

## ORIGINAL RESEARCH ARTICLE

# Unpacking the Black Box of the Training-Performance Relationship: Evidence from Philippine Call Centers

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## Abstract

This study analyzes the relationship between training and development (T&D) and individual performance. Drawing insights from human capital theory and social exchange theory, we hypothesize that the relationship between employee T&D perceptions and role performance is mediated by specific role attitudes – namely, employee self-efficacy and employee engagement. Data were collected from 421 agents across 17 companies in the unique context of the Philippine call center industry. The results of the analyses show that the relationship between employees' perceptions of their organization's T&D investments and their role performance is fully mediated by employee self-efficacy and engagement, whereas the relationship between employees' satisfaction with their line managers' T&D implementation and role performance is partially mediated by employee self-efficacy and engagement. These findings contribute to unpacking the black box of the T&D–performance relationship and have important implications for research and practice.

**Keywords:** *Training and development; Line managers; Human capital; Social exchange; Role attitude; Employee performance*

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Employee training and development (T&D) is a core practice in human resource management (HRM) to strategically develop firms' human capital (Danvila-del-Valle et al., 2019; Martins, 2021; Uslu et al., 2022). According to human capital theory (HCT), a firm's human capital resides in its employees' knowledge, skills, and abilities that can positively influence their job behaviors and, in turn, organizational performance (Danvila-del-Valle et al., 2019; Pfeffer, 1994; Wright & McMahan, 2011). Thus, unsurprisingly, most companies continuously allocate huge sums of their annual budgets to investments related to employee T&D (Felstead et al., 2010; Subramanian & Zimmermann, 2013), with the aim of improving business results through increased employee human capital and higher job performance.

Consistent with HCT predictions, evidence in the extant T&D literature has shown positive individual- and firm-level outcomes of training (Castellanos & Martin, 2011). At the individual level, numerous studies have been published on employees' post-training attitudes and behaviors (for a review, see Bell et al., 2017). At the firm level, much of the focus has been on

T&D financial outcomes (Choi & Yoon, 2015; Nikandrou et al., 2008) and return on investment (Curado & Martins Teixeira, 2014; Percival et al., 2013). While insights from these two foci are clearly relevant for research and practice, very little is known about how firms' investments in T&D affect individual and organizational performance. Indeed, whereas most of the existing research (e.g., Curado & Martins Teixeira, 2014; Martins, 2021) considers training and performance to be directly related (for an exception, see Guan & Frenkel, 2019), the HRM literature has largely argued that such a relationship is actually much more complex and that many potential mechanisms may explain how and why training activities translate into higher performance. This is what has been defined as the *black box* of strategic HRM (Bos-Nehles et al., 2020; Demortier et al., 2014; Purcell et al., 2003), which suggests that more studies on the intervening mechanisms linking T&D practices to individual and firm performance are crucial for the advancement of the HRM literature (Truss et al., 2013).

In this article, we adopt an individual-level analysis and propose a key mediating mechanism that links T&D and individual

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performance: employee role attitudes. Drawing on HCT (Lepak & Snell, 1999) and social exchange theory (SET; Blau, 1964), we argue that T&D effectiveness depends on how employees' perceptions about such activities translate into positive role attitudes that lead to higher individual performance. On the one hand, through an HCT lens, T&D initiatives can be seen to facilitate the acquisition and improvement of knowledge, skills, and abilities that increase employees' self-efficacy (Bandura, 1977) and, in turn, their task performance. Without increased self-efficacy, the impact of T&D initiatives on individual task performance is minimal at best. On the other hand, adopting an SET lens, we argue that T&D initiatives may translate into higher individual performance because employees who positively perceive such initiatives tend to reciprocate organizational investments in their human capital by increasing their levels of engagement with the job and the organization. Engaged employees are characterized as energetic, motivated, and passionate about their role (Kumar & Padhi, 2022; Menguc et al., 2013). This positive attitude is especially true when employees feel that their organization's commitment to them and when they are given access to resources needed to perform their job (Yalabik et al., 2013).

In addition to proposing role attitudes as a mediating mechanism, we conceptualize T&D as organizations' concerted and continuous efforts to improve employees' knowledge, skills, and performance. This approach is unlike that in most of the extant literature, which considers T&D to be a one-time event and assesses its effectiveness based on trainees' satisfaction (Baig & Naqvi, 2023; Chambel & Castanheira, 2012; Egan et al., 2004). In this article, we consider two facets of T&D initiatives: employees' perceived investment in employee development (PIED), a concept that represents how employees perceive their organization's support and commitment to their continuous T&D (Dysvik et al., 2016); and employees' satisfaction with their line managers' (LMs') implementation of T&D practices (SLMI), as the HRM literature increasingly shows the crucial role of LMs in the successful implementation of human resources (HR) practices (Hoogendoorn & Brewster, 1992; Intindola et al., 2017; Tyskbo, 2020). This approach also stems from the proposed research agenda of Bell et al. (2017) in their review of 100 years of training literature, in which they called for more research that goes beyond an instructional design approach, and it aligns with the more recent approach of Garavan et al. (2021).

By analyzing data collected from 421 agents across 17 companies in the Philippine call center industry, this study makes two important contributions to the T&D and HRM literature. Firstly, it contributes to unpacking the 'black box' of strategic HRM by analyzing specific role attitudes (i.e., employee engagement and employee self-efficacy) that serve as intervening mechanisms in the relationship between employees' perceptions of organizational T&D investments and individual performance. Secondly, it advances the current discourse on

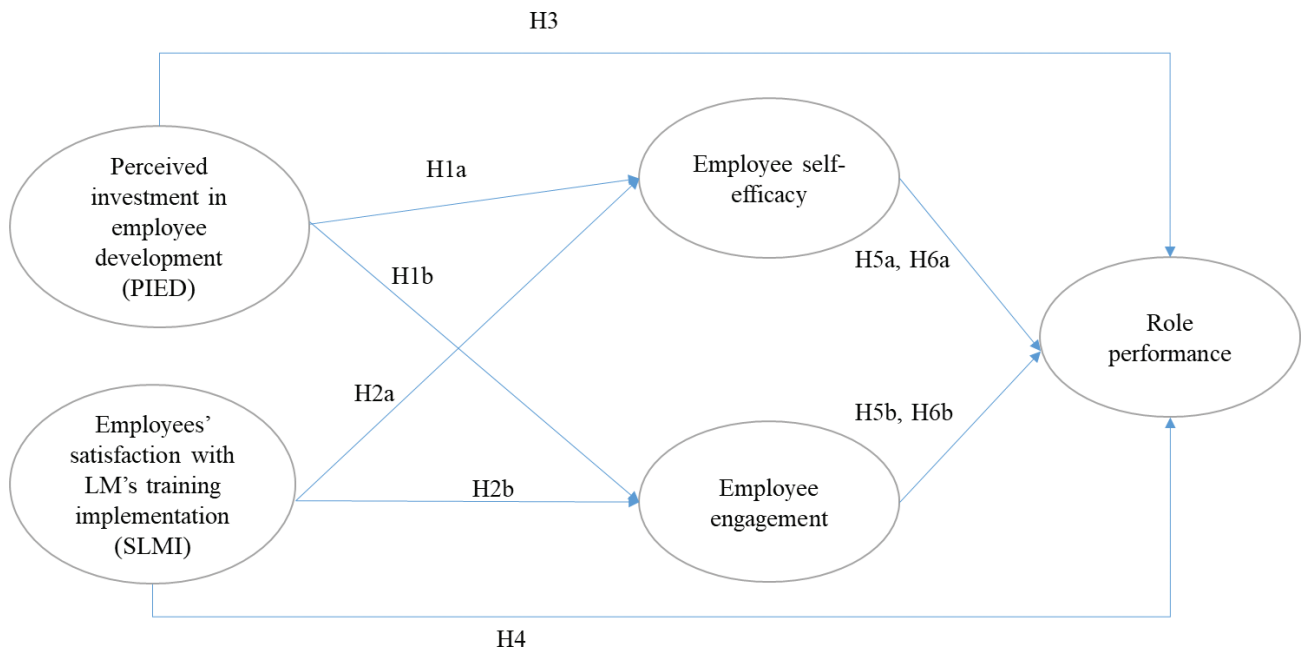
developing alternative ways of assessing the effectiveness of training (Bell et al., 2017) by focusing on two specific dimensions of training effectiveness (i.e., PIED and SLMI). This approach goes beyond a unidimensional conceptualization – for example, the mere evaluation of trainees' satisfaction with training content or methods – to offer a more nuanced and complete picture of T&D effectiveness.

## Theory and hypotheses development

An unresolved issue in the research stream adopting a human capital perspective concerns the identification of the mechanisms through which human capital impacts individual and firm performance, as the link between the two is assessed as distal and could be affected by many potential intervening variables (Purcell et al., 2003; Storey et al., 2019). For example, Wright and McMahan (2011) found that, while organizations may possess human capital, they do not necessarily control or own it because individuals have the choice to use or withhold the effort or behavior that the organization requires. Individuals have free will to leverage their human capital to contribute to their firm and this choice is influenced by their perceptions and feelings about how the company treats them (Wright & McMahan, 2011).

By adopting the SET lens, we recognize that employees' perceptions of training may influence the extent to which they choose to leverage their training-gained human capital in their work performance (Andoh et al., 2023; Bhatti et al., 2013; Grossman & Salas, 2011). Social exchanges are described as invested relationships that are based on or motivated by 'obligatory exchanges of unspecified favors or benefits, over an open-ended and long-term time frame' (Colquitt et al., 2014, p. 600). Blau (1964) described these benefits as voluntary and beneficial actions from one party that are expected to create a desire from the other party to reciprocate. This sense of obligation is particularly fostered in employees who perceive their organization as investing in their human capital development through T&D initiatives and their managers as effectively implementing such organizational initiatives (Yalabik et al., 2013). Indeed, T&D programs provide employees with special knowledge and skills that they can keep indefinitely, thus increasing their employability. Moreover, organizational T&D investments and practices send a high-value social exchange cue that can make employees feel obliged to reciprocate by adopting positive attitudes and behaviors, increasing work effort, and increasing levels of engagement. This, in turn, provides value to the employer as it translates to high employee performance.

Figure 1 shows our conceptual model, which ultimately aimed to test a partially mediated model linking employees' perceptions of T&D to their performance. In the following sections, we present and contextualize our hypotheses regarding the link between employees' perceptions of T&D, their role attitudes, and their performance.



**Figure 1.** Overall conceptual model.  
Source: Own elaboration.

### T&D and employees' attitudes

Although arguments have been made for measuring companies' training investments using actual organizational training expenditures (Curado & Martins Teixeira, 2014; Kwon, 2019; Percival et al., 2013), employees often do not have access to the actual amounts of corporate training budgets, and as such, they are only able to react or form opinions on the training that they receive. It has also been argued that, in social exchange relationships, it is often preferable to gather employees' subjective assessments of their organizations' and managers' commitment to their development (Kuvaas & Dysvik, 2009) because employees tend to react based on these perceptions (Sikora et al., 2015).

Therefore, rather than focusing on the actual number of hours or amount of money spent on training investments, in our analytical model, we adopt two types of employee perceptions of T&D initiatives. The first is PIED, which indicates the extent to which organizations commit to employees' personal and professional growth and is defined as the 'employees' assessment of their organization's commitment to help employees learn to identify and obtain new skills and competencies' (Lee & Bruvold, 2003, p. 983). The second is employees' SLMI, which indicates the employees' satisfaction with their line managers' implementation of T&D practices.

The existing literature on the relationship between employees' perceptions of T&D practices (PIED and SLMI) and employee role attitudes, such as self-efficacy and work engagement, is quite scarce. Most of the studies have focused on the relationships between employee engagement and either a

particular type of training or supervisory support. For example, Menguc et al. (2013) reported that supervisory feedback to employees in retail stores was positively related to employee engagement. Similarly, Sendawula et al. (2018) showed positive associations between training and employee engagement, which were then related to individual job performance. Another example is a study by Johnson et al. (2018), wherein it was found that service training, measured by an individual's motivation for training, benefits of training, and training support for colleagues, had positive effects on employee engagement in the hospitality industry. Other studies have identified constructs such as job characteristics, perceived organizational support, organizational commitment, and procedural justice as antecedents of engagement (Saks, 2006). Many of these studies have drawn from the job demands–resources model, which suggests that employees who feel that they receive adequate resources feel less strain related to job demands (Rai & Chawla, 2022).

In line with HCT and SET, we argue that, if employees perceive that their company highly invests in their professional development and in preparing them for their job, they will feel more confident about their abilities to perform their tasks and will also see this as a sign of their employer's support and long-term commitment to them. Indeed, T&D increases the level of employability of the beneficiaries, both inside and outside the organization, through human capital development (Lee & Bruvold, 2003; Muhumuza & Nangoli, 2019). On the one hand, the amount of training received – or at least the employees' perceptions of the amount of training received (i.e., PIED) – provides resources and opportunities for employees to

properly perform their jobs, thus leading to higher self-efficacy. On the other hand, employees could perceive T&D investments as a demonstration of the organization's long-term orientation toward their relationships and the company's acceptance of the associated risk due to the threat of employees' increased attractiveness and the possibility of transferring to other organizations (Presbitero et al., 2016) and this leads them to reciprocate through higher levels of work effort and engagement. Thus, our first hypothesis is as follows:

*H1: Employees' PIED is positively related to (a) employee self-efficacy and (b) employee engagement.*

Similarly, supervisory support in training has been identified as one of the most critical factors influencing the transfer of training and related employee outcomes (Govaerts, 2017). Previous studies have also stated that LMs play not only a supportive role but also an active role in the training process (Heraty & Morley, 1995). The importance of LMs in HRM implementation has been increasingly demonstrated in the last few decades (Cascón-Pereira et al., 2005; Hall & Torrington, 1998; Intindola et al., 2017). Purcell and Hutchinson (2007) suggested that, with effective line management, HR strategies can fully come to life in organizations. Some studies have also claimed that the cognitive, social, and functional proximities of LMs to their subordinates allow the former to be more attuned to employees' needs and thus provide HR interventions that are more personalized and appreciated (Hutchinson & Purcell, 2010; Mayrhofer et al., 2004).

Consistent with HCT and SET, we expect that, when employees are satisfied with their LMs' implementation of T&D practices, they will show higher levels of self-efficacy and engagement as a result of, respectively, their improvement in specific human capital dimensions and their sense of obligation to reciprocate LMs' efforts to provide them the necessary T&D by living up to the organizational expectations regarding their performance and their overall accrued employability (even outside the organization). Thus, the more effective LMs are in implementing T&D, the more likely employees will be to show more positive role attitudes. This is the basis for our second hypothesis:

*H2: Employees' SLMI is positively related to (a) employee self-efficacy and (b) employee engagement.*

### **T&D, employees' role attitudes, and job performance**

Together with the direct relationship between T&D and employee role attitudes, our model also predicts that role attitudes partially mediate the relationship between T&D and employee role performance. Indeed, on the one hand, the existing literature seems to suggest that T&D investments directly impact individual outcomes (Bell et al., 2017). For example, Liu and Batt (2010) and Ellinger et al. (2003) found that coaching

from their supervisor had an effect on both employees' objective and perceptive performance improvements. This may be explained by the fact that, in the workplace, employees usually interact with their LMs multiple times daily, either through training, formal team meetings, individual coaching sessions, or informal chats (Fabros, 2016). Thus, managers are well positioned to know their employees' T&D needs and to facilitate ways for their employees to receive the appropriate T&D interventions to help them perform their jobs better. On the other hand, the strategic HRM literature has argued that many potential mechanisms, such as role attitudes, may help explain the relationship between T&D and role performance (Bos-Nehles et al., 2020; Demortier et al., 2014; Purcell et al., 2003).

We argue that employee self-efficacy and engagement are two important mechanisms that help explain how and why T&D impacts role performance. Self-efficacy can be considered an individual's conviction that they can successfully execute a given behavior required to produce certain outcomes (Bandura, 1977). Individuals who perceive themselves as more efficacious tend to persevere and remain positive amid difficulties (Fida et al., 2015; Yang & Bentein, 2023). For example, employees in service industries (e.g., call centers) are expected to face emotionally demanding tasks and display emotions that comply with organizational norms in order to provide excellent customer service (Ojha & Kasturi, 2005), thus underlining the need for high self-efficacy to handle emotional labor. Although to our knowledge, the specific relationship between self-efficacy and role performance has not yet been investigated, Alessandri et al. (2015) pointed out the importance of emphasizing self-efficacy in performing specific tasks across diverse situations and other studies have shown positive relationships between this construct and outcomes such as job satisfaction, self-esteem, and prosocial behavior (Caprara et al., 2010, 2013). Adopting an HCT lens, we argue that employees' perceptions of T&D initiatives translate into higher performance by increasing their self-efficacy due to their accumulated human capital. However, if employees perceive that their organization invests in their professional development and that LMs effectively implement T&D initiatives, but their convictions about their potential job success are not increased, T&D initiatives lose their impact on role performance.

Similarly, engagement is crucial for performance, as engaged employees are energetic, motivated, and passionate about their role (Menguc et al., 2013) and 'express themselves physically, cognitively or emotionally during role performances' (Kahn, 1990, p. 694). Their enthusiasm for the job and the organization is beyond normal expectations, and they are known to 'go the extra mile' in exercising discretionary efforts (Arrowsmith & Parker, 2013). This is especially true when employees feel their organization's commitment to them and when they are given access to the resources needed to perform their jobs (Yalabik et al., 2013). In terms of outcomes, the existing literature suggests that more engaged employees display better job

performance (Soane et al., 2012). Again, without a positive impact on employee engagement, T&D initiatives may have significantly reduced effects on role performance. Thus, for organizational T&D investments to be effective, it is essential that employees perceive such initiatives as long-term investments in their development and that they reciprocate by honing their competence and engagement in dealing with the various aspects of their jobs. In the same vein, we expect that, when LMs are perceived to implement training effectively, employees could have access to more training hours or even personalized T&D interventions, and thus, they would feel that their manager is strongly invested in their development and engaged in making them better workers. This perception is likely to lead employees to reciprocate through higher engagement in their role, thus allowing managers to obtain higher employee role performance.

As a result of the above discussion, we hypothesize the following:

*H3: Employees' PIED is positively related to employees' role performance.*

*H4: Employees' SLMI is positively related to employees' role performance.*

*H5: The relationship between PIED and employees' performance is mediated by (a) employee self-efficacy and (b) employee engagement.*

*H6: The relationship between employees' SLMI and performance is mediated by (a) employee self-efficacy and (b) employee engagement.*

## Methodology

### Empirical setting

To test these hypotheses, we used data from a specific industry and country context: call centers in the Philippines. The core business of call centers largely depends upon employee T&D to enable them to provide the best-quality service to customers. Reinforcing the need for engaged and competent employees, call centers are known to operate in an innately knowledge-intensive and people-based environment in which employees are entrusted with valuable tacit knowledge related to confidential market and customer information, business intelligence, and work processes (Presbitero et al., 2016). The Philippines has been branded the 'call center capital of the world' (Fabros, 2016, p. 6). The Philippine business process outsourcing (BPO) industry, which includes call centers, has been experiencing growth in the last couple of decades (Jabutay et al., 2023). Despite slight downturns due to the global pandemic, the Philippine BPO industry has achieved revenues of up to \$26 billion and maintained 1.32 million direct jobs and over 4 million indirect jobs (IBPAP, 2020; Outsourcing Journal, 2021). More ambitious goals are set for the coming years, with

call center associations aiming for continued growth (Cahiles-Magkilat, 2021; Jabutay et al., 2023). In the Philippines, call center agents or BPO employees directly interacting with customers undergo very structured and rigorous training programs before and after deployment to the work floor. Their individual performance is key to their company's success, especially in the highly competitive local market. Although each organization has its own set of basic corporate and job-related training programs, industry standards include accent and product training, role training, soft skills training, and other types of training for newly hired agents. Previous studies have stated that in call centers, soft skills are even more important than technical skills (Ojha & Kasturi, 2005); thus, training that focuses on improving agents' abilities to cope with the emotional labor aspects of call center work is one of the most basic, mandatory training programs (Fabros, 2016).

### Data collection and sample

Our data collection started in December 2016, when we contacted organizational representatives consisting of either HR or training directors or operational directors from the members list of the Contact Center Association of the Philippines (CCAP). CCAP is a non-profit organization that promotes awareness of the industry and facilitates the exchange of ideas and best practices among around 100 member companies representing more than 70% of the total revenue and workforce in the industry.

Of the 30 organizations contacted, 17 agreed to participate in the study, representing a 57% participation rate. Almost all of the organizations that refused to participate cited one of two reasons: either they could not spare any time for their employees to answer the survey due to very heavy workloads or they were conducting their own internal research involving their employees. In each of the participating organizations, we were given direct access to employees from at least one branch of the company. All participants were call center agents, as we did not include employees who held support functions within the organization. The employees could answer either an online survey or a paper-based survey on site during their own personal time or their paid break times between March and August 2017. For the paper-based survey, the agents were in a meeting room with a representative from our data collection team and no managers were present. The cover letter, structure, and overall contents of the survey were the same for both modes of survey administration. We assured each participant that their individual answers would be treated anonymously and confidentially to minimize bias and respect their privacy. All participants returned the questionnaires to us directly.

In total, we distributed 840 questionnaires to individual employees. These employees were clustered within their respective organizations and this clustering was controlled



for in the analysis. Of the sent questionnaires, we received 445 survey forms, representing a 52.98% individual response rate; however, some were unusable due to missing or invalid values and were thus omitted from the final sample. Our final usable sample included 421 call center agents from 17 organizations, with an average of around 25 agents per company. On average, our sample consisted of college graduates and undergraduates who were around 27 years old and had been in the company for more than 2 years. The participants included considerably more women (around 70%) than men, representing the general gender distribution of the sector in the Philippines.

## Measures

Due to the specific context of this study, we operationalized our key constructs using scales that have been used and validated in the HRM, T&D, and service literature. We made minor wording adaptations to better fit the Philippine call center context. All items were measured on a seven-point Likert scale, unless otherwise specified. The complete list of measurement items is presented in Appendix I.

### Perceived investment in employee development

Developed by Kuvaas and Dysvik (2009), PIED was measured using seven items on a five-point scale, a sample of which reads, 'My organization stands out as an organization that is very focused on continuous development of the skills and abilities of its employees'.

### Employees' satisfaction with LMs' training implementation

Based on the list of training practices proposed by Heraty and Morley (1995), this was measured using a five-point scale based on questions about employees' SLMI regarding practices such as 'identification of training needs', 'conducting direct training', and 'evaluation of training activities'. We also added a 'not applicable' (N/A) option, which the employees could select if they deemed that their LM was not responsible for that task. Consistent with past HRM implementation studies (Bos-Nehles et al., 2013; Gilbert et al., 2015), we assigned an effectiveness score of zero to the N/A responses. Then, we created an additive index score by adding the employees' satisfaction scores for each task and dividing it by the total number of practices for which the LM was considered responsible. This implies that a higher index score represents higher SLMI for practices in which the LMs were involved.

### Employee self-efficacy

We operationalized employee self-efficacy using a specific construct that fits the call center context: regulatory emotional self-efficacy. Regulatory emotional self-efficacy is defined as the 'subjective self-appraisal of one's own emotional competence in the domain of emotion regulation' (Alessandri et al., 2015, p. 25). Previous studies have claimed that call center work requires an enormous amount of emotional labor (Huang et al., 2010; Ojha & Kasturi, 2005; Ruppel et al., 2013). Thus, a call center agent's ability to regulate their emotions is a crucial aspect of their job. We measured regulatory emotional self-efficacy using seven items from the emotional work self-efficacy scale used by Fida et al. (2015). This scale was based on earlier measures of affective regulatory self-efficacy by Bandura et al. (2003) and adapted for use in organizational contexts. It assesses self-efficacy in relation to emotional regulation and in managing negative affect when facing frustrating events and in expressing or managing positive emotions and thus fits very well with the specific nature of call center work. A sample item is 'I can keep my cool when others treat me rudely'.

### Employee engagement

This construct was measured using nine items from the Utrecht work engagement scale by Schaufeli et al. (2006). Based on the Maslach burnout inventory, it is one of the most validated measures of engagement to date. Sample items include 'At my work, I feel bursting with energy' and 'I am proud of the work I do'.

### Employee role performance

This outcome variable was operationalized using a specific construct that fits the call center context: employees' service performance. Liao and Chuang (2004, p. 42) defined service performance as employees' 'behaviors of serving and helping customers' (p. 42). Call center agents play a pivotal role in service encounters (Liao & Chuang, 2004), which, in this context, is a dyadic, device-mediated interaction between an employee and a customer. Call center agents typically fulfill customer-oriented functions, the most common of which are telemarketing, sales, answering customer inquiries and complaints, and other service and support tasks. Customers require remote assistance or immediate responses to their complaints, and agents are expected to effectively handle all callers, from polite ones to distressed, upset, and hostile ones, because, in this industry, as in other service-related industries, the 'customer is always right' (Fabros, 2016). It is widely accepted in the extant literature that, when employees provide excellent service to customers, the latter are more likely to

provide favorable service evaluations, experience higher satisfaction, increase their purchases, and even repeat those transactions (Borucki & Burke, 1999; Hudson et al., 2017; Liao & Chuang, 2004). To measure employees' service performance, we drew from the service performance measures for sales personnel developed by Borucki and Burke (1999). In this study, we used five self-report items from the version by Liao et al. (2009). A sample item asks the extent to which agents 'ask good questions and listen to find out what a customer wants'.

### Control variables

Additionally, we collected data on personal and work-related demographic variables that may possibly confound the relationships between our independent and dependent variables. We controlled for the possible effects of the employee's age, gender (coded as 0 for male and 1 for female), educational level (coded as 1–7 from lower to higher degrees), and tenure in the company, as previous studies have found that these factors influence various employee outcomes (Kuvaas & Dysvik, 2009; Maurer et al., 2002).

### Analyses

The data analyses were conducted in several steps using Mplus 7.31. Because our study relied only on employee respondents for all variables, we conducted strict data screening. We checked and removed all outliers and tested our data for issues of homoscedasticity and multicollinearity. The consistent pattern in the scatter plot analyses and variance inflation factor coefficients (ranging from 1.000 to 1.598) showed that our data were above all standard tolerance values (Hair et al., 2005).

We also tested our data for common method bias using both procedural and statistical methods. In the pre-survey administration phase, we applied procedural solutions to possible common method bias through item reordering and assuring respondent anonymity, similar to the approach applied by Azmi and Mushtaq (2015). Then, we applied several statistical

tests to control for common method bias. We found no significant issues after applying Harman's single-factor test and the common latent factor test, as all deltas were below the standard of 0.2 (Podsakoff et al., 2003). To avoid loss of data in the analyses due to missing values in variables not central to our hypotheses, median value replacement was used in cases of missing values (i.e., age and tenure; see for example Guest & Conway, 2011).

After data screening, we conducted confirmatory factor analysis (CFA) to examine the factor structure underlying the items and the correlations among the constructs (Farrell, 2010) and to check the measures' reliability and validity. Construct validity was examined by evaluating the percentage of total variance explained per dimension. The AVE results were higher than 50%, indicating good construct validity. In the CFA, we tested a sequence of six nested measurement models (see Table 1).

We used several fit indices commonly used in CFA and structural equation modeling (SEM) to determine model adequacy (Byrne, 2006). The hypothesized five-factor model had the best fit with the data compared to the nested one- to four-factor models:  $\chi^2 = 1226.02$ ,  $df = 619$ ,  $\chi^2/df = 1.98$ ,  $RMSEA = 0.05$ ,  $CFI = 0.92$ ,  $TLI = 0.92$ , and  $SRMR = 0.04$ . To test the structural model and our hypotheses, we performed SEM in Mplus 7.31 using the robust maximum likelihood estimator. This option allowed us to control for the nested nature of our data – that is, employees nested within organizations, using the 'COMPLEX' procedure, which clusters the data at the company level.

## Findings

### Descriptive statistics and intercorrelations

Table 2 summarizes the descriptive statistics for the main variables. Regarding SLMI, the mean index score among participants was 3.86/5.0, which indicates positive perceptions about LMs' training implementation. The same was true for the employees' perceptions of service performance, which had a mean score of 5.89/7.0.

**Table 1.** Confirmatory factor analyses' fit indices for measurement models

Model	df	$\chi^2$	$\chi^2/df$	RMSEA	CFI	TLI	SRMR
1. Five factor model (hypothesized)	619	1226.02	1.98	0.05	0.92	0.92	0.04
2. Four factor model (PIED + SLMI = 1 factor)	623	2307.03	3.70	0.08	0.78	0.77	0.01
3. Four factor model (employee self-efficacy + employee engagement = 1 factor)	623	2338.84	3.75	0.08	0.78	0.77	0.09
4. Three factor model (combined DVs, combined mediators, 1 outcome variable)	626	3651.11	5.83	0.11	0.61	0.59	0.16
5. Two factor model (DV and mediators combined, 1 outcome variable)	628	5083.22	8.09	0.13	0.43	0.40	0.17
6. One factor model	629	5882.40	9.35	0.14	0.33	0.29	0.18

Source: Own elaboration.

PIED: perceived investment in employee development; df: degrees of freedom;  $\chi^2$ : chi-square; RMSEA: root mean square error of approximation; CFI: comparative fit index; TLI: Tucker Lewis index; SRMR: standardized root mean square residual.

Table 3 presents our variables' intercorrelations. Positive correlations were found among all of our main constructs. Moreover, all internal consistency estimates (shown on the diagonal of Table 3) were acceptable, as they exceeded the minimum value of 0.70 (Nunnally & Bernstein, 1994).

**Structural model and hypotheses tests**

Our hypothesized model, depicted in Figure 1, captured our theoretical approach and therefore formed the basis of our analytical tests. Thus, we fit a structural model that included all paths suggested in our hypotheses in which our two exogenous variables, PIED and SLMI, had direct paths to service performance and to employee self-efficacy and engagement, which, in turn, were linked to service performance (hypotheses 1–6). The fit of this model was not good ( $\chi^2[10]=99.84$ ;  $\chi^2/df=9.98$ ; CFI=0.73; TLI=0.44; RMSEA=0.15; SRMR=0.06) (Hu & Bentler, 1999). We then tested a model with all our hypothesized paths and an additional path allowing our two mediating variables to correlate with each other. This was

driven by the idea that employees' self-efficacy could be related to engagement (Xanthopoulou et al., 2009), particularly to its vigor subdimension, as emotional self-efficacy also indicates agents' mental resilience and persistence in dealing with the emotional aspects of call center work. This model had a better fit to the data ( $\chi^2[5]=14.59$ ;  $\chi^2/df=2.92$ ; CFI=0.97; TLI=0.90; RMSEA=0.07; SRMR=0.06) (Hu & Bentler, 1999) and thus was retained for hypotheses testing.

Figure 2 presents the standardized path coefficients of this model. Of the control variables, only tenure and education had significant, albeit relatively weak, relationships with the outcome variable. Education had a negative relationship with role performance ( $\beta=-0.09$ ;  $p<0.05$ ), while tenure was positively related to role performance ( $\beta=0.08$ ;  $p<0.05$ ). A significant correlation was found between our two mediators: employee self-efficacy and employee engagement ( $\beta=0.40$ ;  $p<0.01$ ).

Our first set of hypotheses focused on the direct relationships between PIED and employees' role attitudes. We found that PIED had a significant and positive relationship with employee self-efficacy ( $\beta=0.16$ ;  $p<0.01$ ) and a significant and positive relationship with employee engagement ( $\beta=0.41$ ;  $p<0.01$ ). Hypotheses 1a and 1b are thus supported.

The second set of hypotheses focused on the direct relationships between SLMI and employees' role attitudes. We found that SLMI had a significant and positive relationship with employee self-efficacy ( $\beta=0.29$ ;  $p<0.01$ ) and a significant and positive relationship with employee engagement ( $\beta=0.19$ ;  $p<0.01$ ). Hypotheses 2a and 2b are thus supported.

We then tested the link between PIED and service performance and found that PIED had no significant direct relationship with role performance ( $\beta=-0.07$ ;  $p=0.30$ ). Thus, hypothesis 3 was not supported. Meanwhile, we found a direct, significant, and positive relationship between SLMI and role performance ( $\beta=0.17$ ;  $p<0.01$ ), which supports hypothesis 4.

We then validated our mediation hypotheses by applying the product-of-coefficient approach (MacKinnon et al., 2000).

**Table 2.** Descriptive statistics

Variables	Mean	Standard deviation	Minimum	Maximum
1. PIED	3.71	0.80	1.00	5.00
2. SLMI	3.86	0.94	1.00	5.00
3. Employee self-efficacy	5.42	1.14	1.00	7.00
4. Employee engagement	5.58	1.17	1.00	7.00
5. Role performance	5.89	1.03	1.00	7.00
6. Age	27.57	6.26	19.00	59.00
7. Gender (1 = female)	0.70	0.46	0.00	1.00
8. Education	3.31	0.92	0.00	7.00
9. Tenure	2.39	1.74	0.00	10.00

Source: Own elaboration.

PIED: perceived investment in employee development.

**Table 3.** Inter-item correlation matrix

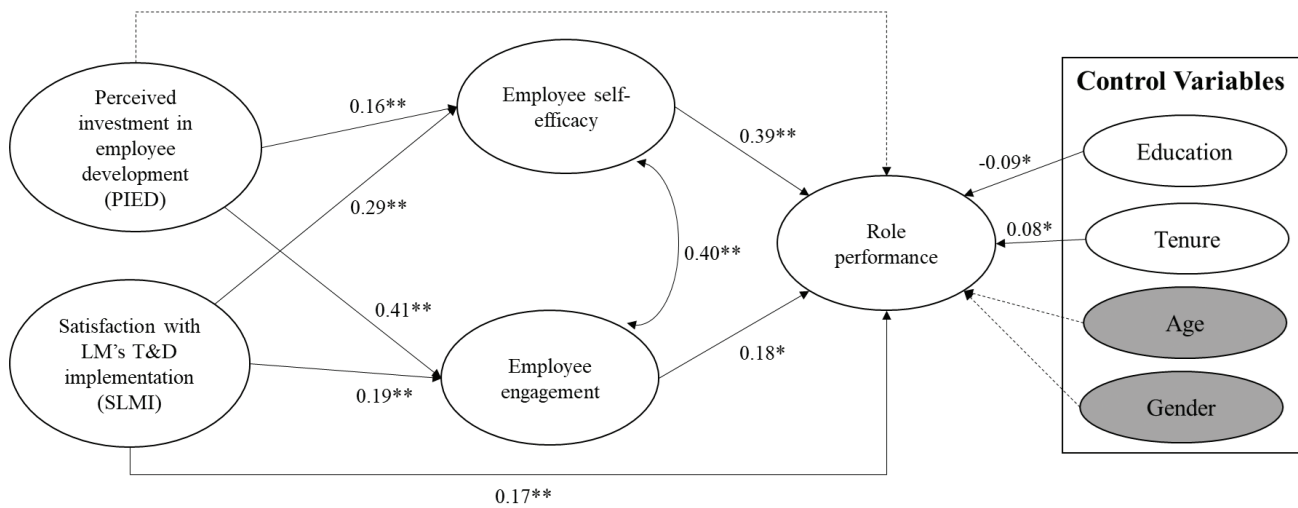
Variable	1	2	3	4	5	6	7	8
1. PIED	(0.92)							
2. SLMI	0.32**	(0.96)						
3. Employee self-efficacy	0.32**	0.34**	(0.89)					
4. Employee engagement	0.49**	0.27**	0.50**	(0.91)				
5. Role performance	0.20**	0.35**	0.52**	0.40**	(0.94)			
6. Age	-0.04	-0.01	0.05	0.08	0.08			
7. Gender	-0.01	0.06	0.03	-0.01	-0.01	0.02		
8. Education	-0.02	-0.12*	0.09	-0.03	-0.07	0.02	0.00	
9. Tenure	-0.06	0.06	0.01	0.05	0.10*	0.31**	-0.04	0.03

Source: Own elaboration.

Notes: N=421; numbers on the diagonal represent the coefficient alphas; \* $p<0.05$ , \*\* $p<0.01$ .

PIED: perceived investment in employee development.





Note: \* $p < .05$ ; \*\* $p < .01$

**Figure 2.** Final structural model: standardized paths.

Source: Own elaboration.  
 Note: \* $p < 0.05$ ; \*\* $p < 0.01$ .

We first tested the statistical significance of the indirect effects of PIED on role performance (MacKinnon et al., 2007) and found positive indirect effects through self-efficacy ( $\alpha = 0.08$ ;  $p < 0.01$ ) and employee engagement ( $\alpha = 0.10$ ;  $p < 0.05$ ), resulting in overall positive total indirect effects ( $\alpha = 0.18$ ;  $p < 0.01$ ) and confirming hypotheses 5a and 5b. However, due to the non-significant path between PIED and role performance and the significant indirect effects, the results of our mediation analysis provide support for a fully mediated model rather than the hypothesized partially mediated model.

Finally, we tested the statistical significance of the indirect effects of SLMI on role performance through employee self-efficacy and we found positive indirect effects ( $\alpha = 0.11$ ;  $p < 0.01$ ). This supports hypothesis 6a. However, a non-significant indirect effect of SLMI on role performance through employee engagement was found ( $\alpha = 0.03$ ;  $p = 0.09$ ), contrary to hypothesis 6b. Despite these mixed results, we found positive and significant total indirect effects ( $\alpha = 0.14$ ;  $p < 0.01$ ), which partially supports hypotheses 6a and 6b. Overall, the significant direct and total indirect effects linking SLMI to role performance support our hypothesized partially mediated model.

## Discussion

It is widely accepted in the extant literature that employee T&D can help individuals and organizations achieve positive performance (Danvila-del-Valle et al., 2019; Sesen & Ertan, 2022). However, less is known about the intervening mechanisms that link the two. Drawing on HCT and SET, this article sought to unpack the black box of the T&D–employee

performance relationship by examining the linkages between employees' perceptions of T&D, role attitudes, and role performance. Our findings show that two types of T&D initiatives (i.e., T&D investments, or PIED; and LMs' implementation of T&D practices, or SLMI) are positively linked with call center agents' role performance through role attitudes (i.e., employee self-efficacy and employee engagement), which could be explained by human capital gains and the reciprocation of social exchange cues. Moreover, the results of this study showed that the effects of PIED on role performance are fully mediated by role attitudes, whereas SLMI has both direct and indirect effects on role performance.

Furthermore, analyzing these results in the specific call center context and applying a Philippine cultural lens, this study offers additional insights into potential social capital development mechanisms that link T&D and performance in certain cultural settings. In the following sections, we discuss the broad contributions of this study to the T&D performance literature, as well as our study's implications for practitioners.

## Theoretical contributions

This study contributes to the literature on T&D by offering a nuanced picture of how employees' T&D perceptions are linked to role performance. Firstly, we found that employees' perceptions of organizational T&D do not have a direct significant relationship with role performance unless mediated by engagement or self-efficacy. This finding enriches those of some scholars, such as Kuvaas and Dysvik (2009) and Dysvik et al. (2016), who also did not find a strong or significant direct

relationship between PIED and work performance. Our results also confirmed our proposition that SLMI is strongly and positively related to employee performance, both directly and indirectly through role attitudes. This reinforces the importance of LMs in implementing HRM, specifically T&D practices. Overall, these findings suggest that employees' perceptions regarding different types T&D initiatives have either stronger or weaker relationships with employees' role performance. For example, from an HCT perspective, our findings suggest that LM effectiveness is more impactful than the overall organizational T&D investment in increasing employee human capital that is crucial to role performance. In other words, the performance effects of T&D investments may be higher in situations of moderate T&D activities and high LM effectiveness than in situations of high T&D activities and poor LM implementation.

These different results for the direct effects of PIED and SLMI may also be interpreted through the social and cultural characteristics of the Philippine context, in which one dominant indigenous cultural value is *utang na loob*, which, when roughly translated into English, means 'debt of will' or 'debt of gratitude'. It is defined as one's natural response and self-imposed obligation to give back 'with interest' – that is, more than what is due – the same kind of goodwill to people who have shown it (Reyes, 2015). This creates a circular dynamic of 'giving back' between two persons, strengthening the relationship in the process (Reyes, 2015, p. 149). The concept of *utang na loob* may well be applied to employees' perceptions of training, in the sense that employees who perceive positive training practices may feel indebted to their company for investing in their long-term development through training and to their LMs for facilitating their work-related training.

Seen through the concept of *utang na loob*, employees' propensity to react positively to the perceived T&D dimensions is stronger when such a cue is given by their manager than by other organizational representatives – much less by the company itself as a single entity. True to the essence of *utang na loob*, Filipinos feel more strongly indebted to a person who has provided them with help or support or who has displayed a positive act that benefits them in a valued way. Thus, employees are more likely to want to give back to their LMs than to their company as a whole. In Filipino society, common examples of *utang na loob* involve parent–child or friend–friend relationships. In the parent–child example, parents are inherently ahead in the exchange relationship – taking care of their children when they are young, paying for their education, and providing their children's needs. Thus, when the child becomes an adult with a job of their own, it is customary for that person to give back 'with interest' to their parents, either through monetary support or by taking care of their parents in their old age (Reyes, 2015). This example illustrates the point that *utang na loob* is a cyclical display of 'one-upmanship' in displaying

goodwill between individuals. Thus, in line with SET, when LMs effectively perform T&D tasks for their employees, those employees have positive attitudes toward their managers and feel indebted to them and thus will be more likely to reciprocate such goodwill by impressing their managers and performing beyond their manager's expectations. This suggests that beyond human capital developments, T&D practices, especially those who are positively perceived by employees, are also able to engender social capital development.

The combination of HCT and SET arguments also explains the results of the mediation analyses, which show that employee self-efficacy and engagement are significant mediators of the T&D–performance relationship. For both PIED and SLMI, such role attitudes represent the mechanisms through which T&D translates into higher levels of role performance. In showing this, our study unpacks a portion of the training–performance black box. On the one hand, consistent with HCT, the increased human capital derived from PIED and SLMI significantly and positively affects employee self-efficacy, which, in turn, leads to higher role performance. On the other hand, consistent with SET, PIED and SLMI also activate the social exchange dynamic depicted above, which leads employees to reciprocate organizational and managerial efforts by offering higher-level engagement, which then translates into better role performance. These findings cover a relevant knowledge gap in the T&D literature, particularly in relation to the role of self-efficacy. Indeed, while the mediating effect of employee engagement strengthens the similar findings of Guan and Frenkel (2019), the strong and positive mediation effect of self-efficacy is new in the T&D literature, as, so far, existing studies have either identified employee self-efficacy antecedents limited to individual traits and personality aspects or used it as an independent variable (Alessandri et al., 2015; Luo et al., 2023). Our findings on self-efficacy also complement other studies in service contexts that suggest that an agent's emotional exhaustion has a negative effect on performance (Jabutay et al., 2023; Witt et al., 2004). Importantly, together with advancing the empirical knowledge of the T&D–performance relationship, our study also shows how adopting and combining different theoretical perspectives (in our case, HCT and SET) may help in understanding complex phenomena, such as the HR–performance black box, and thus offer a promising line of development for future research in this area.

Finally, another contribution of this study is that it proposes an alternative way of evaluating T&D. Specifically, following Sitzmann and Weinhardt (2019), who advocated moving away from micro (e.g., outcomes based on singular training interventions) and macro (e.g., training return on investment) measures of training effectiveness, we gathered two types of employee perceptions regarding T&D: the organization's investments and LMs' implementation. In so doing, we depart

not only from the popular (and criticized) practice of testing the results of a specific training session or method (Bell et al., 2017) but also from the emerging literature focusing on an employee's general perceptions of T&D as a single measure (e.g., Fletcher et al., 2018). Our approach offers a wider picture of employees' T&D perceptions and the results discussed above clearly show how more comprehensive measurements (e.g., including LM implementation) may help in better understanding how and why T&D initiatives translate into higher levels of performance.

## **Implications for practice**

The baseline message of this study's findings for companies is the value of T&D practices. We provide empirical evidence that T&D efforts are positively linked to employee performance, which makes T&D a potential source of competitive advantage, particularly in service industries.

However, we also show that having investments alone does not directly improve employees' performance outcomes. Rather, organizations must communicate and bring these investments to life through important company representatives. Our study suggests that T&D investments would yield better returns if LMs were involved in the effective delivery of T&D practices. LMs are well positioned to influence employees' attitudes and behaviors, likely because of LMs' ability to provide the right T&D interventions for building employees' human capital and bringing about positive employee attitudes. As much as standardized post-hiring training (likely facilitated by separate training departments) is important for employees' performance, so are the continuous T&D interventions that LMs conduct on the work floor. These frequent on-the-job T&D activities are indispensable for achieving high performance levels.

Next, as our study has presented empirical evidence that role attitudes are significant mediators of the T&D–performance relationship, organizations should regularly conduct employee attitude surveys. Data from such surveys could be used to assess whether T&D efforts, or even broader HR efforts, are indeed engendering the necessary positive attitudes that are in line with employees achieving the desired performance levels.

Lastly, this study also has specific managerial implications for the call center context. Call centers have been widely reported to be a high-turnover industry (Jabutay & Rungruang, 2021; Ruppel et al., 2013), but T&D practices may help foster a culture of engagement, competence, and empowerment among its members. T&D investments may, for example, reduce disengagement in employees, who often resort to absenteeism or displaying other negative work attitudes and behaviors due to the difficulties and peculiarities of call center work (Fabros,

2016). Specific investments that help call center agents deal with the emotional aspects of the job are likewise of particular importance for organizations to achieve excellent customer service ratings.

## **Limitations and future research directions**

This study is not without limitations. The first is the cross-sectional nature of our survey, which prevents us from claiming any form of causality among our constructs. Issues of reverse causality may arise, for example, concerning the relationships between T&D and employee self-efficacy or engagement. Longitudinal research would offer more robust evidence on the mechanisms involved in the training–performance link, but it is still quite rare in HRM research (Intindola et al., 2017), particularly in the call center setting. Firstly, the nature of call center work heavily limits employees' availability to participate in research activities. Moreover, employee turnover rates are notoriously high and quick, so it may be difficult to retain participants over time. Future studies must consider other similar approaches, such as time lags, and post-predictive or retroactive designs, as these may help to examine both causality and reverse causality (De Winne & Sels, 2013).

Another limitation of our study is the use of employee self-report measures, which opens up the possibility of common method bias. Although we have performed the necessary actions to prevent and test for such bias, we suggest that future research include other stakeholder perspectives in studying social exchange relationships. Secondly, the use of only perceptual self-report measures may limit the credibility of our findings, but in some cases, we join some scholars in arguing for the validity and usefulness of self-report measures (Boon et al., 2019). Still, future studies could use a more comprehensive set of measures (Choi & Yoon, 2015). For instance, actual objective performance data are applicable in the call center context, where performance monitoring systems may automatically store such data. Moreover, multilevel studies that account for different organizations' training strategies or LMs' different levels and methods of implementation would also help refine our understanding of the linkages among these constructs.

Beyond these limitations, we recognize that not all of our hypothesized relationships were supported in our analyses, and this, along with our other findings, paves the way for some future research directions. Our findings may potentially be generalized to other service industries, and future studies should investigate whether the importance of T&D and its relationship with employee outcomes manifests in the same way in other non-service industries or for other types of employees, such as temporary and gig workers (Scully-Russ & Torracco, 2020). Similarly, as discussed above, our results may be explained by the specific cultural context of the Philippines. While

the Philippine call center context follows the traditional notions of social exchange, entrenched cultural values lead to a slightly nuanced realization of the Western concept due to the heightened importance of personal relationships. Thus, future studies may investigate how our model works in different cultural contexts, particularly in Western countries. Moreover, our work is a small step toward a better understanding of the T&D–performance black box. Future research should explore other intervening mechanisms and consider other contextual and organizational variables that may influence the T&D–performance relationship. Another important line of research emerging from our findings relates to factors that may shape employees' perceptions of T&D, as we demonstrated that these are crucial for training effectiveness. Furthermore, our study has potential implications for social exchange relationships, although we were not able to fully capture the 'exchange' or giving-back aspect in our cross-sectional design. To better understand and confirm whether employees' role performance could be an indication of their ability or willingness to reciprocate the cues received in those exchange relationships, future studies may employ longitudinal, mixed-method, or multilevel studies. Studies matching LM and employee data would be able to gather LMs' reports on the amount of time and effort they spend enacting their T&D duties, and employees could provide information on their role attitudes. In order to complete 'a cycle', LMs can provide data at different time points on whether they perceive employees' efforts and behaviors as their way of matching the LM side of the social exchange relationship and whether these perceptions have an impact on the way they treat their employees.

## Conclusion

The link between T&D and performance remains an important topic for organizations, notably those in the service industry, where employee T&D is not only a high-cost endeavor but also a requisite to the core business strategy. Our study tested a model that links employees' T&D perceptions, their role attitudes, and role performance. Our findings offer several key contributions to T&D research and to studies on call centers and potentially other service industries.

By integrating HCT (Lepak & Snell, 1999) and SET (Blau, 1964), our study suggests that employees' T&D perceptions regarding their company's T&D investments and their LMs' T&D implementation are crucial for developing human capital and social reciprocity norms associated with positive employee performance. In this relationship, T&D perceptions are also associated with positive role attitudes that allow employees to feel more self-efficacious and more engaged in their roles, which are then associated with positive performance. These findings contribute to unpacking the black box of the T&D–performance relationship and pave the way for future research in this area.

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## Appendices

### Appendix I. List of measurement items

#### Perceived investment in employee development (items from Kuvaas & Dysvik, 2009)

1. My organization invests heavily in employee development (for instance, by way of training and development programs).
2. By way of practices such as developmental performance appraisal, counseling systems, competence development programs, and leadership development programs, my organization clearly demonstrates that it values development of the skills and abilities of its employees.
3. My organization stands out as an organization that is very focused on continuous development of the skills and abilities of its employees.
4. My organization is effective in meeting employees' requests for internal job transfers.
5. I definitely think that my organization invests more heavily in employee development than comparable organizations.
6. By investing time and money in employee development, my organization demonstrates that it actually invests in its employees.
7. I'm confident that my organization will provide the necessary training and development to solve any new tasks I may be given in the future.

#### Employees' satisfaction with LM's T&D implementation (items adapted from Heraty & Morley, 1995)

*Survey instruction: Think about your team leader. In the given list, please rate your level of satisfaction regarding the way your team leader performs the following tasks and activities. If your team leader is not responsible for the activity, please choose 'N/A'.*

1. Identification of training and development needs
2. Formulation of training and development policies
3. Translation of training and development policies into plans
4. Selection of training and development methods to be used
5. Deciding who in the organization should be trained
6. Undertaking/conducting direct training
7. Evaluation of training and development activities
8. Succession planning

9. Advising top management of implications of corporate strategy

#### Employee engagement (items from Schaufeli et al., 2002)

1. When I get up in the morning, I feel like going to work.
2. I am enthusiastic about my job.
3. At my work, I feel bursting with energy.
4. At my job, I feel strong and vigorous.
5. I feel happy when I am working intensely.
6. My job inspires me.
7. I get carried away when I am working.
8. I am proud of the work that I do.
9. I am immersed in my work.

#### Employee self-efficacy (items from Fida et al., 2015)

*When at work, I can...*

1. Maintain control of myself in all circumstances
2. Overcome frustration if my superiors and/or my colleagues do not appreciate me as I would like
3. Keep my cool when others treat me rudely
4. Avoid being irritated by wrongs that happen to me in my workplace
5. Overcome frustration related to my failures at work
6. Not get disheartened following a heavy criticism at work
7. Keep my cool in times of stress and tension at work

#### Service performance (items from Liao et al., 2009)

*Survey instruction: Please evaluate your own performance in terms of the listed items.*

1. Being able to help customers when needed
2. Being friendly and helpful to customers
3. Asking good questions and listening to find out what a customer wants
4. Approaching customers quickly
5. Suggesting items customers might like but did not think of
6. Pointing out and relating item features to a customer's needs
7. Explaining an item's features and benefits to overcome a customer's objections

Sources: Own elaboration, based on Kuvaas and Dysvik (2009), Heraty and Morley (1995), Schaufeli et al. (2002), Fida et al. (2015), and Liao et al. (2009).