The Role of Employees’ Technology Readiness, Job Meaningfulness and Proactive Personality in Adaptive Performance

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Abstract: The escalating utilization of digital technology has created new challenges and therefore calls for modifications in organizational culture, technology infrastructure and job structure. However, there is still a lack of research studies that view digital technology from the perspective of how challenges of digital technology can be addressed at the employee level. Transformation toward digitalization requires employees’ readiness to adapt to the new job structure. Adaptability is the employees’ ability to adapt to changes. Employees with adaptive performance can solve problems creatively, manage volatile situations and handle pressure effectively. Adaptive performance can be enhanced when employees are ready to adopt the utilization of digital technology or technology readiness. Technology readiness is the tendency of employees to use new technology to achieve goals related to their lives and work. However, an individual’s tendency to utilize digital technology varies depending on their perception of their job’s meaningfulness and the personality that the person has. Therefore, the objective of this study is to investigate the relationship between employees’ technology readiness and adaptive performance, and to examine the role of job meaningfulness as a mediator and proactive personality as a moderator. Data was analyzed using the PLS-SEM. The results showed that employees with the tendency to utilize technology in their jobs have higher adaptive performance. Furthermore, the relationship is mediated by job meaningfulness and is enhanced by employees with highly proactive personalities. The findings from this study can drive organizations to motivate their employees and provide a flexible job structure to encourage the employees to utilize technology more effectively.

Keywords: technology readiness; job meaningfulness; proactive personality; adaptive performance; digitalization

1. Introduction

Organizations are taking the steps toward utilization of digital technology in managing business to ensure business continuity, maintain a competitive edge and improve business performance. The utilization of digital technology can speed up work processes [1] and increase the organization’s productivity [2]. Moreover, failure of an organization to adopt digitalization can cause the organization to withdraw from the market [3]. The transformation from the use of analog to digital has created new challenges for organizations when it comes to implementing the process of digitalization. Organizations have to change their vision and mission, provide the latest technology infrastructure, and develop multiple strategies in facing the challenges toward realizing the utilization of digital technology [4,5]. Besides that, digitalization has also introduced changes in the aspect of new job structures and patterns [6]. Traditional working methods have shifted to more sophisticated and high-technology methods [7].

Hence, digital transformation not only presents challenges for organizations, but also impacts each employee [8]. However, the majority of the previous studies on digital transformation have been more focused on the smoothness of dealings with external...
stakeholders, especially their relationship with customers, and disregarded the roles of employees in the process [9,10]. But digital transformation requires employees to adapt to the changes in the new working environment by learning digital skills and critical thinking skills in the course of executing their jobs [1,11]. Failure to adapt to the changes may impact productivity and jeopardize the continuity of the organization [12]. Therefore, organizations not only need to equip their employees with digital skills [8], but also need to require capable employees to adapt to the changes in the new job structure [11]. Employees’ success in adapting to the utilization of digital technology in business dealings can be measured through adaptive performance [13].

Adaptive performance can be viewed as a form of behavior under the control of the employees themselves [14]. Hence, employees’ capability to adapt to changes in the high-technology job design requires the readiness and willingness of a flexible employee [8]. Employees’ technology readiness is their tendency to accept and adopt new technology to achieve their goals related to their lives and work [15]. The concept of technology readiness originated from and has been studied extensively in the marketing field [15,16]. However, in recent years, it has been adopted more broadly among employees in organizations and research about it is being actively conducted [17,18] while the results toward a positive output are varied [19,20].

Employees’ tendency to adapt to new work environments vary depending on the underlying mechanism, such as personalities [13], and the new work environment may potentially influence the feeling of meaningfulness among employees as well [21]. Therefore, this study is interested in examining proactive personality as a moderating variable which determines the strength of the relationship between employees’ technology readiness and their adaptive performance. Employees with proactive personalities are very active and motivated in obtaining new information, learning and updating their knowledge and skills, identifying new work processes and creating productive work environments [22]. Since proactive employees are always optimistic and have the initiative to form a more suitable environment to suit the new requirements, they have the potential to adapt to the new job structure.

Although there is an increasing amount of academic and practical interest in the concept of job meaningfulness, there is still a lack of research studies that examine from the perspective of digitalization at the workplace [21]. Technology at the workplace has the potential to radically change the way a job is performed, which may have implications on jobs’ meaningfulness [23]. Experienced meaningfulness is defined as “the degree to which the employee experiences the job as one which is generally meaningful, valuable and worthwhile” [24] (p. 162). There are various expressions of meaningfulness being experienced by employees, for example, as a result of achieving objectives concerning with job career [25] and as a result of interacting and having an impact on others, such as Corporate Social Responsibility (CSR) [26]. Hence, this study would like to examine employees’ tendency to utilize technology in the workplace and experienced meaningfulness.

Based on the problem statement above and existing research gap, this study hypothesized that that technology readiness can contribute to the increase in adaptive performance in facing digital transformation and changes in business environments. The level of employees’ technology readiness may also vary based on the two underlying mechanisms i.e., proactive personality and job meaningfulness. Therefore, the purpose of this study is to examine how much employees’ technology readiness influences adaptive performance through job meaningfulness and the roles of proactive personality as a moderator between technology readiness and adaptive performance.

2. Literature Review and Hypothesis Development

2.1. Adaptive Performance

Adaptability is not a new concept. However, continuous changes in the environment have made adaptability a topic that has constantly garnered attention from researchers and industry practitioners in order to further understand and increase employees’ adaptive
performance [27]. Pulakos et al. [27] are among the earliest researchers to discuss several dimensions in adaptability that employees go through to face various changes in the workplace. The adaptability dimensions that have been discussed include: the capability to control emergency situations during crises; the ability to handle work pressure; the ability to engage in creative problem solving; the capacity to deal with volatile and unpredictable work situations; and demonstrable interpersonal adaptation, cultural adaptation and physically-oriented adaptation [27].

Besides that, Park and Park [13] viewed adaptability as employees’ capability to adapt to changes and measured it using adaptive performance. Adaptive performance refers to the level of employees’ ability to adapt to changing environments by enhancing their work performance [13,20]. Employees with adaptive ability can solve problems creatively, manage volatile situations, learn something quickly, demonstrate adaptability culture and can handle pressure and manage crises [13]. Therefore, it is crucial to understand how employees’ adaptive performance can be improved, especially in ways such as learning new technologies that are related to their job structure with the digitalization [13].

Changes in work environments that are in line with technology changes have initiated the concept of technology adaptability among employees [1]. Employees must adapt to the newly introduced technology applications, be ready to learn and enhance their technology skills and address any challenges in executing their tasks in the new job structure [13,28]. On the other hand, if employees cannot adapt to the requirement of this job structure, they will face difficult times in functioning within the group and this can affect their position in the organization. Employees who can adapt to the new skills and job structure are able to not only enhance their adaptive performance but also guarantee the overall success of the organization [13,29] and their sustainability.

2.2. Technology Readiness and Adaptive Performance

To realize digital transformation, organizations have made large capital investments to enhance their technology infrastructure facilities [30] and to provide training and technical skills coaching that are suited for the employees’ needs [31]. Besides that, organizations have also taken preparatory measures in communicating the changes in technology to their employees so that they would be aware of and ready to face digital transformation [32,33]. However, readiness to face digital transformation is the responsibility of not only organizations, but the employees also have the obligation to be prepared, have the tendency to utilize technology [34,35] and to adapt to new job structures based on digitalization [6].

Technology readiness can be viewed as a mindset overview produced by mental signals that determines the tendencies of an individual’s behavior to utilize new technology in their life and work [15,36]. Technology readiness is often examined to understand the level of employees’ readiness towards the utilization of technology [15]. Technology readiness comprises of four components, namely: optimism, innovativeness, discomfort, and insecurity, which are then categorized under a two-dimensional construct, i.e., motivators (innovativeness, optimism) and inhibitors (insecurity, discomfort). Dimensions that motivate are when individuals feel optimistic and more innovative with the presence of technology. Meanwhile, dimensions that hinder are when individuals feel uncomfortable and unsafe with the use of technology. An optimistic employee will try to adapt to the technology and to enhance their knowledge and skills about new technology [34]. Although Parasuraman [15] explained that technology readiness includes the two-dimensional construct, some studies have used multi-dimensional or unidimensional perspectives [37]. Other studies adopted only the positive dimensions namely, optimism and innovativeness [18].

Past studies have found that employees with a positive perception toward the utilization of technology can adapt the new technical skills with more ease [38]. Therefore, technology readiness can spur employees’ motivation to adopt the technology and to influence their behavior to utilize the new technology [35], which will affect their work performance positively [19,34,35]. Employees’ motivation, attitude and positive reinforcement
are core factors that influence employees’ intention to utilize technology to adapt to the new job structure [14]. Empirically, it has also been proven that the use of new technology can increase employees’ job effectiveness [1] and has the potential to enhance employees’ adaptive performance.

Therefore, based on the positive dimension of technology readiness, which is to motivate employees’ tendency to utilize the latest technology, and a review of past studies about adaptive performance, this study proposes that an empirical study is conducted to test:

**Hypothesis 1. There is a positive relationship between technology readiness and adaptive performance.**

### 2.3. Technology Readiness, Job Meaningfulness and Adaptive Performance

Employees have the perception that job meaningfulness plays an important role in the organization as a trigger to employees’ positive behavior [39] and job outcome [40], especially individual performance [40–42]. Most researchers view job meaningfulness as a positive concept and conceptualize it as jobs that are important, jobs that add value, jobs that are fulfilling and jobs that are rewarding [43]. Hackman and Oldham [24] explained job meaningfulness as the importance of the job based on the outcome of the job itself and the impacts on the lives of other people, direct contribution to common goals through tangible results, and the utilization of various skills, talents and activities for the purpose of enhancing the perception of meaningfulness at the workplace. Meanwhile, according to Steger et al. [44], job meaningfulness is defined as experiencing a positive meaning in work, viewing work as the main way to find meaning and perceiving that work will lead toward a greater good. Individuals seek for meaning in their jobs based on their experience such as those who recognize their presence and their feeling of belonging (where am I?), their relationships (who am I?) and their contributions (what is my value?) [45]. Hence, job meaningfulness makes individuals feel that they’re worthy, useful and valuable, which then facilitates job involvement [46].

Lips-Wiersma and Morris [47] have classified drivers of job meaningfulness into four which are: one’s own self, one’s own ability, benefitting other people and appreciated by the society. Job meaningfulness is a subjective matter. Therefore, if employees desire their jobs to be meaningful, they can influence the level of meaningfulness by focusing on positive goals and performing their jobs based on the goals [48]. Besides that, the employees’ ability to execute the tasks given can also enhance the meaning of the jobs [49]. Their jobs become very meaningful when the work can be performed with the efforts and ability that they have. Besides that, according to Vuori et al. [48], employees feel that their jobs are meaningful when they can provide beneficial contributions and add value to society and the work is appreciated by other people.

Scholars are even more interested to study the effect of job meaningfulness towards job performance, and not job satisfaction [50] or other benefits afforded by the job such as financial rewards [51], because past studies have shown that the relationship between job meaningfulness and job satisfaction or other possible benefits is weak. Job meaningfulness can build a lasting personal resource and this accumulated personal resource can be translated into long-term good performance [42] This study uses adaptive performance to measure individual achievement, where adaptive performance covers task effectiveness and responsibilities under the employee as the component of adaptability task or new tasks demand, extraordinary tasks, or at least unpredictable tasks that are given by the organization.

Although there are an increasing number of academic and practical interests in the concept of job meaningfulness, there is still a lack of research studies that examine the question from the perspective of digitalization at the workplace, a trend which can potentially influence the feeling of meaningfulness among employees [21]. Digitalization at the workplace can nurture the perception of a meaningful work; it can even present
hindrance in the job [52]. It depends on the individuals’ subjective understanding and their organizations’ environment. In other words, it depends on their own selves, because an individual may have different perceptions about working at a digital workplace and may be more ready to adapt to a digital environment as such [52]. There are other factors under IR4.0 that can drive job meaningfulness, such as job changes, loss of job, presence of new jobs, new methods to perform work and communication methods in an organization [53]. Meanwhile, according to Kuper [54], in digital transformation at the workplace, if employees have the perception that job execution using the digital concept provides meaning to their jobs, then the digital system functions as a good job support and not as a system that control employees’ work.

Job meaningfulness also functions as an underlying mechanism. For example, in a study related to job meaningfulness as a mediator, the researchers examined the effect of human interaction relationship, such as customers’ rudeness, toward job satisfaction through job meaningfulness. The results of the study showed that employees with low job meaningfulness are unable to maintain their performance and advance at the workplace, so they will likely have lower job satisfaction at work [55]. For job meaningfulness as a moderator, study found that employees with higher job meaningfulness have higher appreciation for corporate social responsibility activities and attain higher achievement in their work [56]. This viewpoint contends that having a positive perception of one’s employment can encourage meaningfulness of work. Therefore, this study hypothesized that:

**Hypothesis 2.** There is a positive relationship between employees’ technology readiness and job meaningfulness.

**Hypothesis 3.** There is a positive relationship between job meaningfulness and adaptive performance.

**Hypothesis 4.** Job meaningfulness is a mediator in the relationship between employees’ technology readiness and adaptive performance.

2.4. Proactive Personality, Technology Readiness and Adaptive Performance

In organizations, employees with proactive personality are valuable assets because they can provide high-quality individual performance [57], are ready to face challenges [57,58] and contribute to the success of the organizations [59]. Proactive personality is described as individual personality who have the attitude tendency and behavior that can effectively identify and handle pressure and changes in the environment [60]. Employees with this personality will take the initiative to change in order to achieve career goals and make the effort to learn a better to perform a particular task as well as actively make improvements [60,61]. Volatile work environments require employees to constantly upgrade their skills and knowledge and to have a flexible attitude in order to adapt to changes in work environment [62,63] which will lead to positive outcomes for the individual and organization [59].

Therefore, the traits of employees with proactive personality can enhance their adaptive performance and they can make early preparation to face technological changes in the organization [61]. By doing that, new work processes can be realized effectively because the employees can adapt more easily to the environmental changes as well as job execution methods that keep changing with time [64]. Past studies have consistently showed that proactive personality is always connected to a positive output at the workplace and employees have the capacity to adapt to changing environment for the sake of their careers [65]. They have a long-term vision, and they know that they can expect the risks which will be faced if they fail to adapt to the new working environment [66].

Meanwhile, in the context of technology readiness, employees with proactive personality are optimistic individuals. They have an intrinsic motivation to adopt new technology, they accept changes more readily and they like the challenge to learn something new to expand their own technology-based knowledge [61,67]. The study by Spitzmuller et al. [68] found that students with proactive personality can use the digital mode in their studies by
creating an online learning community. Although the study had a different perspective, it is still empirically proven that individuals with proactive personality can accept and utilize new technology more readily. Based on previous studies that have proven empirically the positive traits of individuals with proactive personality, this study hypothesized the following:

**Hypothesis 5.** There is a positive relationship between proactive personality and adaptive performance.

**Hypothesis 6.** Proactive personality can moderate the relationship between employees’ technology readiness and adaptive performance whereby adaptive performance can be enhanced if an individual has a higher proactive personality compared to those with a lower proactive personality.

### 2.5. Theoretical Background

The relationship between technology readiness and adaptive performance in this study is based on the Conservation of Resources (COR) theory. The Conservation of Resources theory was developed by Hobfoll [69] to explain a condition in which individuals will try to obtain, conserve and protect the resources that they value; but stress appears when the resource disappears, and they are threatened with losses or fail to expand existing resources after a large investment. Resources referred to in this theory are objects (for example: jobs), conditions (for example: a positive mood), personal traits (for example: being open-minded) and energy. A loss of jobs may occur when employees are not ready to utilize technology in facing the changes of a new job structure. Technology unreadiness makes it difficult for employees to adapt to the new work skills and they will face a tough time to continue working which will risk a loss of jobs [14].

This study employed the self-determination theory as the fundamental theory that forms the basis of job meaningfulness [70]. According to this theory, a natural individual’s needs, which are competency, autonomy and relatedness, can be met when they are supported by intrinsic motivation and eudaimonia (well-being) [71]. Without competency, it is more difficult for individuals to achieve meaningfulness in their jobs. In this theory, competency refers to individual’s perception toward their capability to handle challenging tasks at the workplace and create a sense of mastery in their jobs [71,72]. They are certain that employees’ competency will have a positive effect to their work.

### 2.6. Conceptual Framework

The aim of this research is to examine the relationship between employee technology readiness and adaptive performance through job meaningfulness and moderated by proactive personality. Figure 1 illustrates the conceptual framework.

![Conceptual Framework](image-url)
3. Research Methodology

3.1. Sampling and Procedures

This study has employed the quantitative approach to test the hypotheses that have been constructed based on the objectives of the study. The population of the study is employees who are working both in the public and private sectors in Klang Valley, Malaysia. As for the sample size, the study refers to Anderson and Gerbing [73], who stated that the minimum sample size to make an appropriate estimate is 100–150 respondents. In total, sets of 200 questionnaires were distributed. Out of these 200, a total of 189 were valid as a final set with a 94.5% response rate. Therefore, the sample size of 189 in this research has exceeded the requirement and is adequate to represent the population. This sample size is also suitable for the use of PLS-SEM in analyzing the data [74]. This study is survey research which employed self-governed questionnaire survey method. Questionnaire forms were distributed to employees using the simple sampling technique and the survey were conducted online using a Google Form. The majority of the respondents are female (60.3%), while 39.7% are male. Meanwhile, 49.2% of respondents are between the ages of 31 to 40, followed by 21 to 30 (33.3%), 41 to 50 (10.6%), less than 20 (5.8%) and more than 50 years old (1.1%). In terms of education, the majority of respondents (34.9%) come from SPM backgrounds, followed by bachelor’s degree (28.6%), diplomas holders (28%) and master’s degree (8.5%). Lastly, for the sector of service, 48.1% of respondents are in the public sector, followed by the private sector (46%), others (5.3%) and NGO (5.3%).

3.2. Measurement

A structured questionnaire has been designed to include all four variables of this study, which are employees’ technology readiness, job meaningfulness, proactive personality and adaptive performance. Respondents have answered all items in the questionnaire using the scale from 1 (strongly disagree) to 5 (strongly agree). The measuring items for employees’ technology readiness (motivator dimension) has been adapted from the study by Parasuraman and Colby [75] by using 21 items. Among the examples of questions in this section are “New technology contributes to a better quality of life” and “I like using the latest advanced technology”. Job meaningfulness is measured using 7 items which have been adapted from the study by Steger et al. [44]. Among the examples of questions in this section are “My job helps me to know myself better” and “I found my career to be very meaningful”. Proactive personality is measured using 10 items which have been adapted from the study by Bateman and Grant [60]. Among the examples of questions in this section are “If I see something that I don’t like, I have to fix it” and “Nothing makes me happier than seeing my ideas become reality”. Adaptive performance is measured using 8 items which have been adapted from the study by Koopmans et al. [76]. Among the examples of questions in this section are “I work to make sure that my job skills are always up-to-date” and “I can handle volatile and unpredictable situations at the workplace”.

4. Data Analysis and Results

This study has employed the Partial Least Square-Structural Equation Modeling (PLS-SEM) or SmartPLS 3.0 [77] as the statistical tool to test the measurement model and structural model. This approach is suitable for the study since it has the ability to test a complex model with a modest sample size [78]. PLS-SEM is able to explain the constructs that are modelled in the abstract manner based on more concrete dimensions [79]. PLS-SEM requires data analysis to be performed at two stages which are (1) to test the measurement model to examine the relationship between measuring items with independent variables and dependent variables; and (2) to test the structural model to examine the relationship between independent variables and dependent variables [80]. Hypothesis testing for direct relationship and indirect relationship were based on the findings from the structural model. For both stages, four procedures in SmartPLS 3.0 were applied which were: PLS algorithm, bootstrapping, blindfolding and PLS predict.
4.1. Measurement Model Assessment

In the assessment of reflective measurement, three main assessment criteria are needed. These are internal consistency, convergent validity and discriminant validity. Internal consistency was determined by using constructs’ composite reliability (CR) values, whilst convergent validity was determined using item loadings and average variance extracted (AVE) values. As shown in Table 1, all loadings meet the recommended threshold of 0.708 [81]; hence, all except the items with low loadings were maintained. Additionally, if the construct met the AVE requirement of 0.5, certain items with loadings less than 0.708 were retained. Following that, all constructs had CR values more than the minimum threshold of 0.7, and all AVEs were greater than 0.5 following item deletion [81]. Thus, the constructs meet the criteria for reliability and convergent validity.

Table 1. Measurement Model for Reflective Constructs.

<table>
<thead>
<tr>
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<th>Indicator</th>
<th>Loading</th>
<th>AVE</th>
<th>CR</th>
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<td>JM2</td>
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Next, Table 2 depicts a method of discriminant analysis using HTMT. The result indicates that all constructs exhibit sufficient or satisfactory discriminant validity as the HTMT value is below the threshold of 0.85 [82].

Table 2. Discriminant Validity via HTMT.

<table>
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<th>Adaptive Performance</th>
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<th>Proactive Personality</th>
<th>Technology Readiness</th>
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<td>0.734</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactive Personality</td>
<td>0.810</td>
<td>0.688</td>
<td></td>
</tr>
<tr>
<td>Technology Readiness</td>
<td>0.679</td>
<td>0.549</td>
<td>0.692</td>
</tr>
</tbody>
</table>

4.2. Structural Model Assessment

After confirming their reliability and validity, the hypotheses are tested through structural model. In the initial stage of accessing the structural model, it is important to address the lateral collinearity issue. To assess the collinearity issue, the VIF value needs to be less than 5.0 [83]. The result showed that all the inner values for the independent variables are less than 5.0, indicating that the collinearity issue is not a concern. [83].

Next, this study develops four direct hypotheses between the constructs, with one mediating and moderating hypothesis, which all hypotheses supported. In order to test the significance level, t-statistics for all paths are generated using Smart-PLS bootstrapping. Based on the assessment in Table 3, all six hypotheses have a t-value ≥1.645; thus, the significance is at a 0.05 level of significance. Specifically, technology readiness significantly influences adaptive performance (β = 0.197, p = 0.008), followed by the strength of the relationship between job meaningfulness and adaptive performance (β = 0.720, p = 0.000).
### Table 3. Structural path analysis.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Standard Beta</th>
<th>Standard Error</th>
<th>p-Value</th>
<th>LL</th>
<th>UL</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Technology Readiness -&gt; Adaptive Performance</td>
<td>0.197</td>
<td>0.074</td>
<td>0.008</td>
<td>0.046</td>
<td>0.336</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>Technology Readiness -&gt; Job Meaningfulness</td>
<td>0.529</td>
<td>0.074</td>
<td>0.000</td>
<td>0.344</td>
<td>0.643</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>Job Meaningfulness -&gt; Adaptive Performance</td>
<td>0.720</td>
<td>0.157</td>
<td>0.000</td>
<td>0.376</td>
<td>1.003</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>Technology Readiness -&gt; Job Meaningfulness -&gt; Adaptive Performance</td>
<td>0.381</td>
<td>0.086</td>
<td>0.000</td>
<td>0.190</td>
<td>0.532</td>
<td>Supported</td>
</tr>
<tr>
<td>H5</td>
<td>Proactive personality -&gt; Adaptive Performance</td>
<td>0.906</td>
<td>0.169</td>
<td>0.000</td>
<td>0.551</td>
<td>1.223</td>
<td>Supported</td>
</tr>
<tr>
<td>H6</td>
<td>Job Meaningfulness * Proactive Personality -&gt; Adaptive Performance</td>
<td>0.165</td>
<td>0.056</td>
<td>0.003</td>
<td>0.046</td>
<td>0.275</td>
<td>Supported</td>
</tr>
</tbody>
</table>

For the mediating relationship, the data show that the indirect effect ($\beta = 0.381$, $p = 0.000$), with 95% Boot, CI Bias Corrected L (LL = 0.190, UL = 0.532). There is no zero between any of the confidence intervals of each of the relationships. Hence, the relationships on the mediating effect of job meaningfulness on the relationship between independent variables technology readiness and adaptive performance are therefore supported empirically.

Next, for the moderating effect (Figure 2), the interaction between job meaningfulness*proactive personality is positive, thus, it can be said that the relationship between job meaningfulness and adaptive performance would be stronger when proactive personality is higher.

![Figure 2. The moderating effect of proactive personality.](image)

Regarding the level of coefficient of determination ($R^2$), according to Hair et al. [81], $R^2$ represents the amount of variance in the endogenous construct that all exogenous constructs can explain. As shown in Table 4, the $R^2$ value is 68% for adaptive performance, which is moderate, and 27% for job meaningfulness, which is more than the very weak value (0.25) as suggested by Hair et al. [84]. In addition, the effect size is also assessed by $f^2$. 


It shows that all the variables have a medium effect size on adaptive performance. Lastly, the predictive relevance assessed by $Q^2$ shows that all endogenous constructs in this study had a $Q^2$ value larger than zero, including the adaptive performance with 0.459 and job meaningfulness with 0.184. This demonstrates the exogenous constructs’ ability to predict the endogenous construct.

Table 4. Effect Size, $R^2$ and $Q^2$.

<table>
<thead>
<tr>
<th></th>
<th>$f^2$</th>
<th>$R$ Square</th>
<th>$R$ Square Adjusted</th>
<th>$Q^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Performance</td>
<td></td>
<td>0.689</td>
<td>0.682</td>
<td>0.459</td>
</tr>
<tr>
<td>Job Meaningfulness</td>
<td>0.120</td>
<td>0.279</td>
<td>0.276</td>
<td>0.184</td>
</tr>
<tr>
<td>Proactive Personality</td>
<td>0.156</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Readiness</td>
<td>0.069</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Discussion

This study examined employees’ readiness toward the utilization of technology or employees’ technology readiness and adaptive performance in a dynamic work environment and technology enhancement in business competition. This study also tested whether the relationship of employees’ technology readiness and job performance becomes significant through job meaningfulness and are moderated by employees’ proactive personality.

The first hypothesis (H1), which tested the relationship between employees’ technology readiness and adaptive performance, is supported in this study. The result of the study has proven empirically that employees with a high tendency to utilize technology when performing their jobs can enhance their adaptive performance where they have the ability to adapt easily to changes in the high technology jobs. This finding is in line with the previous study about the positive perception of employees of the utilization of technology and the ability to enhance their own with new technical skills [38]. Employees’ readiness to utilize technology also motivates them to accept the presence of technology in their jobs and this can have positive effects to their job performance in general [14,34,35].

The relationship between employees’ technology readiness and job meaningfulness which was tested in the second hypothesis (H2) is also supported. The research found that employees who are optimistic and view the utilization of technology in their work as a means to trigger innovation feel that the work that they do is meaningful. The result of this study is consistent with previous studies which found that digitalization in the workplace can influence the feeling of meaningfulness [21]. However, digitalization the workplace can also hinder certain aspects of a job. If, however, employees have positive perceptions toward technology and are able to utilize technology, then it can enhance the meaningfulness of their jobs [48,49]. Similarly, a positive relationship between job meaningfulness and adaptive performance (H3) is also supported in this study. The result of this study is also supportive of several past studies that job meaningfulness is a trigger for positive behavior and outcomes such as increase in job performance [40–42].

Hypothesis 4 (H4), which tested job meaningfulness as a mediator of the relationship between employees’ technology readiness and adaptive performance, is also supported. Employees with the readiness to face the transformation of analog to digital have optimistic and innovative attitude and view their jobs as very important, and this leads to a high job meaningfulness. Job meaningfulness is also a trigger to internal motivation, or an intrinsic motivator [85], which can encourage employees to adapt to the changes in their job structure easily and enhance their adaptive performance. The result of this study enforces the views of several past studies which stated that job meaningfulness is a mediator between positive behavior and positive outcomes, such as an individual’s readiness to accept changes and adaptive performance [86], mediate between learning-oriented individuals and job involvement [84], and mediate between job involvement and sales achievement, as well as customer satisfaction [87].

Besides testing the roles of mediating variables, this study has also tested the roles of proactive personality as a moderator to the relationship between employees’ technology
readiness and adaptive performance. The direct relationship between proactive personality and adaptive performance is supported (H5), as is the moderating relationship (H6). Employees with proactive personalities are employees who are optimistic about the utilization of technology [61,67], and this is consistent with several past studies that have found them to accept technology changes in the environment [64]. Employees’ proactive personalities are also connected to positive work outcomes such as enhanced job performance [59] in general and specific work performance such as innovative performance [88], creative performance [57] and adaptive performance [65]. Previous studies have viewed meaningfulness as subjective and would differ based on different individuals’ assessment such as personality [47] and this study supports that view. Furthermore, the result of this study is also consistent with past studies that have empirically proven that proactive personality is a moderating variable which enhances the relationship between employees’ perception toward organizational support and psychological empowerment [89], high performance work system and employees’ performance [90] as well as proactive behavior and employees’ effectiveness [91].

6. Research Implications

Although much has been discovered about the concept of adaptability, constant changes in the environment mean that this concept needs to be continuously studied [27], especially when related to employees’ adaptive performance in a dynamic environment [13]. This study presents several implications to organizational theory and management when addressing the challenges in the utilization of digital technology. This study has added to the body of knowledge in the field of organizational behavior which stresses that adaptive performance is an important measure to evaluate the extent of the employee’s capability to adapt to work environment in line with technology advancement. The results from this study also add to the evidence of the Conservation of Resources theory which stresses that employees will strive to protect the resources that they value such as jobs. Therefore, with technology readiness, employees will have the tendency to utilize technology and can adapt to changes in the new job structure. Employees will continue to move forward confidently with technology readiness and skills that they have, and they will be able to enhance their own performance and that of their organization. Besides that, there are two underlying mechanisms that act as a mediator and a moderator that can enhance and strengthen the relationship between employees’ technology readiness and adaptive performance.

The first practical implication: other than the task of enhancing the infrastructure facilities, the management also faces challenges in encouraging employees to accept the changes in job environment from analog to digital. Although coaching and training have been provided to the employees to enhance their technology skills, it is not sufficient if the employees themselves do not have the tendency to utilize the technology. Employees at every level must be open to changes and strive to advance and excel in every situation to contribute to maintaining the organization. To achieve this goal, employees must be given the motivation to have an optimistic and innovative attitude in the utilization of technology. Secondly: adaptive performance can also be enhanced if the employee has a positive perception toward the work that they do such as have job meaningfulness. The management can instill the meaningfulness by changing the roles of managers from giving instructions to facilitating. Employees must be provided with flexibility, a better work design and positive reinforcement to trigger acceptance for work changes toward digitalization. Thirdly: this study has proven empirically that organizations that have employees with proactive personality have an advantage in facing the challenges in digital transformation. Therefore, Human Resource departments must ensure that new employees recruited have proactive personality, possess proactive behavior and that they also have a high capability to adapt to any changes in work environment.
7. Research Limitation

This study has focused on employees who are working in the Klang Valley. Therefore, it is recommended that future research consider a bigger sample across a larger geographical area. Besides that, data for the present study was compiled from the perception of employees, which may lead to issues such as the shaping of responses to conform with socially acceptable behavior. Hence, it is proposed that in the future, data is compiled from two or more sources using the multilevel method to prevent the issues. This study has employed a cross-sectional survey method; therefore, future research should consider the use of longitudinal survey to evaluate adaptive performance in order to generate a deeper understanding. Future research can also use the comparison approach, by comparing data across locations and industries to produce more general results. Finally, in order to make a greater practical contribution and help organizations better prepare for the employee sustainability in dynamic working environment, future studies must expand the underlying mechanism by examining the role of various variables that can be used as mediators and moderators.

8. Conclusions

Technology has significantly contributed to the ability of business resilience. Organizations must prioritize employees when considering how technology will change the way work is done since thriving employees are crucial for the achievement of the Sustainable Development Goals (SDG). Employers must involve their workforce in the transformation of technology by being open with them, consulting with them, and involving them in the creation and acceptance of new technologies. The firm also needs to ensure inclusivity and a fair distribution of the advantages of tech-driven advances in order to empower employees to gain from new technology. Organizations that assist their employees in reaching their full potential not only influence the workplace but also promote lifetime employability and sustainable economic growth.

The digital transformation requires changes not just at the meso-level, i.e., the organizations’ strategies but also at the micro-level, i.e., the employees’ ability. The advent of jobs based on digitalization have brought about changes to work methodology and advocated for employees to transform their mindset from the use of analog system to high technology system. Employees need to be committed to continue learning in order to utilize technology. On the other hand, employees who are hesitant to deal with technology or have no interest on technology are employees who are considered as ‘the biggest losers’ and they will face difficulties in maintaining their position in the working world.

The Conservation of Resources theory and empirical evidence from several previous research was referred to as the basis to form the conceptual framework and to bridge the research gap. A total of six (6) research hypotheses had been developed to be tested empirically. The originality of this study lies in its conceptual framework, which was supported significantly by empirical evidence. This study conceptualized employees’ technology readiness as motivator dimension with two component constructs which are optimistic and innovative. Technology readiness is viewed from the aspect of tendency in employees’ behavior in utilizing technology to adapt changes in the context of digitalized work environment. The results of this study demonstrate that employees’ ability to adapt to the use of digital technology improved their performance. Additionally, this study revealed that proactive employees are optimistic and view the utilization of technology in their work as a way to foster innovation, and they believe that the work they do is very meaningful.

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