies in the information technology sector especially the software development industry (Ajgaonkar et al., 2021). By

addressing this g, this research poses the research question pertaining to whether there is a direct impact of performance management practices on workforce agility.

1.2 Research Objectives

The current study aims at expanding the theoretical framework of the direct impact of performance management practices on workforce agility. Consequently, this research empirically examines the crucial role of performance management practices in developing agile workforce behaviors that with the information and communication technology sector in Egypt, more specifically within the software development as well as systems and solutions integration sub-sectors. On the theoretical level, this research aims at investigating performance management practices as an antecedent to fostering workforce agility thereby filling an identified scholarly gap. Additionally, the findings of this research may encourage other researchers to replicate its theoretical model in different industries and geographical locations. On the practical level, this research will furnish some practical recommendations that could be utilized by concerned professionals.

2. Literature Review and Hypothesis Development

This section provides an overview of the theoretical foundation (job demands-resources model), the research

variables (workforce agility and performance management practices), and presentation of the theoretical model and development of research hypothesis.

2.2 Job demands-resources model

The job demands-resources model is grounded on the premises that the employees are exposed to working conditions that may initiate a health impairment process (Huang et al., 2016; Adil & Baig, 2018) or may activate a motivational process (Baker & Demerouti, 2017; Beraldin et al., 2019; Wang & Yang, 2021). The former process is the result of excessive demands arising from the changing needs arising from today's turbulent business environment (Zhang et al., 2020; Salmen & Festing, 2021). On the other hand, job resources initiate a motivational process as they facilitate the achievement of goals (Wang & Yang, 2021) or reduce the adverse effects of excessive job demands (Adil & Baig, 2018; Nuutinen et al., 2021; Wang & Yang, 2021). In this respect, the various human resource management practices could be regarded as job resources (Salas-Vallina et al., 2020).

Baker and Demerouti (2017) argued that there is an interrelationship between job resources and job demands where the former buffers the impact of the latter. For instance, if employees are granted job autonomy, they would be able to meet

the increasing demands from their jobs (Nuutinen et al., 2021) which eventually motivates them to acquire new behaviors.

2.2 Workforce agility

The precise meaning of workforce agility lacks consensus in the literature, as the concept is relatively new (Petermann & Zacher, 2021). Generally speaking, workforce agility could be defined as “the ease, flexibility, and quickness of an organization’s workforce to face the changes in the environment, to adapt an unpredictable and uncertain environment and respond to it positively” (Raut et al., 2021, p. 2). Scholars studying workforce agility have explored it from various perspectives, including ability, attitude, behavioral or a combination of approaches (Muduli, 2017; Muduli & Pandya, 2018; Petermann & Zacher, 2021; Tessarini Junior & Saltorato, 2021). Most researchers, however, opt for a behavioral approach (Saleem et al., 2021).

The trait / ability approach explored workforce agility in terms of the importance of promptly responding to change and capitalizing on opportunities that arise from change (Muduli, 2017; Muduli & Pandya, 2018; Paul et al., 2020). On the other hand, alternative viewpoint focuses on attitudinal aspects of workforce agility. According to this perspective, agile employees demonstrate problem-solving skills, possess a desire for continuous learning and development, exhibit the ability to

generate innovative ideas, and feel comfortable taking on new responsibilities (Muduli, 2016, 2017; Muduli & Pandya, 2018).

From a behavioral approach, workforce agility is identified in terms of employees' behaviors rather than personality traits. The most commonly used definition of workforce agility, in light of this view, was introduced by Sherehiy & Karawoski's (2014) where they defined it in terms of agile behaviors manifested by employees. This definition further dissects workforce agility into three dimensions, namely proactivity, adaptability, and resilience.

First, 'proactivity' is a behavior that entails actively seeking out opportunities and taking action to seize them, thereby making a positive contribution to the success of an organization (Sherehiy & Karwowski, 2014; Muduli, 2017; Muduli & Pandya, 2018). It also involves identifying potential solutions to anticipated problems associated with changes occurring in the environment (Sherehiy & Karwowski, 2014; Nadhira Putri & Mangundjaya, 2020; Doeze Jager et al., 2021; Husni et al., 2021; Raut et al., 2021), and employing creative approaches when dealing with various situations (Husni et al., 2021). Thus, proactivity involves initiating activities that have a positive impact on work and lead to improvement thereof (Sherehiy & Karwowski, 2014; Muduli, 2017; Muduli & Pandya, 2018; Patil & Suresh, 2019; Nadhira Putri & Mangundjaya, 2020). Since proactivity is a future-oriented behavior (Parker et al., 2019; Lin et al., 2021), it is considered one of the fundamental behaviors

that organizations rely on to foster constructive change in the workplace (Lee et al., 2016; Cai et al., 2018; Lin et al., 2021). Thus, it can be argued that employees' proactive behaviors play a critical role in initiating new ideas at work (Bauwens et al., 2023).

Second, 'adaptability' (sometimes referred to as flexibility) is connected to the individual's self (Saleem et al., 2021) and his/her professional flexibility (Patil & Suresh, 2019; Paul et al., 2020). Consequently, adaptability refers to the ability to easily and swiftly switch between roles, simultaneously work on different tasks and within different teams (Patil & Suresh, 2019; Varshney & Varshney, 2020; Herlina et al., 2021; Petermann & Zacher, 2021) while utilizing different capabilities (Muduli, 2017; Khodabandeh et al., 2018; Muduli & Pandya, 2018; Paul et al., 2020; Al-Ganemi & Chalab, 2021). behavior change or modification that enables the individual to fit with a changing environment quickly (Muduli, 2017; Muduli & Pandya, 2018; Nadhira Putri & Mangundjaya, 2020; Paul et al., 2020; Doeze Jager et al., 2021). This means that adaptability is concerned with the person's better fit with the environment (Karman, 2019; Tamtam & Tourabi, 2020) thereby requiring change in behavior, attitude, and mental state (Khodabandeh et al., 2018). Thus, adaptability can be seen as the employee's capacity to adjust to both internal and external changes (Doeze Jager-van Vliet et al., 2019; Karman, 2019; Doeze Jager et al., 2021; Husni et al., 2021).

Third, ‘resilience’ is related to the person’s positive attitude and efficient response during conditions of stress, change, and failure (Sherehiy & Karwowski, 2014; Muduli & Pandya, 2018; Khan et al., 2019; Nadhira Putri & Mangundjaya, 2020; Saleem et al., 2021) especially when developed solutions to problems do not yield the desired outcomes (Patil & Suresh, 2019). In other words, it is the individual’s positive attitude towards divergences, new ideas, and technology; “tolerance of uncertain and unexpected situations, differences in opinions, and approaches; and tolerance to stressful situations and coping with stress” (Muduli, 2017, p. 47). As such, this dimension is related to the person’s ability to adjust and cope with difficult situations (Petermann & Zacher, 2022) while maintaining a positive attitude (Branicki et al., 2016; Caniëls & Baaten, 2018), effectively perform under stressful situations (Husni et al., 2021; Petermann & Zacher, 2021; Saleem et al., 2021), and quickly recover from failure and increased responsibilities (Cooke et al., 2019; Cooper et al., 2019; Lim et al., 2020) while maintaining high levels of stamina and strength (Raut et al., 2021). Thus, it can be argued that resilience is linked to an individual’s effectiveness in adjusting and coping with change (Petermann & Zacher, 2022) while keeping stance towards change or setbacks (Sherehiy & Karwowski, 2014; Herlina et al., 2021).

A combined approach was introduced by Salem and Festing (2021) who considered both the ability and behavioral approach and

posited two dimensions. ‘Learning ability’ is the person’s ability to quickly understand a situation as well as have the flexibility to move between ideas and experiences. Thus, it is a holistic and integrative process that allows transferring experiences into beneficial ideas and actions. In other words, it allows the individual to continuously acquire new competencies that enable alignment with the required behavior. In contrast, ‘innovative work behavior’ is improving role, group, or organizational performance through introduction and adoption of new ideas.

Several studies investigated workforce agility as an independent variable. For example, some empirical studies examined its impact on innovation (Abrishamkar et al., 2020; Franco & Landini, 2022), and safety compliance and safety participation (Saleem et al., 2021). On the other hand, some studies empirically investigated the impact of work organization (Sherehiy & Karwowski, 2014), employee psychological empowerment (Muduli, 2016), job satisfaction (Khodabandeh et al., 2018), and empowering leadership (Al-Ganemi & Chalab, 2021) on workforce agility. Furthermore, other empirical studies examined the mediating role of workforce agility between emotional intelligence and task, contextual, and adaptive performance (Varshney & Varshney, 2020), job characteristics and higher administrative support on crisis management (Raut et al., 2021), employee ambidexterity and organizational effectiveness (Herlina et al., 2021). It was also noticed that some studies empirically investigated one or more dimensions of

workforce agility. For instance, the impact of peer and supervisor support (Kuntz et al., 2017), supportive leadership and peer support (Cooke et al., 2019) on employee resilience. Additionally, empirical studies jointly examined proactivity and adaptability. For example, investigating the impact of knowledge management processes (Kuruppu & Egodawe, 2021), organizational trust (Doeze Jager et al., 2021) on proactivity and adaptability.

Based on the literature review and this research objectives, this research builds on the behavioral approach, specifically Sherehiy and Karwowski (2014) typology for several reasons. Firstly, it is the most commonly used approach in the academic literature (e.g. Muduli, 2017; Muduli & Pandya, 2018). Secondly, the fundamental concept underlying the behavioral perspective is that organizations can employ human resource management practices to ensure that employees' behaviors align with organizational goals (Lee et al., 2016). Accordingly, this research operationalizes workforce agility as the behaviors associated with the employees capacity to foresee potential change and problems while seeking solution-oriented activities, to promptly adjust to unexpected changes and challenges while capitalizing on opportunities, and maintain an assertive attitude towards feedback as well as swiftly bounce back from hardships.

2.3 Performance Management

The shift from control-oriented to development-oriented performance management systems has been a noticeable trend in recent years (Bauwens et al., 2023). This shift emphasizes the need for a comprehensive and dynamic performance management system that supports decision-making through various performance measurement and management activities. The collection and analysis of performance data are integral to the former activities (Sardi et al., 2020; Nudurupati et al., 2021), while the latter focus on activities communication, learning and performance improvement. In addition, by offering feedback to employees regarding their outcomes, performance management contributes to business strategy development (Nudurupati et al., 2021), implementation and validation (Sardi et al., 2020). Overall, performance management practices encompasses a wide range of initiatives aimed at enhancing employee performance, including policies and procedures that begin with goal -setting, performance appraisal, and extend to feedback provision, training, and reward systems (DeNisi & Smith, 2014; DeNisi & Murphy, 2017; Kumar, 2019; Nudurupati et al., 2021; Hill & Plimmer, 2024).

Based on the above, it could be argued that performance management is a continuous process primarily aims at aligning individual and team behaviors with organizational goals

(Schleicher et al., 2018; Mat Desa & Abu Hassan Asaari, 2019; Govender & Bussin, 2020; Mangipudi et al., 2020; Garengo et al., 2021; Santhosh, 2021; Hill & Plimmer, 2024). In this respect, performance management could be viewed as a comprehensive system could be regarded as an ongoing tool for planning, controlling, evaluation, and improvement tool (Brown et al., 2018; Franco-Santos & Otley, 2018; Patil & Suresh, 2019). Based on its purpose, performance management incorporates core and complementary components (Patil, 2020).

Goal setting is a pivotal core component of performance management (Brown et al., 2018; Patil & Suresh, 2019), serving as a cornerstone for its success. Notably, it usually encompasses different types of goals including performance, learning and behavioral objectives (Hill & Plimmer, 2024) that need to align with organizational goals (Brown et al., 2018). These objectives, in turn, serve as blueprints for subsequent components of including feedback, developmental activities, and consequences of actual results (Franco-Santos & Otley, 2018; Hill & Plimmer, 2024). For example, feedback and development play a crucial role in goals attainment, and establishment of new goals, and has a consequence on fair rewards (Hill & Plimmer, 2024).

Organizations are increasingly recognizing the limitations of traditional methods used to evaluate employee performance. These methods, which rely on yearly and fixed measurements,

fail to address the complexities of the modern workplace (Santhosh, 2021) and are neither unable address the complexities of rapidly changing job roles and responsibilities nor provide timely feedback to employees (Pattnaik & Sahoo, 2018). As a result, organizations are encouraged to view performance appraisals as an ongoing process that evaluates, measures, and communicates employees' results (Pattnaik & Sahoo, 2018; Garengo et al., 2021). In this respect, an effective performance appraisal should be directed towards strengthening and improving employees' capabilities and skills (Kuntz et al., 2017; Brown et al., 2018; Dash & Lenka, 2024). Consequently, organizations that aim for success, improvement of competitive position, and enhanced productivity should adopt ongoing (Brown et al., 2018; Subramanian & Suresh, 2022; Dash & Lenka, 2024), constructive (Kuntz et al., 2017; Doeze Jager-van Vliet et al., 2019), fair and accurate (Brown et al., 2018), and supportive performance appraisals. This necessitates the adoption of enabling or developmental performance management systems (Guest, 2017) that support employee growth and development.

Though performance planning is a complimentary component, it is crucial to successful implementation of an effective performance management system. Within this component, performance expectations are determined prior to the initiation of the performance cycle thereby, enabling employees to know what is expected from them (Franco-Santos & Otley,

2018; Patel et al., 2020). Another complimentary but critical component is performance agreement which involves agreement between the organization and its employees on aspects related to goals, performance evaluation tools, and needed competencies. Again, these aspects are determined before the commencement of the performance cycle (Patel et al., 2020). Furthermore, developmental plans are considered complimentary components as they determine performance improvement requirements. In this manner, performance management would be viewed as a feedback and feedforward mechanism (Nudurupati et al., 2021), performance (Patel et al., 2020) and administrative control mechanism (Franco-Santos & Otley, 2018).

Despite the critical role of setting goals in the effective implementation of performance management practices, it received little attention from scholars (Brown et al., 2018; Tweedie et al., 2018). The study of Nguyen et al. (2021), one of few studies, found that lower- level managers' participation in setting organizational performance objectives had a positive impact on organizational performance. On the other hand, several studies supported the positive impact of performance appraisals on organizational performance (Pattnaik & Sahoo, 2018), employee engagement (Kakkar et al., 2020), employee performance (Dash & Lenka, 2024), growth (Nwokeocha, 2024). In addition, other studies revealed a positive impact of performance management practices on organizational

effectiveness (Kumar, 2019), and employee engagement (Govender & Bussin, 2020).

From the above discussion and considering today's constantly changing business environment, the adoption of enabling performance management practices would be preferred over directive practices. This implies that organizational goals would be set after consulting major stakeholders as well as promoting self-efficacy through ongoing feedback mechanisms that are capable of promoting learning and improvement (Franco-Santos et al., 2022). Accordingly, based on the literature review and the objectives of the current research, performance management practices is operationalized as those practices that are capable of enabling rather than controlling employees behaviors and performance (Franco-Santos & Doherty, 2017).

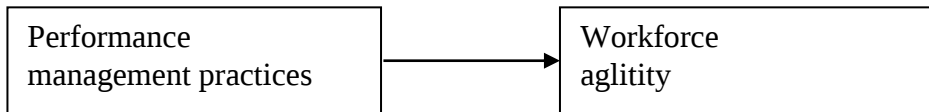
The Relationship between Performance Management and workforce Agility

Building an agile workforce demands the development of performance management practices that are transparent and provide continuous feedback (Munteanu et al., 2020; Subramanian & Suresh, 2022). This implies that enabling performance management practices can play an influential role in creating an agile workforce. It is argued that these practices, through the ongoing feedback mechanism, would enable

employees to realize their deficiencies in a timely manner thus, allowing them to promptly, and continuously modify and improve their performance to align with organizational goals. For instance, in their studies, Kuntz et al. (2017) and Khan et al. (2019) identified performance feedback as a driver toward building employee resilience. In addition, such mechanisms would act as a blueprint when evaluating progress towards goal achievement as well as identification of developmental plans (Kuntz et al., 2017; Moh'd et al., 2024).

Based on the above, and to the knowledge of the researcher, there is scarcity in research that link enabling performance management practices and workforce agility. In response to previous calls to study the impact of performance management practices on workforce agility (Salmen & Festing, 2021) and more specifically within the information technology sector (Ajgaonkar et al., 2021), figure (1) provides the proposed theoretical framework for the current research

Figure (1): Proposed theoretical model



Source: Prepared by the researcher

Based on the proposed theoretical model, this research attempts to investigate the impact of enabling performance management practices on workforce agility by hypothesizing that:

H₁: The is a direct and positive impact of performance management practices on workforce agility

3. Empirical Research

The information and communication technology sector in Egypt plays a pivotal role in boosting economic growth. In the year 2020/21, this sector experienced the highest annual growth rate of 16.7% and generated around 215,000 job opportunities (MCIT, 2023). This empirical research focused on examining the impact of performance management practices on workforce agility within the software development as well as the systems and solutions integration sub-sectors. To ensure the inclusion of companies with well-established human resource management departments, the study specifically targeted organizations with a minimum of 200 employees.

3.1 Population and Sample

Based on the online database of the Information Technology Industry Development Agency (IDITA), the total population within the specified sub-sectors in this empirical study was found to be 28,885 employees divided into three managerial levels: top

management (9%), middle management (18%), and staff level (72%). To address the research question regarding the impact of performance management practices on promoting workforce agility, and following the recommendation of Guerçi et al. (2019) to view employees as the unit of analysis, this quantitative cross-sectional study employed a proportional stratified random sampling method. Thus, a sample size of 392 participants was distributed proportionally based on the number of employees in each company and stratified by managerial levels.

3.2 Data collection and measurement tools

A bilingual (English and Arabic) self-administered questionnaire was employed using online google forms. A vertical layout was used to increase clarity, readability, and data coding (Bryman, 2012). Accordingly, the survey included three sections where a section was devoted to introducing the research purpose and assurance of confidentiality of collected data, a second section included collecting demographic data (gender and managerial level), and finally a section to assess the research variables (performance management practices and workforce agility). As recommended by Sekaran and Bougie (2016) a 5-Likert scale was adopted to evaluate the research variables where “1” indicated strongly disagree and “5” indicated strongly agree.

The choice of the research instruments was based on the research objectives and the context of information and communication technology sector in Egypt. In addition, validated measurement instruments were utilized to ensure content validity. Accordingly, the following measurement tools were used:

1. Performance management practices: Franco-Santos and Doherty (2017) validated tool was employed. “My organization develops its strategic plans following a thorough consultation process” exemplifies included statements (Franco-Santos & Doherty, 2017, p. 32)
2. Workforce agility: This research utilized Cai et al. (2019) validated measurement instrument to evaluate the perception of respondents. An example of statements included in this measurement is “I can adjust to new work procedures” (Cai et al., 2019, p.62).

3.3 Demographic profile of sample respondents

Out of the total 392 respondents in the survey, 80.40% were males while 19.60% were females. The distribution of respondents based on their managerial levels aligned with the determined stratification criteria where 8.90% of the sample respondents were at the top management level, 18.90% were at middle management, and the remaining 72.20% belonged to the staff level.

3.4 Data Analysis

To assess the reliability and validity of the research measurement instruments as well as descriptive and inferential statistics, SPSS 26.0, Lisrel 10.2m and Minitab 16 software were used.

3.4.1 Exploratory factor analysis

The evaluation of whether the items designed to measure a specific construct form a distinct factor separate from other factors was assessed using the principal component analysis with varimax rotation technique (Hair et al., 2019). Additionally, the criterion suggested by Taherdoost (2016) was followed, whereby a minimum factor loading of 0.40 was considered acceptable. As indicated in table (1), all factor loadings met this threshold suggesting a strong relationship between the items and the latent construct they are intended to measure.

Table (1): Factors loadings		
Code	Statement	Factor loading
Workforce agility		
WFA4	“When performing new tasks, I can easily switch between activities” *	0.776
WFR1	“I am able to perform my job efficiently in difficult or stressful situations” *	0.832
WFR2	“I can adapt well in light of workloads” *	0.809

Performance management practices		
WBM2	“It is effective at communicating how the work of individuals contributes to its overall success” **	0.847
WBM3	“It provides us with necessary resources to do our work well” **	0.849
WBM4	“It equally promotes and recognizes excellence in whatever shape or fom it comes in” **	0.838
* (Cai et al., 2019, p. 62) ** (Franco-Santos & Doherty, 2017, p. 32)		

3.4.2 Descriptive statistics

Descriptive statistics are essential in providing an overall summary of the dataset, thus serving as a valuable tool in establishing a foundation for the data analysis process (Hair et al., 2019). As presented in table (2), the results reveal that respondents rated both workforce agility (mean = 3.84) and performance management practices (mean = 3.52) had an above the average score. Notably, the standard error for workforce agility and performance management practices was 0.036 and 0.042 respectively, thus indicating a more accurate estimation of the population mean.

<i>Table (2): Average scores and their significance</i>				
Variable	sample mean	Standard error	P -Value	95% confidence interval for mean
Workforce agility	3.84	0.036	<0.001	3.79 - 3.90
Performance management practices	3.52	0.042	<0.001	3.46 - 3.60

In the current empirical study, two demographic variables were considered namely, gender and managerial levels. An independent sample T-test was conducted to assess whether there was a significant difference between males and females. As indicated in table (3), there was no statistically significant difference between males and females for both variables – workforce agility and performance management practices (p-value = 0.91, 0.67 respectively). Additionally, the perception of males and females on workforce agility was above average (3.84 for males and 3.83 for females). Similarly, the mean score for performance management practices exhibited an above average score (males = 3.53 and females = 3.48).

Table (3): Comparing means between males and females

Variable	Gender	Mean	Standard Deviation	Standard Error Mean	p-value
Workforce agility	Male	3.84	0.69	0.04	0.91
	Female	3.83	0.89	0.09	
Performance management practices	Male	3.53	0.81	0.05	0.67
	Female	3.48	0.86	0.09	

With respect to the second demographic variable, namely managerial level, an ANOVA test was conducted. As reflected in table (4), there was insignificant difference between managerial levels regarding workforce agility (p-value = 0.05) with mean scores above 3.00. However, regarding performance management practices, there was a significant difference between managerial levels (p-value = 0.01). Accordingly, Duncan test was conducted and revealed that middle management level and staff level had similar perception with mean scores 3.30 and 3.54 respectively whereas top management level had a higher perception with a mean score of 3.76.

Table (4): Comparing means between managerial levels

Variable	Managerial levels	Mean	Standard Deviation	Standard Error Mean	p-value
Workforce agility	Top management	3.97	0.82	0.14	0.50
	Middle management	3.83	0.71	0.08	
	Staff	3.82	0.70	0.04	
Performance management practices	Top management	3.76	0.82	0.14	0.01
	Middle management	3.30	0.80	0.09	
	Staff	3.54	0.81	0.05	

3.4.3 Testing the model goodness of fit

To indicate the theoretical model's goodness of fit, Lisrel 10.2 software was utilized. Table (5) shows the various indices results which indicated that the model adequately represented the relationship between performance management practices and workforce agility.

<i>Table (5): Goodness of fit indices results</i>	
Index	Results
Root mean square approximation (RMSEA)	0.04
Chi-square / degrees of freedom	1.61
Normed fit index (NFI)	0.985
Non-normed fit index (NNFI)	0.989
Comparative fit index (CFI)	0.994
Incremental fit index (IFI)	0.994
Relative fit index (RFI)	0.972
Root mean square residual (RMR)	0.03
Standardized root mean square residual (SRMR)	0.03
Goodness of fit (GFI)	0.989
Adjusted goodness of fit (AGFI)	0.972

3.4.4 Reliability and validity of the measurement instruments

Evaluating the reliability and validity of the research measurement instruments is critical before testing the hypothesis. In the current research, reliability was evaluated through Cronbach's coefficient of reliability and composite reliability. The results indicated measurement instruments of workforce agility and performance management practices were reliable as their respective Cronbach's coefficient of reliability were 73.5%

and 80.40%. To further confirm the reliability of the measures, the composite reliability was estimated which also confirmed the measurement instruments' reliability (composite reliability for workforce agility = 79.59%, composite reliability for performance management practices = 84.33%). Consequently, it could be argued that the two measurement tools showed stability and consistency of the included items (Bryman, 2012)

To examine the measurement instruments validity, the variance explained, average variance extracted, and discriminant validity were calculated. For workforce agility, the variance explained was 65.48%, and average variance extracted was 56.57%. Additionally, performance management practices results indicated 71.95% and 64.22% for variance explained and average variance extracted respectively. Therefore, it could be concluded that both measures accurately measure what they were assumed to measure (Sekaran & Bougie, 2016). Finally, the discriminant validity was estimated to evaluate whether workforce agility and performance management practices were empirically differentiated. Again, a discriminant validity of 25.94% indicated that respondents could differentiate between the two latent constructs.

Path Analysis: Hypothesis Testing

As shown in table (6), there was a positive and statistically significant (p-value = 0.01) impact of performance management practices on workforce agility. Consequently, H₁ was supported. However, the correlation coefficient (r) was .252 indicating a weak relationship between performance management practices and workforce agility. This implies that a one-unit improvement in performance management practices could bring about a 25.20% enhancement in workforce agility.

Table (6): Direct impact of performance management practices on workforce agility				
The effect	Path Coefficient	Standard Error	t-value	P-value
Performance management practices → workforce agility	0.252	.062	4.048	0.01

4. Discussion, Recommendations and Implications

The findings of the current empirical study is unique for several reasons. First most of the previous research on performance management practices concentrated on its impact at the organizational-level (Maley et al., 2020). Second, most of the previous research concentrated on one element of performance management practices. Third, even when examining one of these elements, only one or two dimensions of workforce agility were considered (e.g. Kuntz et al., 2017; Khan et al., 2019; Moh'd et al., 2024). Despite this, the results of the current empirical investigations

aligned with prior study. For example, Khan (Khan et al., 2019) found a positive and significant impact of performance feedback on employee resilience. This study also found a positive and significant influence of performance practices on promoting workforce agility. However, previous studies ignored the interactive impact of the various components of performance management practices on developing an agile workforce.

The present empirical research stands out for several reasons. Initially, in contrast to most prior studies on performance management practices that concentrated solely on their effects at the organizational level (Maley et al., 2020), this study dived in their influence on workforce agility, which is considered crucial in today's volatile business environment. Secondly, while previous research often concentrated on examining only one aspect of performance management practices, this study considered multiple elements. Therefore, unlike previous studies that neglected to consider the interconnected effects of different elements of performance management practices on promoting workforce agility, the current study addressed this gap. Thirdly, even when previous studies did investigate one of these components, they typically only considered one or two dimensions of workforce agility (e.g. Kuntz et al., 2017; Khan et al., 2019; Moh'd et al., 2024). Despite these distinctions, the results of the current empirical inquiry aligned with previous research. For example, Khan

(2019) identified a positive and significant relationship between performance feedback and employee resilience.

Thus, this research responded to calls to examine how performance management practices affect workforce agility (Salmen & Festing, 2021). More specifically, there has been a call to investigate this issue within the software development industry (Ajgaonkar et al., 2021). To this end, the current research has contributed to filling this gap in knowledge.

According to the job demands-resources model, the implementation of performance management practices can serve as an asset in fostering workforce adaptability. This would undoubtedly boost employees' abilities to effectively address the constantly increasing challenges that stem from the volatile and unpredictable business environment (Zhang et al., 2020; Salmen & Festing, 2021). For instance, the incorporation of goal-setting, ongoing performance feedback, and continuous performance improvement mechanisms within performance management practices could play a pivotal role in alleviating the pressures associated with job demands (Harsch & Festing, 2019).

At the practical level, it is recommended that organizations operating in the information and communication technology industry in Egypt embrace and implement developmental / enabling performance management practices. Encouraging

employee involvement in the performance management process is believed to heighten their sense of self-efficacy, thereby equipping them with the necessary capabilities to adapt to the turbulent business environment and exhibit agile behaviors. Moreover, it is advisable to incorporate more frequent performance feedback, leveraging digital technologies that enable real-time feedback and align with the skillsets of the new generation. Furthermore, the performance management practices should prioritize providing developmental feedback that accounts for both organizational outcomes and fulfills employees' career aspirations and advancement.

5. Limitations and Future Research

This empirical investigation sheds valuable insights on the impact of performance management practices on workforce agility, but it is essential to recognize the study limitations. This empirical study is confined to the information and communication technology in Egypt, limiting its generalizability to a more global context and over other industries. In addition, as a cross-sectional study, the study has its limitation in capturing changes in behavior over time. Moreover, reliance on self-administered questionnaires introduces common method bias. Finally, there may be other intervening or confounding factors that could potentially influence the results of this study.

Linked to the limitations of this empirical study, it is recommended to perform longitudinal study to observe changes in behavior over time. Furthermore, to increase the generalizability of this study, it is suggested to replicate the theoretical model in different geographical, cultural, and industrial contexts. In addition, future research may attempt to investigate the impact of enabling performance management practices on employee wellbeing, job satisfaction, and employee engagement. Alternatively, future research may examine the moderation effect of age, gender, and managerial levels on the relationship between performance management practices and workforce agility.

6. Conclusion

In the current dynamic and unpredictable business landscape, it is imperative for organizations to adopt human resource management practices that effectively align employees' behaviors with the goals of the organization. Despite the critical role of enabling or developmental performance management practices in inducing employees' agile behaviors, there is limited research on this issue. This study aimed to bridge this research gap by examining the impact of performance management practices on workforce agility in the information and communication technology sector in Egypt, specifically within the software development and systems and solutions integration

sub-sectors. Consequently, this study provides valuable insights and implications for both theoretical understanding and practical implementation in this field.

References

- Abrishamkar, M. M., Abubakar, Y. A., and Mitra, J. (2020). The influence of workforce agility on high-growth firms: The mediating role of innovation. *The International Journal of Entrepreneurship and Innovation*, 22(3), 146-160 doi:10.1177/1465750320973896
- Adil, M. S., and Baig, M. (2018). Impact of job demands-resources model on burnout and employee's well-being: Evidence from the pharmaceutical organisations of Karachi. *IIMB Management Review*, 30(2), 119-133 doi:10.1016/j.iimb.2018.01.004
- Ajgaonkar, S., Neelam, N. G., and Wiemann, J. (2021). Drivers of workforce agility: a dynamic capability perspective. *International Journal of Organizational Analysis* doi:10.1108/ijoa-11-2020-2507
- Al-Ganemi, S. S. W., and Chalab, I. D. (2021). Reflection of the effect of empowering leadership behaviors on the workforce agility (An analytical study of the opinions of teachers in the private schools of the Diwaniyah governorate center). *Turkish Journal of Computer and Mathematics Education*, 12(14), 2120-2149
- Baker, A. B., and Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *J Occup Health Psychol*, 22(3), 273-285 doi:10.1037/ocp0000056
- Bauwens, R., Audenaert, M., and Decramer, A. (2023). Performance management systems, innovative work behavior and the role of transformational leadership: an experimental approach. *Journal of Organizational Effectiveness: People and Performance*, 11(1), 178-195 doi:10.1108/joepp-03-2022-0066

- Beraldin, A. R., Danese, P., and Romano, P. (2019). An investigation of the relationship between lean and well-being based on the job demands-resources model. *International Journal of Operations & Production Management*, 39(12), 1295-1322 doi:10.1108/ijopm-05-2019-0377
- Branicki, L., Steyer, V., and Sullivan-Taylor, B. (2016). Why resilience managers aren't resilient, and what human resource management can do about it. *The International Journal of Human Resource Management*, 30(8), 1261-1286 doi:10.1080/09585192.2016.1244104
- Brown, T. C., O'Kane, P., Mazumdar, B., et al. (2018). Performance Management: A Scoping Review of the Literature and an Agenda for Future Research. *Human Resource Development Review*, 18(1), 47-82 doi:10.1177/1534484318798533
- Bryman, A. (2012). *Social research methods* (Fourth ed.). USA: Oxford University Press.
- Cai, Z., Huang, Q., Liu, H., et al. (2018). Improving the agility of employees through enterprise social media: The mediating role of psychological conditions. *International Journal of Information Management*, 38(1), 52-63 doi:10.1016/j.ijinfomgt.2017.09.001
- Cai, Z., Parker, S. K., Chen, Z., et al. (2019). How does the social context fuel the proactive fire? A multilevel review and theoretical synthesis. *Journal of Organizational Behavior*, 40(2), 209-230 doi:10.1002/job.2347
- Caniëls, M. C. J., and Baaten, S. M. J. (2018). How a Learning-Oriented Organizational Climate is Linked to Different Proactive Behaviors: The Role of Employee Resilience. *Social Indicators Research*, 143(2), 561-577 doi:10.1007/s11205-018-1996-y
- Cooke, F. L., Wang, J., and Bartram, T. (2019). Can a Supportive Workplace Impact Employee Resilience in a High Pressure

- Performance Environment? An Investigation of the Chinese Banking Industry. *Applied Psychology*, 68(4), 695-718 doi:10.1111/apps.12184
- Cooper, B., Wang, J., Bartram, T., et al. (2019). Well-being-oriented human resource management practices and employee performance in the Chinese banking sector: The role of social climate and resilience. *Human Resource Management*, 58(1), 85-97 doi:10.1002/hrm.21934
- Dash, Y., and Lenka, S. (2024). HRM Practices and Employee Performance - A Study of IT Sectors in Odisha. *European Economic Letters*, 14(1), 843 - 851 doi:10.52783/eel.v14i1.1109
- DeNisi, A., and Smith, C. E. (2014). Performance Appraisal, Performance Management, and Firm-Level Performance: A Review, a Proposed Model, and New Directions for Future Research. *The Academy of Management Annals*, 8(1), 127-179 doi:10.1080/19416520.2014.873178
- DeNisi, A. S., and Murphy, K. R. (2017). Performance appraisal and performance management: 100 years of progress? *J Appl Psychol*, 102(3), 421-433 <https://www.ncbi.nlm.nih.gov/pubmed/28125265> doi:10.1037/apl0000085
- Doeze Jager-van Vliet, S. B., Born, M. P., and van der Molen, H. T. (2019). Using a portfolio-based process to develop agility among employees. *Human Resource Development Quarterly*, 30(1), 39-60 doi:10.1002/hrdq.21337
- Doeze Jager, S. B., Born, M. P., and Molen, H. T. (2021). The relationship between organizational trust, resistance to change and adaptive and proactive employees' agility in an unplanned and planned change context. *Applied Psychology*, 71(2), 436-460 doi:10.1111/apps.12327

- Franco-Santos, M., and Doherty, N. (2017). Performance management and well-being: a close look at the changing nature of the UK higher education workplace. *The International Journal of Human Resource Management*, 28(16), 2319-2350 doi:10.1080/09585192.2017.1334148
- Franco-Santos, M., and Otley, D. (2018). Reviewing and Theorizing the Unintended Consequences of Performance Management Systems. *International Journal of Management Reviews*, 20(3), 696-730 doi:10.1111/ijmr.12183
- Franco-Santos, M., Stull, D., and Bourne, M. (2022). Performance Management and Wellbeing at the Workplace. In *Handbook on Management and Employment Practices* (pp. 503-524).
- Franco, C., and Landini, F. (2022). Organizational drivers of innovation: The role of workforce agility. *Research Policy*, 51(2) doi:10.1016/j.respol.2021.104423
- Garengo, P., Sardi, A., and Nudurupati, S. S. (2021). Human resource management (HRM) in the performance measurement and management (PMM) domain: a bibliometric review. *International Journal of Productivity and Performance Management*, 71(7), 3056-3077 doi:10.1108/ijppm-04-2020-0177
- Govender, M., and Bussin, M. H. R. (2020). Performance management and employee engagement: A South African perspective. *SA Journal of Human Resource Management*, 18, 1-19 doi:10.4102/sajhrm.v18i0.1215
- Guerci, M., Hauff, S., and Gilardi, S. (2019). High performance work practices and their associations with health, happiness and relational well-being: are there any tradeoffs? *The International Journal of Human Resource Management*, 33(2), 329-359 doi:10.1080/09585192.2019.1695647

- Guest, D. (2017). Human resource management and employee well-being: towards a new analytic framework. *Human Resource Management Journal*, 27(1), 22-38 doi:10.1111/1748-8583.12139
- Hair, J. F., Black, W. C., Babin, B. J., et al. (2019). *Multivariate Data Analysis* (Vol. 8th). Hampshire, UK: Cengage Learning.
- Harsch, K., and Festing, M. (2019). Dynamic talent management capabilities and organizational agility—A qualitative exploration. *Human Resource Management*, 59(1), 43-61 doi:10.1002/hrm.21972
- Herlina, M. G., Lasmy, L., Sudrajat, D., et al. (2021). Ambidexterity and agility in achieving dry port effectiveness in the greater Jakarta. *Uncertain Supply Chain Management*, 9(2), 247-254 doi:10.5267/j.uscm.2021.3.008
- Hill, K., and Plimmer, G. (2024). Employee Performance Management: The Impact of Competing Goals, Red Tape, and PSM. *Public Personnel Management* doi:10.1177/00910260241231371
- Huang, Q., Xing, Y., and Gamble, J. (2016). Job demands–resources: a gender perspective on employee well-being and resilience in retail stores in China. *The International Journal of Human Resource Management*, 30(8), 1323-1341 doi:10.1080/09585192.2016.1226191
- Husni, M., Athamneh, A., and Jais, J. B. (2021). Examining the Effect Of Job Empowerment On Human Resource Agility At Jordanian Commercial Banks: The Mediating Effect of Job Satisfaction: A Conceptual Framework. *Academy of Strategic Management Journal*, 20(6), 1-15
- Kakkar, S., Dash, S., Vohra, N., et al. (2020). Engaging employees through effective performance management: an empirical examination.

- Benchmarking: An International Journal*, 27(5), 1843-1860
doi:10.1108/bij-10-2019-0440
- Karman, A. (2019). The role of human resource flexibility and agility in achieving sustainable competitiveness. *Int. J. Sustainable Economy*, 11(4), 324-346
- Khan, Z., Rao-Nicholson, R., Akhtar, P., et al. (2019). The role of HR practices in developing employee resilience: a case study from the Pakistani telecommunications sector. *The International Journal of Human Resource Management*, 30(8), 1342-1369
doi:10.1080/09585192.2017.1316759
- Khodabandeh, N., Mohammdi, N., Doroudi, H., et al. (2018). Designing a Human Resource Agility Model based on Grounded Theory Approach (Study Case: Social Security Organization). *Iranian journal of educational Sociology*, 1(7), 163-179
- Kumar, P. (2019). Relationship between Performance Management System (PMS) and Organizational Effectiveness (OE): Manufacturing Enterprises in India. *SCMS Journal of Indian Management*, 16(3), 77 - 86
- Kuntz, J., Connell, P., and Näswall, K. (2017). Workplace resources and employee resilience: the role of regulatory profiles. *Career Development International*, 22(4), 419-435 doi:10.1108/cdi-11-2016-0208
- Kuruppu, K. A. D. T. D., and Egodawe, M. H. A. (2021). The Relationship between Knowledge Management Processes and Workforce Agility in the Sri Lankan Banking Sector. *Wayamba Journal of Management*, 12(2) doi:10.4038/wjm.v12i2.7546
- Lee, H. W., Pak, J., Kim, S., et al. (2016). Effects of Human Resource Management Systems on Employee Proactivity and Group

- Innovation. *Journal of Management*, 45(2), 819-846
doi:10.1177/0149206316680029
- Lim, D. H., Hur, H., Ho, Y., et al. (2020). Workforce Resilience: Integrative Review for Human Resource Development. *Performance Improvement Quarterly*, 33(1), 77-101 doi:10.1002/piq.21318
- Lin, C.-S., Xiao, R., Huang, P.-C., et al. (2021). Composing the same song: when and how high-performance work systems can stimulate proactive behavior. *Personnel Review*, 51(9), 2388-2403 doi:10.1108/pr-11-2020-0820
- Maley, J. F., Dabic, M., and Moeller, M. (2020). Employee performance management: charting the field from 1998 to 2018. *International Journal of Manpower*, 42(1), 131-149 doi:10.1108/ijm-10-2019-0483
- Mangipudi, M. R., Prasad, K., and Vaidya, R. W. (2020). Evolution of Performance Management Systems and the Impact on Organization's Approach: A Statistical Perspective. *International Journal of Management (IJM)*, 11(5), 988-1000 doi:10.34218/IJM.11.5.2020.091
- Mat Desa, N., and Abu Hassan Asaari, M. H. (2019). Pay for Performance, Performance Management, and Internal Promotional Opportunities of Human Resource Practices with Job Performance. *International Journal of Business and Management*, 15(1) doi:10.5539/ijbm.v15n1p49
- MCIT. (2023). MCIT Achievements 2022. Retrieved from https://mcit.gov.eg/en/Media_Center/Press_Room/Press_Releases/66732
- Moh'd, S., Gregory, P., Barroca, L., et al. (2024). Agile human resource management: A systematic mapping study. *German Journal of*

-
- Human Resource Management Review*, 0(00)
doi:10.1177/23970022231226316
- Muduli, A. (2016). Exploring the facilitators and mediators of workforce agility: an empirical study. *Management Research Review*, 39(12), 1567-1586 doi:10.1108/mrr-10-2015-0236
- Muduli, A. (2017). Workforce agility: Examining the role of organizational practices and psychological empowerment. *Global Business and Organizational Excellence*, 36(5), 46-56 doi:10.1002/joe.21800
- Muduli, A., and Pandya, G. (2018). Psychological Empowerment and Workforce Agility. *Psychological Studies*, 63(3), 276-285 doi:10.1007/s12646-018-0456-8
- Munteanu, A.-I., Bibu, N., Nastase, M., et al. (2020). Analysis of Practices to Increase the Workforce Agility and to Develop a Sustainable and Competitive Business. *Sustainability*, 12(9) doi:10.3390/su12093545
- Nadhira Putri, D., and Mangundjaya, W. (2020). Examining the Effects of Organizational Learning on Workforce Agility through Psychological Empowerment. *Open Journal for Psychological Research*, 4(2), 85-94 doi:10.32591/coas.ojpr.0402.02085n
- Nguyen, O. T. K., Liu, L. Y. J., Haslam, J., et al. (2021). The moderating effect of perceived environmental uncertainty and task uncertainty on the relationship between performance management system practices and organizational performance: evidence from Vietnam. *Production Planning & Control*, 34(5), 423-441 doi:10.1080/09537287.2021.1934586
- Nudurupati, S. S., Garengo, P., and Bititci, U. S. (2021). Impact of the changing business environment on performance measurement and management practices. *International Journal of Production Economics*, 232 doi:10.1016/j.ijpe.2020.107942

- Nuutinen, S., Ahola, S., Eskelinen, J., et al. (2021). How job resources influence employee productivity and technology-enabled performance in financial services: the job demands–resources model perspective. *Journal of Organizational Effectiveness: People and Performance*, 9(2), 233-252 doi:10.1108/joepp-01-2021-0014
- Nwokeocha, I. M. (2024). Performance Appraisal Techniques And Their Effects On Organizational Growth. *International Journal of Technology and Education Research*, 20(1), 18-31 <https://e-journal.citakonsultindo.or.id/index.php/IJETER/article/view/694>
- Parker, S. K., Wang, Y., and Liao, J. (2019). When Is Proactivity Wise? A Review of Factors That Influence the Individual Outcomes of Proactive Behavior. *Annual Review of Organizational Psychology and Organizational Behavior*, 6(1), 221-248 doi:10.1146/annurev-orgpsych-012218-015302
- Patel, B., Patel, A., and Sharma, A. (2020). Examining the Role of HR Professionals in Developing Efficient and Effective Performance Management Systems. *AAYAM*, 10(1), 17-24
- Patil, E. (2020). How is employee well-being affected by human resource management practices? *THE International Journal of Indian Psychology*, 8(4), 1312-1318 doi:10.25215/0804.143
- Patil, M., and Suresh, M. (2019). Modelling the Enablers of Workforce Agility in IoT Projects: A TISM Approach. *Global Journal of Flexible Systems Management*, 20(2), 157-175 doi:10.1007/s40171-019-00208-7
- Pattnaik, S. C., and Sahoo, R. (2018). Human Resource Practices as Predictors of Organizational Performance: A Structural Equation Modeling Approach. *Global Business Review*, 21(4), 1087-1112 doi:10.1177/0972150918779286

- Paul, M., Jena, L. K., and Sahoo, K. (2020). Workplace Spirituality and Workforce Agility: A Psychological Exploration Among Teaching Professionals. *J Relig Health*, 59(1), 135-153
<https://www.ncbi.nlm.nih.gov/pubmed/31549287>
doi:10.1007/s10943-019-00918-3
- Petermann, M. K. H., and Zacher, H. (2021). Agility in the workplace: Conceptual analysis, contributing factors, and practical examples. *Industrial and Organizational Psychology*, 13(4), 599-609
doi:10.1017/iop.2020.106
- Petermann, M. K. H., and Zacher, H. (2022). Workforce Agility: Development and Validation of a Multidimensional Measure. *Front Psychol*, 13, 841862 doi:10.3389/fpsyg.2022.841862
- Raut, P. K., Das, J. R., Gochhayat, J., et al. (2021). Influence of workforce agility on crisis management: Role of job characteristics and higher administrative support in public administration. *Materials Today: Proceedings* doi:10.1016/j.matpr.2021.08.121
- Salas-Vallina, A., Alegre, J., and López-Cabrales, Á. (2020). The challenge of increasing employees' well-being and performance: How human resource management practices and engaging leadership work together toward reaching this goal. *Human Resource Management*, 60(3), 333-347 doi:10.1002/hrm.22021
- Saleem, M. S., Isha, A. S. N., Mohd Yusop, Y., et al. (2021). Agility and Safety Performance among Nurses: The Mediating Role of Mindful Organizing. *Nurs Rep*, 11(3), 666-679
<https://www.ncbi.nlm.nih.gov/pubmed/34968341>
doi:10.3390/nursrep11030063
- Salmen, K., and Festing, M. (2021). Paving the way for progress in employee agility research: a systematic literature review and

- framework. *The International Journal of Human Resource Management*, 1-54 doi:10.1080/09585192.2021.1943491
- Santhosh, H. (2021). Significance of Performance Management Activities in Improving Employees Skills and Abilities: A Study On Selected It Industries *IRE Journals*, 4(7), 55 - 60
- Sardi, A., Sorano, E., Ferraris, A., et al. (2020). Evolutionary paths of performance measurement and management system: the longitudinal case study of a leading SME. *Measuring Business Excellence*, 24(4), 495-510 doi:10.1108/mbe-01-2020-0016
- Saritha, P., and Murthy, Y. S. (2024). Advancing Performance Management and Impact on Employee Performance – a Comprehensive Review and Future Directions. *EPRA International Journal of Economic and Business Review*, 11(12), 54-58 doi:10.36713/epra15349
- Schleicher, D. J., Baumann, H. M., Sullivan, D. W., et al. (2018). Putting the System Into Performance Management Systems: A Review and Agenda for Performance Management Research. *Journal of Management*, 44(6), 2209-2245 doi:10.1177/0149206318755303
- Sekaran, U., and Bougie, R. (2016). *Research methods for business : a skill-building approach* (7th ed.). United Kingdom: John Wiley & Sons.
- Sherehiy, B., and Karwowski, W. (2014). The relationship between work organization and workforce agility in small manufacturing enterprises. *International Journal of Industrial Ergonomics*, 44(3), 466-473 doi:10.1016/j.ergon.2014.01.002
- Shields, J., Kim, S., Chhetri, A., et al. (2023). Traditional, transitional and new performance management practices in Australian organisations: incidence, coverage and perceived effectiveness. *Asia Pacific Journal of Human Resources*, 61(3), 554-581 doi:10.1111/1744-7941.12372

- Subramanian, N., and Suresh, M. (2022). Assessment Framework for Agile HRM Practices. *Global Journal of Flexible Systems Management*, 23(1), 135-149 doi:10.1007/s40171-021-00294-6
- Tamtam, F., and Tourabi, A. (2020). A Framework for Measuring Workforce Agility: Fuzzy Logic Approach Applied in a Moroccan Manufacturing Company. *Advances in Science, Technology and Engineering Systems Journal*, 5(3), 411-418 doi:10.25046/aj050352
- Tessarini Junior, G., and Saltorato, P. (2021). Workforce agility: a systematic literature review and a research agenda proposal. *Innovar*, 31(81), 155-167 doi:10.15446/innovar.v31n81.95582
- Tweedie, D., Wild, D., Rhodes, C., et al. (2018). How Does Performance Management Affect Workers? Beyond Human Resource Management and Its Critique. *International Journal of Management Reviews*, 21(1), 76-96 doi:10.1111/ijmr.12177
- Varshney, D., and Varshney, N. K. (2020). Workforce agility and its links to emotional intelligence and workforce performance: A study of small entrepreneurial firms in India. *Global Business and Organizational Excellence*, 39(5), 35-45 doi:10.1002/joe.22012
- Wang, C. J., and Yang, I. H. (2021). Why and How Does Empowering Leadership Promote Proactive Work Behavior? An Examination with a Serial Mediation Model among Hotel Employees. *Int J Environ Res Public Health*, 18(5) doi:10.3390/ijerph18052386
- Zhang, X., Lin, Z., Liu, Y., et al. (2020). How do human resource management practices affect employee well-being? A mediated moderation model. *Employee Relations: The International Journal*, 42(4), 903-919 doi:10.1108/er-08-2019-0320