Maximizing Work Effort: Harnessing Perceived Training Opportunities and Intrinsic Motivation

Wen-Luo Huang and Sharmila Jayasingam*

ABSTRACT

Manuscript type: Research paper

Research aims: This study aims to prove that training is far from an indulgence but rather a vital necessity to increase employee work effort.

Design/Methodology/Approach: Using an experimental design, the study explores the link between perceived training opportunities (PTO) and work effort, investigating intrinsic motivation's moderating role. Data from 208 employees were analysed through confirmatory factor analysis (CFA) and structural equation modelling (PLS-SEM).

Research findings: The findings unveiled a positive correlation between perceived training opportunities and work effort. Although intrinsic motivation doesn't moderate this connection, it was found to exert a positive influence on work effort.

Theoretical contribution/Originality: The research highlights the pertinence of perceived training opportunities on employees' willingness to exert extra work effort.

Practitioner/Policy implications: Organizations should prioritize providing ample training opportunities while communicating their availability. Even in tough financial times, maintaining training's importance signals employees' value.

Research limitation/Implication: The study's limited sampling and focus on a single province in China may limit its generalizability.

Keywords: Intrinsic motivation, Perceived training opportunities, Work effort, Experimental design

JEL Classification: M12

* Corresponding Author. Sharmila Jayasingam is an Associate Professor at the Faculty of Business and Economics, Universiti Malaya, 50603, Kuala Lumpur Malaysia. Email: sharmila@um.edu.my

Wen-Luo Huang is a master student at the Faculty of Business and Economics, Universiti Malaya, 50603, Kuala Lumpur Malaysia. Email: charles.huang.wl@qq.com

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1. Introduction

For over a century, work effort and how to maintain and improve employee effort has been a central concept in management theories and research (Van Iddekinge et al., 2023). Work effort is conceptualised as translating the motivation into finished work (Parsons, 1968). It is often operationalized as the amount of energy expended to turn motivation into completed task and time the employees are likely to commit to work activities (Brown & Leigh, 1996). Work effort is critical to both employees and organizations, especially in the present dynamic business environment. Job tasks in organizations have become strictly regulated, more complicated, and less routinized, thus requiring employees of the organization to maintain greater extent of work effort proactively (Dysvik & Kuvaas, 2013). Paposa and Kumar (2019) highlighted that the competence and efficiency of an organization depend on how capable its workforce is and how effectively they achieve the objectives of the organization. In other words, if employees are willing to put more effort into their job tasks, this will undoubtedly enhance their work performance and may ultimately improve organizational performance.

Over the years, research has consistently supported a link between employee work effort and job performance. Brown and Leigh (1996) indicated that greater engagement and work effort are positively associated with superior performance. Similar findings were echoed in subsequent studies (e.g., Chang, 2003, Wu et al., 2013). Piccolo et al. (2010) accentuated that "individuals who exert higher levels of effort are expected to yield higher levels of task performance" (p. 265). Frenkel and Bednall (2016) indicated that "understanding the antecedents and dynamics of employees' discretionary work effort assumes critical importance in promoting organizational effectiveness and employment" (p. 16). Similarly, Avgoustaki and Frankort (2019) highlighted that work effort is associated with employees' individual consequences including their well-being and career-related outcomes. Ahmed et al. (2021) delineated that work effort is an extra resource that can be invested in many job-related activities to achieve desirable results such as performance.

Research on factors influencing work effort has evolved from examining external forces to exploring internal organizational dynamics. Early studies linked work effort to external pressures like competitive forces, trade union protections, and technological advancements (Green & McIntosh, 2001; Green, 2004). More recent

research, however, emphasizes internal organizational factors that shape employee effort.

For instance, work effort is significantly impacted by perceptions of job security in post-layoff contexts (Brandes et al., 2008), while ethical leadership has been shown to positively affect work effort, with this relationship mediated by the perceived significance of tasks (Piccolo et al., 2010). The quality of social leader-member exchanges has also been linked to enhanced subordinate effort (Buch et al., 2014). Additionally, variables such as organization-based self-esteem, supervisory support, and organizational identification have been identified as mediators between leader-member exchange quality and employee work effort (Lu & Sun, 2017).

The role of workplace dignity further contributes to understanding work effort, as it fosters discretionary effort through enhanced organization-based self-esteem (Ahmed et al., 2021). Moreover, recent studies have examined the intersection of work effort and employee well-being. For example, different motivations for exerting work effort influence well-being outcomes like job satisfaction and quit intentions (Avgoustaki & Frankort, 2023). Flexibility arrangements, or "i-deals," also facilitate well-being by enabling employees to manage work effort in ways that conserve personal resources (Avgoustaki & Cañibano, 2024).

The literature increasingly points to organizational support and internal dynamics as critical determinants of employees' work effort and well-being, moving beyond the focus on external pressures alone. A significant body of research suggests that specific human resource management (HRM) practices are instrumental in directly or indirectly stimulating work effort. For instance, HRM strategies that build employee skills, commitment, and engagement are associated with improved organizational performance (Shanmugathasan & Thirunavukkarasu, 2023). Similarly, Koster (2011) found that employees across 26 European countries report higher work effort when they perceive HRM practices as consistent and intensive, as these practices encourage collaboration by enhancing both ability and willingness to work (Koster, 2011).

Compensation fairness is another critical factor, with findings showing that perceived fairness in pay positively impacts future work effort as employees are more motivated when they believe they are compensated fairly (Wu et al., 2013). Training, task rotation, and teamwork are also noted to positively influence work effort (Avgoustaki, 2016). In contrast, flexible working arrangements (FWAs) have been shown to correlate negatively with work effort,

possibly due to perceived trade-offs in workload or productivity expectations (Avgoustaki & Bessa, 2019).

Training opportunities, a crucial HRM practice, are highlighted as potentially beneficial to work effort, though they remain underutilized in many organizations. Given the limited research specifically linking training opportunities to work effort, further study is needed to understand this relationship fully and to inform HR practices aimed at enhancing employee engagement.

In sum, HRM practices that promote skill-building, fairness, and consistent support are central to fostering employee work effort, yet the nuanced effects of flexibility and training merit further investigation to optimize these practices' impact on organizational outcomes.

1.1 Training and development – the side-lined HRM practice

Training involves acquiring and developing the knowledge, skills, and attitudes employees need to perform their tasks or jobs effectively (Goldstein, 1980; Latham, 1988). Aguinis and Kraiger (2009) defined training as a systematic method to develop employees' attitudes, knowledge, and skills, which can enhance the individual, team, and organizational effectiveness. As one of the HRM practices, training is regarded as a crucial strategy that can bring numerous benefits for the employees (Rawashdeh & Tamimi, 2019). Mansour et al. (2022) indicated that training can be perceived as human capital investment, which may result in positive employee outcomes for the organization. Training and development are an indispensable HRM practice that may affect employees' work engagement and related behavioral outcomes, as well as their performance outcomes (Albrecht et al., 2015; Shantz et al., 2016; Guan & Frenkel, 2019).

Despite its pertinence, training is treated as a luxury and not necessity. Currently whenever the company's performance is poor, it is common for them to adopt the approach of budget reduction. Sadly, training budgets are always affected first and most often bears the brunt of cost cutting exercise (Ratanjee, 2020). This could be due to the dearth of evidence of a positive Return on Investment (ROI) (Young, 2009). Elliott (2020) stated that "it is generally accepted that austere times typically lead to a reduction in training and development budgets – particularly within the public sector" (p. 1). With economic downturns, many employers have cut their training budgets since the "cost pressures may heighten the need for short-term, quick-fix, financial solutions, resulting in cuts to soft targets such as training budgets" (Felstead et al., 2012, p. 970).

In the previous study, scholars have argued that in order to investigate the impact of HRM practices on employees' behaviour, it is necessary to focus on their perceptions of these practices, instead of only paying attention to the implementation of these practices at the strategic levels (Khilji & Wang, 2006; Nishii et al., 2008). The call to investigate the implication of HRM practices from the lenses of employees, is driven by the notion that individuals will undoubtedly have different perceptions on the objectives and influence of HRM practices (Nishii et al., 2008). However, notwithstanding calls for employee oriented HRM research which includes views of employees of the practices, research in this area especially in the global HRM milieu remains scarce (Cooke, Dickman, & Parry, 2020).

Some studies have linked employees' perceptions of training and development to job attitudes and behavioural outcomes such as job satisfaction (e.g., Sahinidis & Bouris, 2008; Fletcher et al., 2016), organizational commitment (e.g., Bartlett, 2001; Bartlett & Kang, 2004; Sahinidis & Bouris, 2008; Yang et al., 2012; Rawashdeh & Tamimi, 2019), turnover intention (e.g., Dysvik & Kuvaas, 2008), and work engagement (e.g., Fletcher, 2016; Fletcher et al., 2016; Guan & Frenkel, 2019). However, fewer studies have linked employees' perceptions of training and development to their work effort. To our knowledge, only Dysvik et al. (2014) tested the relationship between perceived training intensity (PTI) and work effort, and found the relationship is not supported. One of the possible reasons is that as tasks become complicated, the perceived anticipations and requirements triggered by PTI might not be explicit and particular enough to induce the goal-oriented work effort. Further, PTI cannot induce employees to feel obligated to reciprocate their company with work effort as it is less advantageous in facilitating individual growth and success when compared with providing training and development opportunities (Dysvik et al., 2014). Hence, the current study might generate different insights into this relationship by exploring the impact of employees' perceived training opportunities on their work effort.

Despite the lack of empirical evidence to support the relationship between training opportunities and employee work effort, it may be premature to conclude that training has no effect on employee work effort. This study proposes that the relationship between training opportunities and work effort should be explored further. Hence, the objective of this study is twofold. First, this study intends to examine the association between perceived training opportunities and work effort. Second, this study aims to determine if the abovementioned relationship is unique for those with different levels of intrinsic motivation.

2. Theoretical Framework and Hypothesis Development

2.1 Perceived training opportunities and work effort

As discussed in the introduction, training has not received adequate attention despite playing a potentially crucial role in influencing employee work effort. While cutting the training budget may save costs, the implication on employee's attitudes and behaviour could be detrimental. The current study places emphasis on perceived training opportunities, which is generally defined as employees' perceptions of their participation in existing training opportunities (Dysvik & Kuvaas, 2008; Al Bastaki et al., 2021). Compared to general training practice, perceived training opportunities pay more attention to employees' evaluation of their training opportunities, satisfaction with training, and the sufficiency of received training (Albloush et al., 2019). Arthur et al. (2003) argued that although tremendous benefits might be acquired by providing training and development opportunities to employees, the impact of training and development on employees' work outcomes is dependent on their perceptions of these activities (Sitzmann et al., 2008). Additionally, "whether training can achieve its intended purpose depends not only on how organizations arrange it but also on how employees perceive such training arrangements" (Yang et al., 2012, p. 126). Furthermore, Fletcher et al. (2016) opined that it is this individual-level perception of training activities that play significant roles in employees' work attitudes and behaviours.

In previous studies, scholars have closely linked employees' perceptions of training to their job outcomes. Sahinidis and Bouris (2008) examined 134 lower managers and employees from five large organizations in Greek and found that employees' perception of training effectiveness is significantly associated with their job satisfaction. Furthermore, several studies illustrated that there is a positive association between employees' perceived access to training and their organizational commitment (e.g., Bartlett, 2001; Bartlett & Kang, 2004; Yang et al., 2012). Kim (2012) found that IT employees of state government who perceive high levels of training opportunities show lower levels of turnover intentions. More recently, employees' perception of having access to training opportunities is found to positively influence their work engagement (Hassett, 2022). Apparently, employees' perception of training is critical to their work outcomes. Work effort as one of the important employee job outcomes, is thus pertinent to perceived training opportunities.

Moreover, social exchange theory (Blau, 1964) suggested that when perceiving the provision of benefits from the organization, employees tend to reciprocate in positive work behaviours and attitudes (Settoon et al., 1996; Cropanzano & Mitchell, 2005). In this study, we argue that compared to general training practice, employees' perception of training opportunities is more likely to trigger their obligation to reciprocate their employers with more work effort.

Social exchange theory focuses on the obligations created by a set of exchanges between different parties (Blau, 1964). These exchanges are implicit and often occur between personnel and organization (Cropanzano & Mitchell, 2005). "In other words, the receiver (e.g., an employee) is somehow obliged to provide something in return to the giver (e.g., an employer)" (Avgoustaki & Bessa, 2019, p. 434). de Reuver et al. (2021) proposed that motivation-enhancing practices have significant impacts in stimulating employees to input additional effort to cope with their jobs. Providing sufficient training opportunities to employees may be regarded as a signal that organizations value and support their employees (Van Hootegem et al., 2023), and those employees who believe they received sufficient support from their employers are more willing to continue putting effort into their jobs (Alfes et al., 2013). Avgoustaki and Cañibano (2020) presented that with the opportunities to learn relevant expertise and techniques, employees are driven to work harder and spend more time on their work. Mustafa and Siew Chen Sim (2022) posited that employees who regard themselves as having the opportunities to obtain necessary competencies and skills in their workplace would invest more time and energy, and complete jobs more efficiently or beyond what the organization mandates. When employees perceive they are given the training opportunities for them to grow and improve, they may feel obligated to reciprocate these benefits provided by the organization through increasing their work effort (Dysvik et al., 2014). Furthermore, Frenkel and Bednall (2016) suggested that "additional work effort arises from both a calculus about future rewards and gratitude" (p. 29). They indicated that offering training opportunities might trigger employees' perception that their future career expectations may be satisfied by their employer, which may stimulate employees to input higher levels of work effort out of gratitude and obligation to the company (Frenkel & Bednall, 2016).

This study posits that training and development opportunities not only enhance the skills of employees but also influence their perception of the organization's attention towards their growth

needs. Employees' decisions to act and the effort they are willing to input are impacted by how they perceive the learning opportunities in the organization (Steil et al., 2020). They may interpret the reduction in training budget as a depiction of the organization's lack of commitment to them, which in turn may lead to their negative job behaviours and attitudes (Sheehan, 2014). In line with the social exchange theory, the provision of training and development opportunities is inadvertently expected to motivate employees to invest greater work effort. Fundamentally, when employees perceive that their training opportunities are decreasing, they will reduce their work effort correspondingly. Hence, we hypothesize that:

H_1: Perceived training opportunities will positively influence work effort.

2.2 *Perceived training opportunities, intrinsic motivation, and work effort*

Self-determination theory (SDT) is an approach to human motivation and personality, which explores "people's inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration, as well as for the conditions that foster those positive processes" (Ryan & Deci, 2000a, p. 68). Individuals become self-determined when their fundamental needs for competence, relatedness, and autonomy are satisfied (Ryan & Deci, 2000a). SDT differentiates types of motivations between intrinsic and extrinsic motivation and suggests that employees' performance and well-being are influenced by their motivation types toward work activities (Deci et al., 2017). Intrinsic motivation refers to "doing something because it is inherently interesting or enjoyable" (Ryan & Deci, 2000b, p. 55). Ryan and Deci (2000a) further described intrinsic motivation as "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" (p. 70). According to Gagné and Deci (2005), "intrinsic motivation involves people doing an activity because they find it interesting and derive spontaneous satisfaction from the activity itself" (p. 331). Intrinsic motivation occurs when people are motivated to participate in a job activity for the sake of the activity itself as they can directly acquire the positive experiences from this involvement, instead of for the external factors such as performance incentives and rewards (Gagné & Deci, 2005; Bloom & Colbert, 2011).

Intrinsic motivation is significant for understanding nonmandatory workplace behaviours such as organizational citizenship behaviours, and it might also affect the way in which

individuals approach mandatory or task-related work behaviours (Bloom & Colbert, 2011). Intrinsically motivated employees tend to have strong interests in learning and growth opportunities and will highly engage in activities and expend greater efforts (Han et al., 2019). Previous studies showed that intrinsically motivated employees are more self-driven and autonomy-oriented (e.g., Ryan & Deci, 2000a; Gagné & Deci, 2005). "They will take more responsibility for ensuring necessary levels of skills and abilities, and thus, respond more positively to training opportunities" (Dysvik & Kuvaas, 2008, p. 142). Van Iddekinge et al. (2023) proposed that employees who are more intrinsically motivated possess greater confidence regarding their ability through training or practice and tend to exert greater work effort. Additionally, employees with high intrinsic motivation may pay more attention to their personal development and thereby input more effort in their jobs (Dysvik et al., 2010). Furthermore, when employees perceived the training opportunities offered by the organization, this might lead to their obligation to repay their organization and intrinsic motivation may serve as a "booster" for employees to behave greater than what is expected for them (Dysvik & Kuvaas, 2008). More importantly, employees with high intrinsic motivation are more engaged in their works (Gagné & Deci, 2005; Vansteenkiste et al., 2007), they may be more possible to take advantage of these developmental opportunities to enhance their work effort when compared with less intrinsically motivated employees (Kuvaas & Dysvik, 2009).

In addition, in the study investigating the moderation effect of intrinsic motivation on the relationship between trainees' reactions to training programs and work performance, Dysvik et al. (2010) found that the positive association between trainees' reactions to training programs and work effort is only found for trainees low in intrinsic motivation. This can be interpreted that trainees with low intrinsic motivation may perceive the trainee programs are of great benefit to their career development, which to some extent compensates for the lack of satisfaction and interest inherent in their jobs (Dysvik et al., 2010). In contrast to those highly intrinsically motivated, "employees low in intrinsic motivation seems to need alternative reasons to put in effort and persistence in their work, where positive experiences with trainee programs may represent one such alternative" (Dysvik et al., 2010, p. 418). Besides, by conducting a three-way interaction model between job insecurity, motivation, and perceived investment in employee development on employees' extra-role behaviours, Nikolova et al. (2022) established that "the negative relationship

between qualitative job insecurity and extra-role behaviours is likely to become stronger when highly intrinsically motivated employees experience high levels of organizational investments in their development" (p. 554). It is suggested that to increase employees' extra-role behaviours, organizations should reduce qualitative job insecurity and offer sufficient training opportunities for employees with lower intrinsic motivation (Nikolova et al., 2022). Moreover, Buch et al. (2014) explored 352 employee-leader dyads in the public health department of Norway and found that the association between social leader-member exchange and work effort is more positive for employees with lower levels of intrinsic motivation. This finding implied that employees low in intrinsic motivation may respond more positively while experiencing higher levels of social leader-member exchange and pay back their leader with increased work effort (Buch et al., 2014). However, we argue that if highly intrinsically motivated employees are exposed to the work climate in which many training opportunities are available and accessible to them, they are probably more willing to exert effort on their job tasks. Therefore, we hypothesize the following:

> *H_2: Intrinsic motivation moderates the relationship between perceived training opportunities and work effort. The higher the intrinsic motivation, the more positive the relationship.*

3. Methodology and Design

3.1 Experimental design

To better observe the influence of perceived training opportunities on employees' work effort, we conducted an experimental design. This is a 2 (perceived training opportunities: high vs low) x 1 (intrinsic motivation) between subject factorial design. This study applied the experimental vignette (EVM) technique which employed brief hypothetical scenarios that reflect the availability of training opportunities.

In this experiment, we developed two scenarios to manipulate perceived training opportunities at a hypothetical company (Company A/Company B). The level of training opportunity (high/ low) was described as shown in the following vignettes:

High training opportunities (Company A):

> ***Let's say you are now an employee of Company A**. In this company, the management is **WILLING** to spend money on training activities. The management **DOES** attach great importance to the improvement of employees'*

*skills and expertise through training. In order to improve the effectiveness of training activities, the management **DOES** solicit employees' opinions and feedback.*

Low training opportunities (Company B):

***Suppose you are now an employee of Company B**. In this company, the management is **NOT willing** to spend money on training activities. The management **DOES NOT** attach great importance to the improvement of employees' skills and expertise through training. The management **DOES NOT** display effort to improve effectiveness of training activities. They **DO NOT** solicit opinions and feedback related to training from employees.*

The study had two separate sets of surveys with a specific vignette (high/low training opportunity). Each participant was allotted either one of the sets and under no circumstances were they asked to respond to both sets of the survey.

3.2 Experiment procedure

The respondents were randomly assigned either one of the sets of the questionnaire. Specifically, we set up experimental group A and group B based on the two vignettes, and randomly assigned respondents to these two experimental groups in an alternate manner. For example, when we send a questionnaire to the first respondent and place him/her in Group A, the next respondent will receive another set of questionnaires and be assigned to Group B. If there is a bunch of respondents, we will randomly divide them evenly according to their total numbers, and send them different questionnaires respectively to assign them to the corresponding experimental groups (e.g., if there are 6 respondents in total willing to participate in the experiment, we will randomly send questionnaire A to 3 of them and questionnaire B to the other 3). Meanwhile, we will pay close attention to the distribution of two sets of questionnaires and the number of respondents allocated to the two experimental groups.

The respondents were first asked to respond to items related to intrinsic motivation and work effort (pre-test). Once they completed this section, the instructions guided them to move on to read the assigned vignette (high/low training opportunity). Subsequently, they were asked to assume that they were now working in the specified hypothetical organization (Company A/Company B) and proceed to answer questions related to perceived training opportunity (manipulation check items) and work effort (post-test). Finally, they were requested to provide the required demographic

information. To ensure that respondents can effectively follow our experimental design when completing the questionnaire, clear instructions are provided on the questionnaire. Prior to the official distribution of the questionnaire, we conducted a pilot test and also asked some respondents about their feelings and suggestions about filling out the questionnaire. They reported that the instructions for the questionnaire were clear and enabled them to understand the requirements for filling out it well. The overall pilot test results were in line with our expectations. Moreover, when officially distributing the questionnaires to the respondents, we would also reiterate the requirements for filling out the questionnaires.

3.3 Research site and sample

The focus of this study is on individuals who met the required definition of working adult and our data were derived from the working adults in the Guangdong province of China. We prepared an online survey link to be distributed to potential respondents and they would randomly receive one of the two sets of questionnaires. A total of 208 respondents (104 for vignette A and 104 for vignette B) participated in this study. With exception for 14 respondents (6.7%) who had one year or less of working experience, other 194 respondents (93.3%) have all have been working for more than two years. All of them met the criteria of working adult. Majority were female (63%). Most of the participants were above 26 years old and from lower to middle level of management. All of them were educated with most holding at least a bachelor's degree.

3.4 Measurement

The original questionnaires were written in English and then translated into Chinese through the back-translation method suggested by Brislin (1970). Unless otherwise noted, all the variables in this study were rated by using a five-points Likert-scale format ranging from "1" representing "strongly disagree" to "5" representing "strongly agree". In addition to the below-mentioned measurements, the respondents' demographic information such as gender, age, working experience, current job position level and educational level were also collected.

3.4.1 Perceived training opportunities

Perceived training opportunities was assessed using seven items taken from the eight-item scale validated by Dysvik and Kuvaas

(2008). This scale achieved a coefficient α of 0.81. In the present study, one item has been removed since it is found to be not related to perceived training opportunities. To match the vignettes, the items were slightly adapted. A sample item includes "I feel certain that I will get the necessary training in Company A to solve any new tasks I may be given in the future". This scale was use for manipulation check.

3.4.2 Intrinsic motivation

Intrinsic motivation was assessed by six items created by Kuvaas (2006) and further developed by Kuvaas and Dysvik (2009). A sample of these items is "The tasks that I do at work are enjoyable". The α coefficient for this scale in previous studies was 0.90 (Kuvaas, 2006) and 0.92 (Kuvaas & Dysvik, 2009) respectively.

3.4.3 Work effort

Work effort was measured with five items taken from a ten-item scale developed by Kuvaas and Dysvik (2009). This ten-item instrument incorporates work effort and work quality, which was used to validate work performance (e.g., Kuvaas & Dysvik, 2009; Dysvik & Kuvaas, 2011). The current study only adopted the items associated with work effort. A sample item includes "I will expend extra effort in carrying out my job". The coefficient α value of this scale was 0.81 (Kuvaas & Dysvik, 2009) and 0.93 (Dysvik & Kuvaas, 2011).

4. Results

4.1 Dimensionality and distinctiveness of measure

Following the recommendations of Hair et al. (2017), "assessment of measurement models includes internal consistency, convergent validity and discriminant validity" (p. 111). Hence, before evaluating the convergent validity, we first examined the internal consistency of all the constructs. As presented in Table 1, the composite reliability of perceived training opportunities (0.961), intrinsic motivation (0.906), pre-work effort (0.845) and post-work effort (0.959) are all above the threshold value (0.70), which shows high levels of internal consistency reliability (Nunnally, 1978; Richter et al., 2016).

To assess convergent validity, the outer loadings of the indicators and the average variance extracted (AVE) should be considered (Hair et al., 2017). Refer to our results in Table 1, almost all the outer loadings are greater than 0.70 except for IM1, IM2 and Pre-WE1.

"Generally, indicators with outer loadings between 0.40 and 0.70 should be considered for removal from the scale only when deleting the indicator leads to an increase in the composite reliability above the suggested threshold value" (Hair et al., 2017, p. 113). Since the outer loadings of IM1, IM2 and Pre-WE1 are close to 0.70 and the composite reliability of intrinsic motivation and pre-work effort does not increase when deleting these three items, the indicators of IM1, IM2 and Pre-WE1 are thus retained. Furthermore, the AVE of perceived training opportunities (0.781), intrinsic motivation (0.620), pre-work effort (0.522) and post-work effort (0.824) are all higher than 0.50, thereby indicating adequate convergent validity for all the constructs (Hair et al., 2017).

As suggested by Hair et al. (2017), discriminant validity can be evaluated through three approaches including cross-loadings, Fornell-Larcker criterion (Fornell & Larcker, 1981) and Heterotrait-Monotrait Ratio (Henseler et al., 2015). Firstly, as displayed in Table 2, the outer loadings of the latent variables are all greater than any of its cross-loadings respectively. With respect to the Fornell-Larcker criterion, the results illustrated in Table 3 also fulfil this criterion that "the square root of AVE of each construct should be higher than its highest correlation with any other construct" (Hair et al., 2017, p. 122). Regarding of Heterotrait-Monotrait Ratio (HTMT), a cut-off value of 0.85 would be more warranted (Henseler et al., 2015). As can be seen in Table 4, the HTMT value of all the constructs is lower than 0.85 that meets the criterion. Therefore, after the evaluation with these three approaches, the current study has satisfied the mentioned criteria and thus does not violate the assumptions of establishing discriminant validity.

Table 1: Internal Consistency Reliability and Convergent Validity.

Construct	Measurement Item	Outer Loading	CR	AVE
Perceived training opportunities	PTO1	0.886	0.961	0.781
	PTO2	0.873		
	PTO3	0.889		
	PTO4	0.889		
	PTO5	0.871		
	PTO6	0.874		
	PTO7	0.903		

Construct	Measurement Item	Outer Loading	CR	AVE
Intrinsic Motivation	IM1	0.656	0.906	0.620
	IM2	0.675		
	IM3	0.774		
	IM4	0.828		
	IM5	0.895		
	IM6	0.865		
Work Effort	Pre-WE1	0.643	0.845	0.522
	Pre-WE2	0.719		
	Pre-WE3	0.772		
	Pre-WE4	0.757		
	Pre-WE5	0.716		
	Post-WE1	0.892	0.959	0.824
	Post-WE2	0.927		
	Post-WE3	0.910		
	Post-WE4	0.935		
	Post-WE5	0.874		

Notes: PTO = Perceived training opportunities; IM = Intrinsic motivation; WE = Work effort; CR = Composite reliability; AVE = Average Variance Extracted.

Table 2: Discriminant Validity (Cross-loadings).

Measurement Item	IM	PTO	Pre-WE	Post-WE
IM1	**0.656**	0.335	0.445	0.320
IM2	**0.675**	0.250	0.494	0.358
IM3	**0.774**	0.287	0.556	0.423
IM4	**0.828**	0.309	0.622	0.417
IM5	**0.895**	0.360	0.657	0.451
IM6	**0.865**	0.345	0.617	0.460
PTO1	0.358	**0.886**	0.330	0.739
PTO2	0.326	**0.873**	0.331	0.737
PTO3	0.362	**0.889**	0.362	0.727
PTO4	0.340	**0.889**	0.402	0.719
PTO5	0.385	**0.871**	0.375	0.689
PTO6	0.358	**0.874**	0.363	0.711
PTO7	0.344	**0.903**	0.343	0.760

Measurement Item	IM	PTO	Pre-WE	Post-WE
Pre-WE1	0.553	0.191	**0.643**	0.340
Pre-WE2	0.557	0.272	**0.719**	0.411
Pre-WE3	0.539	0.341	**0.772**	0.476
Pre-WE4	0.492	0.355	**0.757**	0.494
Pre-WE5	0.483	0.290	**0.716**	0.478
Post-WE1	0.460	0.764	0.500	**0.892**
Post-WE2	0.496	0.777	0.531	**0.927**
Post-WE3	0.466	0.729	0.591	**0.910**
Post-WE4	0.488	0.740	0.613	**0.935**
Post-WE5	0.440	0.722	0.541	**0.874**

Notes: IM = Intrinsic Motivation; PTO = Perceived training opportunities; WE = Work Effort; Outer loadings are shown in bold while the other entries represent the cross-loadings.

Table 3: Discriminant Validity (Fornell-Larcker Criterion).

Latent Constructs	Intrinsic motivation	Perceived training opportunities	Work effort
Intrinsic motivation	*0.785*		
Perceived training opportunities	0.401	*0.884*	
Work effort	0.519	0.822	*0.908*

Notes: Italic values on the diagonal represent the square root of AVE, while the other entries represent the correlations.

Table 4: Discriminant Validity (HTMT Criterion).

Latent Constructs	Intrinsic motivation	Perceived training opportunities	Work effort
Intrinsic motivation	-		
Perceived training opportunities	0.401	-	
Work effort	0.516	0.822	-

Notes: Discriminate validity is established at the threshold value of 0.85.

To sum up, the statistical results of the entire measurement model meets the criteria discussed, which indicates sufficient internal consistency, convergent validity, and discriminant validity for this study.

4.2 Manipulation check

Before moving forward with hypotheses testing, it is necessary to check if the experimental manipulation of training opportunities worked as intended. Hence, a t-test was conducted to assess the success of the manipulation. Table 5 illustrates the t-test result of perceived training opportunities. Participants who were allocated the vignette on the organization with high training opportunities provided significantly greater ratings for perceived training opportunities ($M = 3.92$, $SD = 0.444$) compared to participants assigned the vignette on the organization with low training opportunities ($M = 1.84$, $SD = 0.551$, $p < 0.001$) (see Table 5). Besides statistical significance, it is also pertinent to consider the effect size when deciding on whether the difference is deemed large enough to consider it significant (Kirk, 2001). Normally, Cohen's d value was computed to estimate the effect size for independent t-test through the formula $d=(M1-M2)/SDpooled$. According to Cohen (1988), the d value of 0.2, 0.5, and 0.8 are benchmarks for what may be considered as small, medium, large effects respectively. As displayed in Table 5, Cohen's d value is around 4.16 ($d > 0.8$) which reflected a large effect size of this study. Therefore, the manipulation of training opportunities was successful.

Table 5: T-test Analysis

	Type	N	Mean	Std. Dev.	F	Sig.	Cohen's d
Perceived training opportunities	Vignette A	104	3.92	0.444	5.600	0.000	4.16
	Vignette B	104	1.84	0.551			

Notes: Cohen's d value of 0.2, 0.5, and 0.8 are represented as small, medium, and large effect sizes.

4.3 Descriptive and correlation analysis

Table 6 presented the means and standard deviations of all the latent variables for group A and group B respectively. As can be seen, the mean value of pre-work effort is relatively high for both group A (3.98) and group B (3.64), which indicated that the respondents are rather willing to invest effort in their works. However, with the manipulation of perceived training opportunities, the mean value of work effort for group A (with high training opportunities) increased to 4.05 while the mean value of work effort for group B (with low training opportunities) dropped dramatically to 2.61. In theory,

this might imply that perceived training opportunities is related to employee work effort.

Table 7 displayed the results of correlation analysis. As expected on theoretical grounds, perceived training opportunities was significantly correlated with both intrinsic motivation ($r = 0.373$, $p < 0.01$) and work effort ($r = 0.787$, $p < 0.01$). Additionally, intrinsic motivation was significantly associated with work effort ($r = 0.483$, $p < 0.01$).

Table 6: Descriptive statistics

	Group A			Group B		
Variable	**N**	**Mean**	**Std. Dev.**	**N**	**Mean**	**Std. Dev.**
Perceived training opportunities	104	3.92	0.44	104	1.34	0.551
Pre-work effort	104	3.98	0.58	104	3.54	0.644
Post work effort	104	4.05	0.51	104	2.51	0.937
Intrinsic motivation	104	3.52	0.79	104	3.02	0.761

Notes: Five-points Likert-scale: 1 = strongly disagree; 5 = strongly agree

Table 7: Correlations.

Variable	1	2	3
1. Perceived training opportunities	1		
2. Intrinsic motivation	0.373**	1	
3. Work effort	0.787**	0.483**	1

Notes: n = 208. **correlation is significant at the 0.01 level (two-tailed).

4.4 Hypothesis Testing

To evaluate the structural model and test the hypotheses, the current study mainly includes collinearity assessment, model fit, the coefficient of determination (R^2) and path coefficients (Henseler et al., 2016; Hair et al., 2017). The PLS algorithm and bootstrapping techniques with 5000 sub-samples were used to test the hypothesized model (Hair et al., 2017). Figure 1 illustrates the results of the structural model.

Firstly, for the collinearity assessment, the variance inflation factor (VIF) should be greater than 0.20 but lower than 5 (Hair et al., 2017). The results reported in Table 8 indicate that the VIF values of all the constructs are less than 5. Hence, there are no collinearity issues among the constructs in the present study. Regarding the

model fit, the standardized root mean square residual (SRMR) should be lower than 0.08 (Henseler et al., 2016; Hair et al., 2017). Refer to Table 9, the SRMR value of our model is 0.047 (SRMR<0.08) which demonstrates an acceptable fit. With respect to the coefficient of determination, Hair et al. (2017) suggested that the R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables represent substantial, moderate, or weak predictive accuracy. As displayed in Table 10, the R^2 value of this model is 0.719 which demonstrates that the predictive accuracy is substantial.

Table 11 reports the causal relationships among the study variables. The results suggest that perceived training opportunities is positively related to work effort (β = 0.733, p < 0.001, LL: 0.651, UL: 0.801), thereby H1 is supported. However, the results of moderating effect (β = -0.009, p > 0.05, LL: -0.082, UL: 0.066) reveal that intrinsic motivation does not moderate the relationship between perceived training opportunities and work effort. Therefore, H2 is not supported. Surprisingly, intrinsic motivation is found to has positive association with work effort (β = 0.224, p < 0.001, LL: 0.112, UL: 0.336).

Figure 1: Structural Model

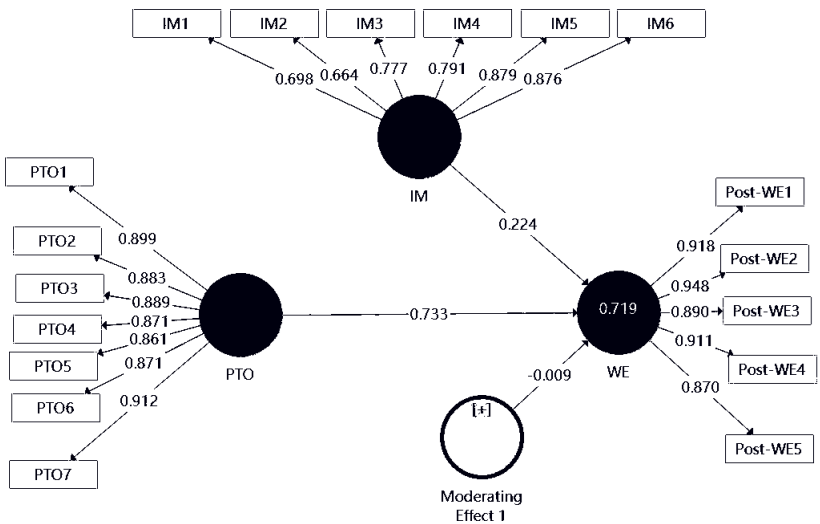

Table 8: VIF Values

Items	VIF Values
	Work effort
Intrinsic motivation	1.212
Moderating effect	1.017
Perceived training opportunities	1.197

Notes: Criterion: VIF value should be lower than 5.

Table 9: Model Fit

Items	Saturated Model	Estimated Model
SRMR	0.047	0.047
d_ULS	0.370	0.370
d_G1	0.567	0.567
d_G2	0.485	0.485
Chi-Square	499.521	499.485
NFI	0.879	0.879

Notes: Criterion: SRMR value should be less than 0.08.

Table 10: R^2 Values of The Endogenous Latent Variable

Endogenous Variable	R^2	Predictive Accuracy
Work effort	0.719	Substantial

Notes: R^2 values of 0.75, 0.50, or 0.25 are represented as substantial, moderate, or weak respectively.

Table 11: Results of the Path Coefficients

Hypotheses	Path	β	T-Value	P-Value	CI (LL, UL)	Support
H1	PTO→WE	0.733	19.296	0.000***	0.651, 0.801	Supported
H2	PTO*IM→WE	-0.009	0.239	0.811ns	-0.082, 0.066	Not Supported
	IM→WE	0.224	3.942	0.000***	0.112, 0.336	

Notes: Bootstrapping with 10000 sub-samples. PTO = Perceived training opportunities; IM = Intrinsic motivation; WE = Work effort; ns = non-significant; CI = Confidence interval; LL = Lower level; UL = Upper level; ***p < 0.001 (two-tailed).

5. Discussion and Findings

In accordance with our first assumption, we found that perceived training opportunities is a strong predictor of work effort, which provides support for earlier research stated that HRM practices might be directly associated with work effort (e.g., Green, 2004; Kelliher & Anderson, 2009; Avgoustaki, 2016). Furthermore, the result of the study is also in line with the previous studies stated that employees' perceptions of training activities are closely relevant to their job attitudes and behavioural outcomes (e.g., Bartlett, 2001; Bartlett & Kang, 2004; Sahinidis & Bouris, 2008; Yang et al., 2012; Rawashdeh & Tamimi, 2019; Hassett, 2022).

This finding implies that providing training opportunities for employees may release a positive signal that they are the most valued capitals among the organization, which can strengthen the emotional bond between employees and their employer. Such opportunities can be perceived by employees as the organization's willingness to invest in them, which in turn may trigger employees' feelings of responsibility to repay their employers with work effort. This is consistent with the social exchange theory and the criterion of reciprocity, where offering employees training opportunities can make them feel obligated to reciprocate their company by investing additional work effort (Dysvik et al., 2014; Frenkel & Bednall, 2016). Furthermore, the provision of sufficient training opportunities enables employees to have capabilities to handle their job demands (Memon et al., 2016). Therefore, when employees feel that they are competent to fulfil their task demands and organizational goals, their levels of work effort may also increase. Additionally, since the respondents in this study are employees working in the Guangdong province of China, cultural differences might also influence this positive relationship. Unlike Western culture which prioritizes the premise of adhering to formal rules and precluding personal affects, the culture of "*Renqing*" is prevalent in China and is embraced by all members of Chinese society (Ren et al., 2020; Xie et al., 2023). *Renqing* refers to the resources that one individual can present to others as gifts and favours (Ren et al., 2020), which is often accompanied by the obligation with reciprocal exchange of favours. We believe that this unique *Renqing* culture dramatically affects the reciprocity behaviour of Chinese employees. As the career development opportunities for local employees in China are limited due to the "glass ceiling" (Newman et al., 2011), employees may regard the training opportunities related to their career development as great favours. When they perceive the resources (i.e. training opportunities)

provided by their employer, they are more likely to repay their employer with additional work effort since people in China generally dislike owing others favors.

In contrast to our hypothesis, there is no moderation effect of intrinsic motivation in the relationship between perceived training opportunities and work effort. This result is congruent with the finding of Dysvik and Kuvaas (2011), who found that intrinsic motivation does not moderate the relationship between perceived job autonomy and work effort. It may be interpreted that employees high in intrinsic motivation may perceive the opportunities of training positively, but is not adequate for them to exert more work effort on their works. Another plausible explanation may be related to the nature of work tasks. According to the job characteristics model (JCM, Hackman & Oldham, 1976), five core job characteristics (i.e., autonomy, task identity, skill variety, task significance, feedback) play a significant role in employees' psychological states, which in turn lead to a variety of positive job outcomes (Astakhova et al., 2024). The insignificant moderating effect of intrinsic motivation might imply that the current work tasks employees perceived are less challenging, meaningful, and autonomous, which naturally could not arouse their intrinsic motivation, not to mention affecting the relationships between perceived training opportunities and work effort.

Although intrinsic motivation does not play the moderator role in the perceived training opportunities-work effort model, it is found to be the antecedent of work effort. This observation is in line with scholars who indicated that intrinsic motivation has significant impacts on employee effort and thereby job performance (e.g., Menges et al., 2017; Tariq & Ding, 2018). As discussed, probably employees with high intrinsic motivation are more self-driven and willing to expend extra effort to perform their tasks. This finding reflects that organizations would benefit most from recruiting and selecting employees who are highly intrinsically motivated.

5.1 Implications for practice

Some important managerial implications may be drawn from our findings. First, since perceived training opportunities is positively associated with work effort, the management should provide sufficient training opportunities to their employees as well as explaining to them the availability and accessibility of these training opportunities. Though the company's performance is sluggish, employees' training activities should not be side-lined. Instead, continuing to treat training opportunities as an important HRM

component despite the financial position of the company, would send a positive signal to employees that they are being valued and trusted. As a result, employees will reciprocate their company's goodwill through the exertion of greater effort in their jobs.

Moreover, because intrinsic motivation has a positive influence on work effort, organizations should recruit employees with high intrinsic motivations that are capable to find fun and meaning in their jobs, which may be beneficial for the personal and organizational performance eventually as such employees tend to put much effort into their work tasks. For current employees with low intrinsic motivation, management needs to focus on strategies that could enhance their motivation level. This could be done through job redesign as stipulated in the job characteristics model. With respect to skill variety and task significance, since properly complicated jobs can induce intrinsic motivation (Zheng et al., 2011) and encouraging the workers to put into more than their expected effort level (Kmec & Gorman, 2010), thus the management should avoid providing simple and repetitive jobs to employees. Conversely, the management should assign tasks with meaningfulness to employees as it may stimulate them to expend additional effort when they perceive their tasks have a meaningful and positive influence on others (Piccolo et al., 2010).

5.2 Limitation and future research directions

Although the current study provides new evidence relevant to the antecedents of work effort, several limitations should be recognized when interpreting the findings of this study. First, this study mainly adopted convenient sampling and data was gathered from employees with different organizational backgrounds in one province of China, which might not be appropriate to generalize the findings for other geographic regions or countries. Thus, future research can compare our results with different samples from other Asian or Western countries.

Second, although the self-reported intrinsic motivation and work effort in this study would not cause major concern as this study adopted an experimental design, future studies are encouraged to gather data from various sources and using multiple assessment techniques to further validate our findings.

Third, similar to many experimental designs, our respondents are only simply invited to participate in study with a manipulated scenario. Nevertheless, in their organizations, they may not experience the settings and changes mentioned in the scenario. As we manipulate the participants' perception of training opportunities (i.e.

we asked the respondents to imagine they are working in Company A or Company B, which there may be many training opportunities versus may not be many training opportunities offered to them), the lack of reality may make it difficult for us to generalize the findings to real situations (Belle & Cantarelli, 2014). Future studies may eliminate this potential effect by conducting the field experiments or other nonexperimental research designs, as well as qualitative research such as interviews.

Finally, the current study only focuses on training practice and future research may be to explore the impact of other HRM practices such as recruitment and selection, compensation management, performance appraisal and career development on employees' work effort. Furthermore, since the moderating effect of intrinsic motivation is not significant, another interesting direction for future studies may be investigating the alternative moderators in the relationship between perceived training opportunities and work effort. Prior studies showed that person-job fit, employee self-construal and perceived supervisor support have been found to moderate the relationship between perceived HRM practices and employee job outcomes (e.g., Boon et al., 2011; Yang et al., 2012; Dysvik et al., 2014). Thus, other moderators can be explored according to this avenue in the future research.

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