

The Role of Internal Human Resource Orchestration on Firm Performance

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Abstract

The purpose of this research is to measure the mediating role of teamwork and participation (T&P) on the relationship between two human resource (HR) practices – “training and development” (T&D) and “performance appraisal” (PA) – and operational performance (OP). Employing the contingency approach, this study develops a research model that validates the assumption that appropriate internal orchestration of HR practices improves firm performance. Using AMOS, data from 157 manufacturing firms are analyzed through structural equation modeling (SEM). The results show that T&P fully mediates the relationship between T&D and OP, and partially mediates the relationship between PA and OP. This study, which provides empirical support for the importance of OP to firm effectiveness, finds that OP is positively related to financial performance (FP). The study develops a theoretical logic and empirically demonstrates that T&P is an appropriate practice for mediating the impact of T&D and PA on OP. The inclusion of T&P contributes to the theory and shows that appropriate internal orchestration of HR practices can realize effective OP and consequently greater FP of the firm.

Keywords: Training and Development, Performance Appraisal, Teamwork and Participation, Operational Performance, Financial Performance

1. Introduction

Firms are looking for ways to gain competitive advantage and improve their performance against rivals [1]. In this regard, various HR practices have received significant attention in the management literature, focusing on their impact on organizational [2], [3] and individual outcomes [4], [5], [6]. Although the direct impact of HR practices on firm performance has been widely studied [7], findings are inconsistent [8].

Most studies show a positive impact on performance [9], [3], [10], while other studies show a negative effect [11] or failed to find significant associations [12]. This

leaves several research questions unanswered or misinterpreted. Therefore, the question of how and which methods to use to improve performance remains a topic for further investigation [13]. As there is little consistency in the impact of HR practices on firm performance and little is known about whether HR practices influence each other and enable better OP, the need to integrate developmental HR practices is an important contribution to the literature. However, to date, little research has examined the impact of the mediating means of HR practices through which T&D and PA influence firm performance. This research gap is addressed in this study.

This research focus is on T&D – the level of formal training provided to a firm's workers [14]. And on PA – an effective system used by firms to develop their employees' appraisal and motivation [10] - as potential enablers of OP through the mediating means of T&P. In this vein, the aim of the present study is to explore the causal relationship between T&D, PA, T&P and OP, as well as the mediating role of T&P between T&D and PA practices and OP. By achieving the aim of the study, it contributes to the current state of the literature in several ways. First, the study contributes to broadening our understanding of the role of T&D and PA in realizing better firm performance (i.e., OP). HR researches believe that are quite limited studies that examine the implication of T&D [15], [16] and PA [17], [13]. In this respect, this paper is crucial as it provides empirical evidence on the impact of T&D and PA on achieving better business performance, especially OP.

Second, the debate on the instrument that transfers the impact of T&D and PA to performance concepts is relatively limited. In particular, little is known about the mediating role of T&P in relation to other developmental HR practices. Exploring the role of T&P as a mediator between T&D and PA practices and OP is another unique contribution of this study. “Individuals who are engaged in their work have high levels of energy, are enthusiastic about their work, and are completely immersed in their work activities” [18] (p. 4). Teamwork engagement is the focus of interest for HR practices [19], as it has been found to be positively related to team performance [20] and organizational performance [18]. T&P is critical to firm outcomes as it builds mutual trust and respect within a firm [10] and increases employee engagement. However, Bhuiyan [21] suggests empirically investigating whether the positive effect of participation on FP exceeds the cost of its implementation.

To recapitulate, in this research we identify the significant gap that can be bridged by examining the mediating effect of T&P on the link between T&D and OP or PA and OP, respectively. We also investigate the effect of OP in FP. To achieve the objective of this paper, it is necessary to answer the following research questions in particular: What is the nature of the relationship between T&D and PA practices with OP? What is the nature of the relationship between T&P and OP? How T&P mediates the relationship between T&D and PA practices with OP? And, what is the nature of the link among OP and FP? Hence, the outcomes of this research may have useful contributions for both researchers and practitioners to recognize the role of T&D, PA and T&P in providing better firm performance. Based on HR theory [17], the following section discusses the hypothesized relationships between T&D, PA, T&P and firm performance (OP and FP).

2. Theoretical background

2.1. Human resource practices

It is widely agreed that HR development can produce comparative advantage to the firm [22], if internal practices are well orchestrated. This study specifies additional values and develops new dimensions of HR management through the synthesis of three practices: training and development, performance appraisal, and teamwork and participation.

Training and development refer to the amount of informal education given to firm employees [14]. Training is defined as “[...] the most important factor in the business world because training increases the efficiency and the effectiveness of both employees and the organization” [23] (p. 63). It aims to bridge the gap between the extant capability of employees and job requirements [24]. Whereas, development is “[...] an unfolding process that enables people to progress from a present state of understanding and capability to a future state in which higher-level skills, knowledge and competencies are required” [25] (p. 570). Therefore, the integration of T&D practice is a boundless process to keep improving employees all the times [22]. Training targets the skill development [26], which may influence the employee performance in two ways, (a) improves and updates relevant abilities and skills of employees, and (b) increase employees’ happiness with their actual job and workplace [27]. Kadiresan et al. [22] highlight that T&D is essential to ensure workers with needed skills and competencies in order to improve, organization competitiveness, productivity and performance.

Although firms by T&D opportunities aim to increase employee knowledge, motivation and skills, training in itself may not generate the intended employee outcomes [28]. Indeed, the huge capital spending on T&D are not always translated into improved firm performance [30], it may have negative consequences, notably in the short term [31]. That said, empirical evidence about the contribution of HR development to organizational performance is inconsistent [32]. It is not clear if T&D is applied and brings benefit to all firms’ size [16], hence several “barriers” are identified to organizing formal T&D in smaller companies [33]. Therefore, Sung and Choi [28] highlight that given the prevailing skepticism on the benefits of T&D, a closer investigation of the connection between HR development and firm performance is necessary.

Performance appraisal has been broadly known by academics and practitioners as a HR practice [29], which aims to evaluate the effectiveness and efficiency of employees [5]. Its purpose “is to improve goal setting and feedback processes in order that employees can direct, correct and improve their performance” [14] (p. 1354). According to Fletcher [34], PA consists to “a variety of activities through which organizations seek to assess employees and develop their competence, enhance performance and distribute rewards” (p. 473). PA presents the most effectual method for workers’ evaluation, motivation and development, in modern time [5]. According to, Shaout and Yousif [35] PA aims to recognize the existing skills’ status of firm’s employees.

Even though PA is costly firms still adopt it, considering as an essential HR practice, the evaluation of employees “may either shape a satisfied frame of behavior after being appreciated or a frame of dissatisfaction after not being appreciated” [22] (p. 163). Thus, PA is an integral and undividable part of the organization [27]. Besides its importance and positive effect, still, employees may dislike PA, so it can serve also as a deregulator in the motivation process and organizational productivity [10]. According to Noe et al. [36], the words that come to workers’ minds when they make performance appraisals are: “time-consuming”, “dread”, “burden”, “frustrating” and “pain”, arguing that PA systems are ineffective to the point that they are manipulative, counterproductive, abusive and autocratic. Armstrong [25] shows several ways of realizing PA, such as, monolithic system, use of ratings, focus on quantified objectives, bureaucratic – complex paperwork, annual appraisal meeting, top-down assessment, and often linked to pay.

Teamwork and participation are a vital HR practices for firm success [10]. Teamwork refers “[...] to a group of employees created on purpose to carry out a particular job or to solve problems” [14] (p. 1353). The main purpose of the teamwork is to make employees to share knowledge, judgment and ideas among one another in order to achieve better organizational performance. Whereas, participation is described by Gulzar [37] as “[...] a process which allows employees to exert some influence over their work and the conditions under which they work” (p. 59). Employee participation plays a key “role in increasing employee commitment and determines the degree of job satisfaction” [10] (p. 22). Thus, T&P is an important HR practice for a high productivity and good communication among employees in the firm [38].

Social theorists consider the firm’s ability to develop teamwork as one of the growth and success elements for a high level of efficiency [39]. Therefore, adoption of teamwork and the application of collective skills improve employees’ productivity [19]. Employees working together to perform a job, to think and argue about it, generate a rich and comprehensive work plan, which make their productivity and progress more visible [40]. However, Bhuiyan [21] highlights that the positive impact of employee T&P on performance of the firm cannot be considered a postulate, it is essential to make further measurements in order to find its real effect. According to him, there are several factors that hinder employees to participate or work in a team, such as, lack of workforce diversity, unwillingness of the management, absence of labor union activities, illiteracy of workers and political grouping among workers.

2.2. Firm performance

According to Islami [10], performance refers to “[...] the difference between the cost of capital used by an organization to operate and its achieved results” (p. 74). In literature, the performance of an organization mainly is measured using operational indicators – measuring firm achievement in non-monetary terms or competitive advantage items – (e.g., [31], [14]), financial indicators – focusing on items that directly reflect the financial value – (e.g., [41], [42], [43]), or integrating both OP and

FP indicators (e.g., [44], [45], [1], [46]). In this study, the items to measure OP and FP will be adopted in line with above literature.

3. Research model and Hypotheses

The conceptual model in Figure 1 describes that the correlation between T&D and PA with OP would be mediated by a suitable HR practice. Precisely then, T&P would mediate the relationship between T&D and OP; and secondly, T&P would also mediate the relationship between PA and OP. In addition, the direct relationship between OP and FP is described. The rationale for the research hypotheses is described below. The summary for the relationship between H_{1A}, H_{1B}, H_{2A}, H_{2B}, H₃, H₄, H₅ and H₆ is shown in Figure 1.

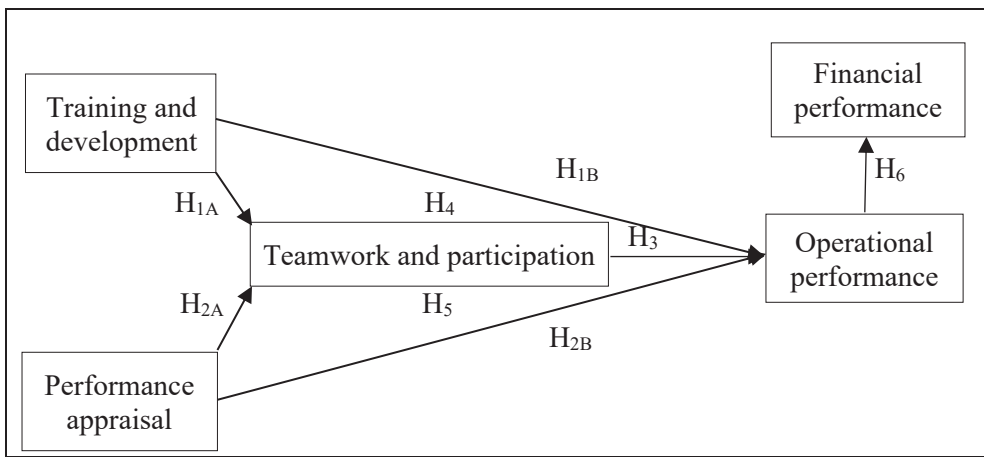


Figure 1. Research model and hypotheses

3.1. Training and development, performance appraisal, teamwork and participation, and operational performance

T&D affects employees' capabilities and is a tool to improve their productivity and thus the overall performance of the company [47]. Furthermore, Susomrith et al. [16] emphasize that employee engagement is related to T&D. PA, a management method for improving employee outcomes [48], is also an essential dimension of organizational performance. It can be considered as a trust mechanism between employees and their organization, which is crucial for improving employee engagement and commitment in the firm [17]. Following this argument, first hypotheses of this research (H_{1A}, H_{1B}, H_{2A} and H_{2B}) postulate the main relationships between T&D and PA with T&P and OP.

A link between T&D and affective organizational commitment is analyzed by Susomrith et al. [16], where T&D is examined as the antecedents of employee participation and engagement. Affective organizational commitment refers to an employee's emotional attachment and engagement with the work organization [49].

In such a participative employee environment, it is important to provide employees with access to T&D opportunities [50]. This is because employees view T&D as a mechanism to improve their career prospects and work performance [51]. It can encourage employees to respond through positive organizational behavior and show more loyalty to the organization [52]. In addition, T&D practice contributes to the growth of positive sentiment towards organizational progress and change as it is affirmed by individuals, groups and teams [53]. This positive feeling to contribute will increase their ambitions for T&P in the firm. Thus, based on the findings of previous research, it is fair to say that this relationship is still quite unexplored in the management literature. Therefore, the effect of T&D on T&P is an empirical question. Accordingly, it is proposed that:

H_{1A}: An employee's T&D has a positive influence on its T&P.

T&D is a key factor in human resource management because it improves the individual, group and organizational efficiency and effectiveness [23], [54] and provides various benefits for society [51]. Therefore, Chatterjee [55] classifies T&D practice as a human capital investment that has a positive influence on the strategic benefits and returns of the organization. Therefore, developing employees through training is an important practice for organizational success as employees have clear communication and feel valued [15]. Previous studies have shown that there is a positive relationship between training and organizational performance [56], [57]. For instance, Lyons [58] highlight that T&D improves employee performance by developing appropriate skills. Kadiresan et al. [22] also points out how important it is for companies to use T&D to increase the competence and performance of their employees. If there are unexpected problems in the implementation of OP in the company, relational T&D programs would help the company to improve its product quality, responsiveness to customer queries and customer service, which in turn can increase customer loyalty towards the firm. Therefore, we propose the following hypothesis:

H_{1B}: An employee's T&D has a positive influence on firm's OP.

Workers' awareness that their individual performance is valued increases their productivity because they work harder to perform better [5]. But "working in a team hinders the identification of individual performance because of the presence of interdependencies" [29] (p. 9). Accordingly, teamwork is identified as a dimension that presents difficulties in measuring employee performance. This may discourage employees from working as a team, as their individual contributions may not be fairly evaluated due to interdependencies. To address this problem, we seek to measure whether PA affects employees' T&P. In other words, the aim is to measure whether employees work more as a team and participate more in solving problems when they are aware of their performance evaluation.

Several studies have found that employee engagement is closely related to their perception of fairness of PA [59], [60]. Employees' perception that the performance appraisal process is fair increases their efforts to contribute to the achievement of organizational goals [22]. Therefore, Akhtar and Khattak [61] point out that

performance appraisal is important because it determines the level of participation in the organization. Firms “capable of building performance appraisal systems which employees consider to be satisfying harvest many vital employee outcomes at the workplace” [62] (p. 111). It is therefore predictable that the experience of fair treatment by employers can increase employee participation in improving organizational performance. It is expected that a positive perception of the PA system by employees will encourage them to participate and be highly engaged [17]. PA is thus an upstream factor in employee engagement [63]. Therefore, we propose the following hypothesis:

H_{2A}: An employee’s PA has a positive influence on its T&P.

PA should be designed to produce positive effects for the organization. Bayo-Moriones et al. [29] show that performance appraisal is multidimensional and that the manager must design it in such a way that the organization receives positive results. Several previous studies have indicated that there is a significant relationship between PA and organizational performance [56], [64], [57], [13]. Harmonizing HR practices, such as incentive compensation and formal training, increases PA, leading to a greater effect on productivity [65]. PA is indeed a means of providing incentives for talented employees to be satisfied with the organization [66]. On the other hand, ineffective PA can lead to various undesirable problems, such as low enthusiasm for organizational support, lower employee productivity and morale, and thus lower organizational performance [67]. Thus, fair and proper implementation of the employee appraisal process enables higher employee productivity and, consequently, higher organizational performance. In line with the foregoing, the following hypothesis can be made:

H_{2B}: An employee’s PA has a positive influence on firms’ OP.

3.2. The mediating role of teamwork and participation

One of the main elements that realize a good OP is the nature of the links between HR practices, reflected in the cohesion between them. For this reason, to explore the contribution of staff T&D and their evaluation by PA on the participation and cohesion among staff (teamwork), which in turn can improve the working climate and OP, and then FP. We proposed to measure the mediating role of T&P.

The literature indicates that employee participation improves firm performance [67], [57]. Employee participation plays an important role in the decision-making process, which leads to the efficiency of the firm [68]. According to Abdulkadir et al. [69], T&P is an arrangement that ensures that workers have the opportunity to influence supervisory decisions and contribute to the improvement of organizational performance. In this context, Mohammad [70] highlights that participation is the mechanism of work discussion among employees that enables them to share ideas and information. Worker involvement and participation at different levels is therefore considered an important indicator of firm competitiveness, capacity for continuous innovation and excellence in production [68]. We assume that T&P can play a crucial role in promoting OP.

H₃: An employee's T&P has a positive influence on firms' OP.

Although much of the management literature has demonstrated that T&D and PA are positively related to firm performance, both empirical evidence and theory provide a logical argument for why T&D and PA can predict firm performance, the mechanisms that enable this relationship remain vague. They were left to explore that the role of T&P practices could be a significant factor in making the link between T&D and PA practices to OP more effective. Thus, if the company does not adopt T&P practices, it cannot reap the full benefits of T&D and PA. Thus, T&D and PA influence workers' commitment and dedication to organizational improvement and make them feel more involved in fulfilling organizational tasks [22]. In this way, employees are perceived as part of the team. This can improve their commitment to the organization [71], which in turn can improve overall organizational performance. T&P can therefore transform the effects of T&D and PA achieved in the human resource management process into a contribution to overcoming the organization's difficulties.

This study focuses on the potential mediating role of T&P in the relationship between T&D and PA practices and OP for the following reasons. First, T&P is one of the most widely studied PA practices and has been found to be significantly associated with a variety of outcomes, including firm performance, in recent empirical research [10], [45], [14], [67], [57]. Second, organizing appropriate T&D programs and fair compensation systems will increase employees' willingness to be more involved in the organization, to work in teams to solve organizational problems, and to implement company procedures and policies. Third, previous studies have also found that T&P is significantly associated with T&D [50], [53], and PA [61], [17], [63]. Fourth, previous research has substantiated a substantial relationship between T&P and firm performance through various research positions (e.g., [69], [13]). Finally, T&P is believed to facilitate the link between other HR practices and firm performance. For example, Islami [10] notes that companies that provide a suitable internal environment view workers as an important part of the team and are able to contribute their ideas, which in turn can improve firm performance.

Based on these arguments, it can be concluded that T&P practices have a mediating effect in the link between T&D and PA practices and the OP, in the following way: the company's leaders have a clear vision of what the company wants to be and what it wants to achieve in the future. T&P activities play an important role in realizing the manager's plan to achieve a viable competitive position. By organizing T&D and PA systems, the manager's plan will not be effectively translated into the better OP without the collaboration of internal HR practices such as T&P. In order for the plan to become a reality, T&D and PA practices must be based on T&P activities to help the company become competitive in the market. In summary, assuming that T&D and PA practices predict T&P and T&P predict OP, it is possible that T&P mediates the link between T&D and PA practices and OP. Therefore, in light of the theoretical and empirical research discussed earlier, we expect that T&P mediates the relationship between T&D and PA practices and OP, in such a way that T&D and PA

are positively related to T&P, which in turn positively increases OP. Therefore, based on the above discussion and arguments, this study hypothesizes the following:

H₄: An employee's T&P mediates the link between employee's T&D and firms' OP.

H₅: An employee's T&P mediates the link between employee's PA and firms' OP.

3.3. Operational and financial performance

Li et al. [46] highlight that “having a competitive advantage generally suggests that an organization can have one or more of the following capabilities when compared to its competitors: lower prices, higher quality, higher dependability, and shorter delivery time” (p. 111). These indicators will in turn increase the overall performance of the firm [72]. Improving firm OP to a level that “a competitive advantage can lead to high levels of customer satisfaction and loyalty, relationship effectiveness” and economic performance [46] (p. 111). Accordingly, a firm that offers high quality products can charge higher prices and thus increase its return on investment and profit margin on sales. An organization that responds to customer requests in a short time, provides a high level of service and delivers its products quickly and reliably can increase customer loyalty and achieve a higher sales volume. Therefore, a positive relationship between OP and FP can be proposed.

H₆: The higher the OP level, the higher the FP level.

4. Methods

4.1. Sampling and data collection

A mail survey was used to collect the required data. The element of analysis was the manufacturing firm. Key respondents were selected from senior and middle managers who responded authoritatively to questions on human resource practices and OP [10]. Then, two months later, financial managers were asked in a separate questionnaire about the financial aspect of their firm [10]. Following Gölgeci and Kuivalainen [42] and based on the Podsakoff et al. [73] requirements to mitigate the “common method variance” (CMV), this study used dual respondents of each firm for the survey. In order to make the examination more in-depth, which allows for more reliable and realistic results, the research variables measure the use of HR practices and the benefits derived from their relationships from March (2017 - 2020), while the company's performance was observed for the period of March (2019 - 2020). It was considered that the full effect of the use of the independent variables (training and development, and/or, performance appraisal) and the mediator (teamwork and participation) as HR practices on operational and financial performance will be revealed after 2 years.

The sampling frame used the “Kosovo Agency of Statistics” (KAS), where 600 firms meeting our selection criteria were selected from the 10,190 firms listed by KAS

[10]. Only 447 manufacturing firms had up-to-date contact information. The questionnaires were accompanied by a cover letter specifying the objectives of the study, the confidentiality of the use of their data, potential contributions and ethical issues. In line with Frohlich [74] and Islami [10] suggestions to improve the response rate, emails were followed up with phone messages and calls. Finally, with an effective response rate of 35% of the contacted sample, 157 firm were used in our further analyses. The main characteristics of the firms in the sample are presented in Appendix A. The results show that about 43 per cent of the responding firms had more than 20 years of work experience and more than half of them had less than 49 employees.

4.2. Measurement

In this study, we used existing validated scales to measure “training and development” [10], [45], [14], [75], “performance appraisal” [64], [45], “teamwork and participation” [10], [14], [76], “operational performance” [44], [10], and “financial performance” [42], [44], [10], [1], [77]. Respondents answered on a Likert-type scale ranging from 1 to 7. The scores of the scale items are provided in Appendix B.

5. Analysis and results

5.1. Reliability and validity

To validate the dimensionality and reliability of the research constructs a rigorous process is used. Following the requests of Podsakoff et al. [73] and based on previous practices used by Huo et al. [44] and Islami and Topuzovska Latkovikj [1] prior to data collection, “content validity was established through a domain search of the literature, an iterative construct review by domain experts, careful synthesis and critical evaluation of existing constructs executive interviews, pre-pilot study and pilot study” [10] (p. 122). After data collection, “several purification processes and analyses to test the reliability and validity of the constructs were conducted, including factor analysis, means, standard deviations, internal consistency analysis (Cronbach’s alpha)” [10] (p. 122) and correlation analysis (see Table 1). In addition, the study addressed potential non-response bias during the data collection process using Harman’s single-factor test where no single factor is found to explain more than fifty percent (>50%) of the variance. Consequently, there was no serious common-method bias in this research.

CFA measurement model was run to estimate construct validity. The results of the measurement model indicate a moderate model fit: ($\chi^2_{(157)} = 374.28$; $df=218$; $p<.001$; $NFI=.85$; $IFI=.93$; $TLI=.92$; $CFI=.93$; $RMSEA=.06$). For all measures, the estimates of “composite reliability” (CR) and “average variance extracted” (AVE) were above the recommended thresholds of 0.7 and 0.5, respectively, demonstrating convergent validity.

Definition	# Items	α^1	Mean	S.D.	1	2	3	4	5
1. Training and development	4	0.87	3.94	0.97	.				
2. Performance appraisal	5	0.90	5.39	0.96	0.62**	.			
3. Teamwork & participation	3	0.87	4.33	0.96	0.65**	0.67**	.		
4. Operational performance	4	0.88	5.94	0.65	0.44*	0.62**	0.59**	.	
5. Financial performance	7	0.88	5.13	0.74	0.24**	0.41**	0.21**	0.31**	.

Table 1. Descriptive statistics, cronbach’s alpha, and inter-correlations.²

Indeed, according to Hair et al. [79] CR values (>.7) confirm reliability, AVE values (>.5) confirm convergent validity, and maximum shared variance (MSV<AVE) and the square root of AVE greater than inter-construct correlations confirm discriminant validity. In addition, to address potential multicollinearity issues, the “variance inflation factor” (VIF) is measured. The results show that none of the constructs pose a multicollinearity problem, as the values are well below the threshold of 4 recommended by Pan and Jackson [78]. All these results are presented in Table 2. Finally, the “exploratory factor analysis” (EFA) shows that all item loadings are above the recommended threshold value of .50 [79], and none of them are cross-loaded with other constructs.

Construct	CR	AVE	MSV ³	T&D	PA	T&P	OP	FP	VIF ⁴
Training and development (T&D)	0.87	0.69	0.43	0.83					1.86
Performance appraisal (PA)	0.90	0.64	0.45	0.62	0.80				2.28
Teamwork and participation (T&P)	0.88	0.71	0.45	0.65	0.67	0.84			2.49
Operational performance (OP)	0.80	0.51	0.39	0.44	0.62	0.59	0.71		1.00
Financial performance (FP)	0.87	0.50	0.17	0.25	0.41	0.21	0.31	0.70	

Table 2. Convergent and discriminant validity of the measurement model.⁵

¹ Cronbach’s alpha

³ Maximum Shared Variance

⁴ Variance Inflation Factor

⁵ Note: N = 157. “Correlation is significant at the 0.01 level (2-tailed)”. (** p < 0.01; * p < 0.05). Bold values on the diagonal are the square root of the AVE values.

5.2. Hypotheses testing

Figure 1 illustrates the theoretical model on which this research is based. This study by estimating a SEM in AMOS 26 has tested the hypothesized relationships. SEM is a comprehensive technique that enables to analyses relationships of latent variables, and test non-normal and time-series data [42]. Therefore, for this study, the SEM method is considered appropriate, as the majority of constructs in the conceptual model are latent and it tests for mediation effects in the whole model.

In the whole model, both direct and mediating T&P paths are tested. Where the interaction terms in the model are applied, using the single indicator estimation method to calculate them [42]. The fit statistics for the structural model are well within generally accepted limits ($\chi^2_{(157)}=385.25$, $df=221$, $p<.001$; $NFI=.84$; $IFI=.93$; $TLI=.92$; $CFI=0.93$; $RMSEA=.06$). The standardized parameter estimates and directional significance levels for the structural paths examined are presented in Table 3. The full set of relationships in the proposed model is presented in Appendix B and C.

(Hypotheses) Path	Coefficient (t-value)		Results
<i>Direct effects</i>			
(H _{1A}) T&D → T&P	0.38 (4.00)***		Supported
(H _{1B}) T&D → OP	-0.03 (-0.26)		Not supported
(H _{2A}) PA → T&P	0.44 (4.45)***		Supported
(H _{2B}) PA → OP	0.44 (3.36)***		Supported
(H ₃) T&P → OP	0.31 (2.44)*		Supported
(H ₆) OP → FP	0.33 (3.20)**		Supported
<i>Mediating effects</i>			
	Total Effects	Direct Effects	Indirect Effects
(H ₄) T&D x T&P → OP	0.09 (<1.65)	-0.03(<1.65)	0.12 (>2.58)**
(H ₅) PA x T&P → OP	0.58(>3.30)***	0.44 (>1.65)*	0.14 (>1.96)*

Table 3. Structural model estimation results.⁶

5.2.1. Direct effects and mediation

In H_{1A} is argued that T&D is connected positively to T&P, while in H_{1B}, a positive relationship between T&D and OP is not found. The results support the first hypothesis (H_{1A}) with ($\beta=.38$; $t=4.00$; $p<.001$), but do not support hypothesis H_{1B} with ($\beta=-.03$; $t=-0.26$; $p>.10$).

In H_{2A} and H_{2B}, is argued that PA is connected positively with T&P and OP. The results support these hypotheses ($\beta=.44$; $t=4.45$; $p<.001$, and $\beta=.44$; $t=3.36$; $p<.001$,

⁶ Notes: "Critical values of the t distribution for $\alpha=0.10$, $\alpha=0.05$, $\alpha=0.01$, and $\alpha=0.001$ (two-tailed test) are $^+=1.65$, $^*=1.96$, $^{**}=2.58$, and $^{***}=3.30$, respectively". The coefficients are standardized regression coefficients.

respectively). In H_6 , is expected that OP is positively linked with FP. In support of this hypothesis, the path between OP and FP is significant ($\beta=.33$; $t=3.20$; $p<.01$).

To test mediation, initially was tested the direct links between T&P and OP. Where in H_3 , was expected that T&P is positively linked with OP. In support of this hypothesis, the path between T&P and OP is significantly positive ($\beta=.31$; $t=2.44$; $p<.05$). Then was analyzed indirect effect by setting the number of sampling iterations (N) to 5000, using the bootstrapping method suggested by Hayes [80]. When testing the mediating effect of T&P, the direct effects between T&D and OP were found to be still non-significant at $p<.05$ with the mediation. Moreover, the bootstrapping method revealed that the indirect effect of T&D on OP through T&P was significant at $p<.01$ ($p=.007$). This result argument the full mediation and supports H_4 . In addition, when testing the mediating effect of T&P, the direct effects between PA and OP were found to be significant at $p<.05$ with the mediation, whereas $p<.001$ without the mediation. The bootstrapping method, also revealed that the indirect effect of PA on OP through T&P was significant at $p<.05$ ($p = .014$), which argument the partial mediation and supports H_5 .

6. Discussion and conclusions

Firms operate in an increasingly unfriendly and turbulent environment [42]. Therefore, the firm's T&D and PA practices, resulting from its network connections with other HR practices, could provide exclusive income that could influence its OP. Yet, little is known how and when the interactions among the HR practices lead to OP. This study place of interest the scarce attention paid to inspecting the in-depth image of the relationship between R&D and PA practices and OP. It also takes out the dominant premise that T&P can play an influential role in clarifying how companies can utilize T&D and PA and improve their OP, consequently, their FP. The findings of this study suggest that T&P can function as a linking pin between T&D and PA practices and OP and clarify how T&D and PA can be used to increase the firm performance. For the reason, that T&D and PA are vital resources, link intra-boundary capability of T&P are necessary to channel its potential toward planned ends so as to realize its influence on the competitive market and OP. This result advances the existing researches that examine the linkages between T&D and firm performance [23], [28] and between PA and performance of the firm [29], [13], but have overlooked mediating internal mechanisms that serve as a channel on the relationship between these constructs. The outcomes also expose that the role of OP has positive and significant influence on FP, which is in line with Li et al. [46] who found that competitive advantage can have a direct and positive influence on performance of the organization.

The findings of this study rich the extant body of HR and strategic management literature in several directions. First, it contributes to inquiries on how the dimension of T&D is put into use through T&P to concretize its potential impact on OP. Therefore, these outcomes on the effect of T&D practice as a relational basis of OP complement existing study, which has measured mainly the impact of HR practices on performance of the firm using behavioral but not contingency perspectives (e.g.,

see [10], [45], [14], [81]). Second, it suggests that the utilization of PA competences should not be separated from T&P of employees. The addition of T&P into the equation develops an indirect view of the effect that PA shows in OP. Hence, these findings indicate that T&P is an important condition for firm performance and organizational existence, since firms may face a greater chance to failure if they do not integrate their HR practices (e.g., T&D, PA and T&P) strategically. This contribution can explain why some firms might have bad OP although they may possess a high level of T&D and conversely help decompose paradoxical findings in research on T&D, PA, T&P and OP. Third, previous studies have mainly assumed T&D and PA as essential practices in volatile and disruptive settings [10], [45], [16], but paid little attention to the internal orchestration of HR practices using empirical tests. This study moves beyond a mere supposition that T&D and PA are crucial for firm performance and empirically tests whether T&P channels the potential impact of T&D and PA on increasing firm performance.

To conclude, this study orchestrates HR practices as a set of tactics to integrate T&D, PA and T&P, which practices work interdependently and complement one another in a manner to be able to ensure both individual and operational performance. Following the Sabiu et al. [13] approach, in this paper HR practices are treated as activities that ensure that resources are integrated in the manner to fulfill organizational goals. The study results acquired through SEM depicted in Figure 1 and solved in Appendix B indicate that T&D and PA practices have a positive indirect effect (through T&P) on OP. The results for mediating role of the T&P practice are in harmony with modern HR management requests and undoubtedly have theoretical and practical implications where managers think about how to link internally HR in the employment of T&D and PA.

6.1. Managerial implications

The results of the current study show that employee satisfaction with the PA system is an important element that affects their participation and thus leads to an improvement in the climate of teamwork in the company. This suggests that companies should priorities employee satisfaction with the PA system in order to achieve the desired results. In particular, top managers should use effective evaluation systems that are reliable and neutral. In addition, before implementing T&D programs and PA systems, management should define employee satisfaction or acceptance and inform them how they will be implemented. In addition, practitioners should note that satisfaction with T&D and employee appraisal can be achieved through relational fairness - the degree to which the employees involved are treated with respect by managers. This strategy emphasizes the importance of T&P for employees at every stage of the task implementation process to perform their tasks well and contribute positively to the organization as a whole.

It also recommends that T&D programs and PA systems should be organized more frequently and that managers should know their employees well in order to provide appropriate development programs and fair appraisal. These activities should be organized to increase staff motivation, make them feel valued and improve their

contribution to the company in terms of participation and teamwork in solving problems to improve the company OP. In order for employees to be more committed to participation and teamwork, they should be able to see how their performance is valued and their skills improved.

Finally, most companies have valuable resources and effective policies embedded in their organization. However, some of these essential resources cannot have their impact if they are not linked to the company's internal practices. Therefore, companies should encourage and stimulate employees' T&P and use their T&D in the pursuit of better OP. Although heavy investment in T&D is required to develop, sustain and operate it. It is a valuable endeavor as it could play a significant role in organizational performance in the long run [31]. In addition, we highlight that T&P also facilitates the realization of PA's potential for OP, thus we believe that T&P is a valuable practice for companies. Therefore, maintaining organizational cohesion through resources embedded in internal HR practice relationships is beneficial to achieving better OP. Companies that seek greater internal integration of HR practices are likely to be better able to manage their T&D, PA and T&P to improve OP and FP.

6.2. Limitations and future research

This research offered a relational view of HR practices. It suggests that the orchestration of HR practices can be a critical source of organizational performance. Nevertheless, a deeper approach is needed to analyze the internal linkages of HR practices in order to specify how such practices can be used to help companies be leaders in their industry. As there might be a difference between the perception and reality of T&D and PA as HR practices, it is not clear how such a difference might affect T&P and business performance. Future research may measure the role of other HR practices in OP or FP. For example, the practices analyzed in this study do not represent all HR practices. Therefore, future research can investigate the integration of additional practices, such as: recruitment and selection, compensation incentives, job analysis and description, and employment security [10], which have been overlooked in this study. Moreover, this model can be implemented in different industries and in different contexts.

In addition, since the majority of existing studies focus on HR practices that have a positive impact on performance, it is important to examine which practices may hinder or affect employee or organizational performance. For example, the negative factors that may hinder effective implementation of T&D, PA or T&P should be identified and investigated.

Furthermore, Tóth et al. [82] emphasize that qualitative analysis provides a better understanding of how different combinations of conditions/structures lead to a particular outcome. From a procedural position, human resource management studies can therefore “benefit from methodologies beyond commonly adopted methods of case studies and survey-based research” [42] (p. 73). In turbulent and dynamic markets, qualitative analysis can be used to discover different pathways or patterns in the implementation of human resource management strategies, as it allows researchers

to interpret the collaborative nature of the underlying forces behind human resource practices.

Finally, this research only measured the upright relationship between T&D, PA, T&P, OP and FP. Future research could focus on investigating reverse causality, e.g., the influence of FP on OP or whether better OP has an influence on the use of T&D, OP or T&P practices, which would provide more information about the cause-effect relationship uncovered in this research.

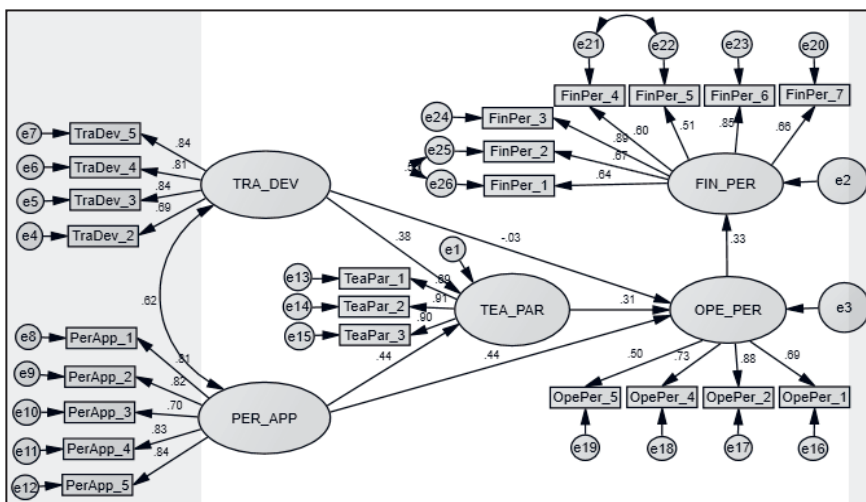
Acknowledgment

This paper analyses data collected by the first author for his PhD thesis. The dissertation is published by the Faculty of Economics of the "Ss. Cyril and Methodius" University, Skopje, Republic of North Macedonia. Based on the same data, we tested the model we propose in this paper, which is completely different from the model tested in my PhD thesis and other related research.

Appendix A. Characteristics of sample firms.

Industry sector	Food	Textile	Construction	Wood	Metal	Plastic	Chemical	Other	
Number	31	7	63	15	11	6	5	19	
Percent (%)	19.7	4.6	40.2	9.8	7.1	3.9	2.6	12.1	
Number of employees	<i>10-49</i>	<i>50-249</i>	<i>≥250</i>	Firm age			<i>≤10</i>	<i>11-20</i>	<i>>20</i>
Number	96	57	4	Number	49	41	67		
Percent (%)	61.2	36.3	2.5	Percent (%)	31.2	26.1	42.7		
Annual revenue (2019 value)	<i>≤€1 million</i>		<i>€1-10 million</i>		<i>> €10 million</i>				
Number	71		80		5				
Percent (%)	45.5		51.3		3.2				

Appendix B. Measurement items and proposed model.



Note: Standardized loadings - all items' loadings are significant at $p < .001$ (***)

Appendix C. Constructs and items abbreviations

“To what extent did your organization use the following practices in last three years 2017 March – 2020 March”, (evaluate from 1 – “not at all” to 7 – “to an extreme extent”).

Training and development (TRA_DEV)			
“TraDev_1*”	“Providing extensive training programs for individuals in their jobs.”		
“TraDev_2”	“Activities of the training program provided meet the needs of the employees.”		
“TraDev_3”	“Formal training programs are offered to employees in order to increase their promotability.”		
“TraDev_4”	“Identifying realistic and useful training needs based on the competitive strategy of the organization.”		
“TraDev_5”	“Providing formal training programs to teach new hires the skills they need to perform their jobs.”		
Performance appraisal (PER_APP)			
“PerApp_1”	“Appraisal system is growth and development oriented.”		
“PerApp_2”	“Employees have faith in the performance appraisal system.”		
“PerApp_3”	“Appraisal system has influence on individual and team behavior.”		
“PerApp_4”	“The appraisal data is used for making decisions like job rotation, training, and compensation.”		
“PerApp_5”	“The objectives of the appraisal system are clear to all employees.”		
Teamwork and participation (TEA_PAR)			
“TeaPar_1”	“During problem solving sessions, an effort to get all team members’ opinions and ideas is given before making a decision.”		
“TeaPar_2”	“Forming teams to solve problems and in the past 3 years many problems have been solved through small group sessions.”		
“TeaPar_3”	“Problem solving teams have helped improve manufacturing processes.”		
“TeaPar_4*”	“Employee teams are encouraged to try to solve their problems as much as possible.”		
“TeaPar_5*”	“Allowing employees to make decisions related to cost and quality matters.”		
Market/operational performance (OPE_PER) Financial performance (FIN_PER)			
“OpePer_1”	“Overall product quality.”	“FinPer_1”	“Return on investment (ROI).”
“OpePer_2”	“Responsiveness to customers.”	“FinPer_2”	“Growth in return on investment.”
“OpePer_3*”	“Customer service level.”	“FinPer_3”	“Growth in sales.”
“OpePer_4”	“Delivery speed.”	“FinPer_4”	“Return on sales (ROS).”
“OpePer_5”	“Delivery dependability.”	“FinPer_5”	“Growth in return on sales.”
		“FinPer_6”	“Growth in market share.”
		“FinPer_7”	“Growth in profit.”

Note: “Items marked by an asterisk (*) were removed in the final instruments”.

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