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RESEARCH ARTICLE

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Investing in general human capital as a relational strategy: Evidence on flexible arrangements with contract workers

Thomaz Teodorovicz[1] | **Sérgio Lazzarini**[2] | **Sandro Cabral**[3] | **Anita M. McGahan**[4]

[1]Department of Strategy and Innovation, Copenhagen Business School, Frederiksberg, Denmark

[2]Ivey Business School, Western University, London, Ontario, Canada

[3]Business Economics Program, Insper Institute of Education and Research, São Paulo, Brasil

[4]Rotman School of Management, University of Toronto, Toronto, Ontario, Canada

Correspondence
Thomaz Teodorovicz, Department of Strategy and Innovation, Copenhagen Business School, Kilevej 14A, 2nd floor, DK-2000, Frederiksberg (Copenhagen), Denmark.
Email: tt.si@cbs.dk

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Abstract

Research Summary: This article examines a firm's investment in the general skills of contract workers in flexible work arrangements. It theorizes that this investment may prolong a productive firm-worker collaboration even when workers' mobility barriers are low. It also proposes that achieving such benefits requires that the firm frames the relational benefits of the investments both to managers and workers. Such a "relational framing" mitigates worker concerns about subsequent productivity demands and manager concerns about worker mobility. Experimental and non-experimental studies conducted in a multinational cosmetics direct sales company support the theory. Investments in the general skills of workers—even those in flexible work arrangements—can benefit both firms and workers by deepening the firm-worker relationship while increasing value creation.

Managerial Summary: Should companies train workers in general skills if the workers can easily leave and transfer productivity gains to competing firms? A common answer to this question is "no," especially when targeting workers hired under flexible arrangements, such as gig workers and direct sales representatives. This article offers a different perspective. It predicts that these investments signal a company's commitment to nurture workers' development. In turn, workers reciprocate by prolonging a more productive collaboration. Training

thus benefits workers and companies. Using relational terms to frame training programs enables the promotion by managers of training opportunities, and uptake by workers. This framing overcomes managerial concerns about worker exit and worker concerns about subsequent productivity demands. Studies conducted in a multinational cosmetics direct sales company support these arguments.

KEYWORDS

contract workers, framing, general human development, relational strategy, strategic human capital

1 | INTRODUCTION

Extensive research in strategic management has examined how and under what conditions investments in workers' knowledge, skills, and abilities enable firms to create value (Acemoglu & Pischke, 1999; Starr et al., 2018; Wang et al., 2009). While skill development programs have been widely examined in traditional full-time work arrangements, scholars and practitioners continue to raise questions about whether and how firms create value by investing in the human capital of contract workers employed via flexible work arrangements (Anderson & Bidwell, 2019; Burbano, 2021; Burbano & Chiles, 2022; Horton, 2011; Spreitzer et al., 2017). Such work arrangements are prevalent in many organizations. For instance, door-to-door cosmetic sales, ridesharing, and other "gig" jobs are frequently temporary, intermittent, and non-exclusive. Yet, contract workers often lack general skills such as communication and performance management skills (Kistruck et al., 2011; Perez-Aleman, 2011). Thus, a firm employing contract workers may face an incentive to increase the value created within flexible work arrangements by sponsoring general skills training that elevates worker productivity and engagement (Galunic & Anderson, 2000).

However, the temporary nature of the work arrangement raises the risk that the firm would not benefit from investing this way in the general human capital of workers (Campbell et al., 2012; Coff, 1997). Despite mobility frictions that may reduce worker turnover (Acemoglu & Pischke, 1999; Campbell et al., 2012; Kryscynski et al., 2021; Starr et al., 2018), workers in flexible arrangements often engage with multiple (and potentially competing) firms and can easily switch jobs (Campion et al., 2020), leading to high turnover rates (Bidwell, 2013). Uncertainty about worker retention and concerns about the distribution of benefits may blunt incentives for firms to invest in the human capital of a flexible workforce (Cropanzano et al., 2023).

This article addresses how firms can benefit from investing in the general human capital of workers in flexible work arrangements despite the challenges. Specifically, it proposes that such investments create value by simultaneously triggering *instrumental* mechanisms (i.e., by increasing the economic benefits to the firm and worker) and *commitment-based* mechanisms (i.e., by nurturing a mutual sense of dedication and responsibility from the worker toward the firm and between the worker and other individuals in the firm) (Chadwick et al., 2015;

Galunic & Anderson, 2000; Klein et al., 2012). The additional value created via these mechanisms ultimately prolongs the firm-worker collaboration (Gibbons & Henderson, 2012; Poppo & Zenger, 2002) because it fosters an orientation toward a recurring, prolonged exchange on the side of the firm (Allen et al., 2003; Galunic & Anderson, 2000; van Rossenberg et al., 2022) and on the side of the contract worker (Fehr & Gächter, 2000; Kryscynski et al., 2021; Martin et al., 2016).

For these mechanisms to be active, however, it is crucial that contract workers and their immediate managers develop an *ex ante* mutual understanding of the purpose and expected relational implications of the general skills training offered by the firm. Such understanding leads the manager to convey information about training opportunities and contract workers to engage in the training, despite the flexible nature of the work arrangement. This article proposes that a firm's framing of its skills training programs enables managers and workers to achieve such mutual understanding (Coff & Raffie, 2015; Holladay et al., 2003; Tai, 2006). A firm may frame skills training to highlight the expected *internal productivity* gains within the firm (e.g., workers will achieve higher sales performance) or the *general worker benefits* (e.g., workers will develop skills that are economically valuable beyond their current work arrangement). Alternatively, the firm may adopt a *relational framing* that emphasizes training as a mechanism to strengthen the collaboration between the firm and worker. By promoting the mutual perception in managers and workers that human-capital investments can lead to a committed firm-worker exchange, the relational framing enhances managers' willingness to promote training initiatives and the willingness of workers to enroll in them. As a result, the relational framing may be more effective than framings that focus on expected benefits accruing primarily either to the firm or to workers.

This article tests the proposed theory by examining the work arrangement between contract workers and the Brazilian branch of a multinational direct sales firm (referred to as "SalesNow," a pseudonym). The data cover workers contracted via a recurring, performance-based flexible arrangement. Consistent with low mobility barriers, the annual churn rate of these workers is 75%, and they often engage with multiple firms concurrently. The analysis utilizes a mixed-methods approach consisting of non-experimental and experimental methods (Study 1 and Study 2, respectively), both informed by qualitative interviews.

Study 1 confirms that training to develop the general skills of contract workers created value for SalesNow by increasing sales productivity and by prolonging the work arrangement. However, despite these results, managers consistently failed to promote the general skills training, potentially out of concern that the benefits would accrue entirely to the workers. This outcome guided the design of Study 2, a field experiment that tested alternative ways to frame the benefits of a new training program for both managers and workers. The alternatives emphasized either (1) internal productivity benefits, (2) general benefits to the worker, or (3) relational benefits through the strengthening of the firm-worker collaboration. In line with the proposed theory, the relational framing outperformed the competing framings by increasing the likelihood that both managers promoted the training and contract workers enrolled in it.

This article makes two contributions to the literature on strategic human capital. First, the study examines how firms benefit from general human capital investments even in highly flexible work arrangements (Burbano, 2021; Burbano & Chiles, 2022; Campbell et al., 2012; Cropanzano et al., 2023; Horton, 2011). It establishes that general human capital investments create value for the firm by increasing worker productivity while simultaneously fostering a mutual commitment that increases the willingness of workers to stay in the arrangement. Although previous studies have examined the effects of committed relationships in formal

employment settings (Chadwick et al., 2015; Gibbons & Henderson, 2012; Klein et al., 2012), this article shows their relevance in flexible arrangements by demonstrating how firms can use general human capital investments to strengthen ties with contract workers.

Second, this study demonstrates the importance of framing the expected benefits of human-capital investments to create a mutual understanding of the relational benefits for both the worker and the immediate manager responsible for promoting training programs. The relational framing resolves the concerns of the manager, who may otherwise fear that benefits would accrue primarily to the worker. At the same time, it resolves the worker's concern that the skills training will lead to additional work-related demands and productivity benefits that would accrue primarily to the firm. This resolution contributes to studies on the role of framing and cognition in enabling firms to benefit from skill development (Coff & Raffie, 2015; Holladay et al., 2003; Tai, 2006). It also points to the importance of micro-level relationships internal to the organization as critical for firms to benefit from investments in the general human capital of workers (Agarwal, 2019; Martin et al., 2016; Shapiro et al., 2016) even when firms contract them under flexible work arrangements.

2 | INVESTMENTS IN THE GENERAL HUMAN CAPITAL OF CONTRACT WORKERS

2.1 | Creating value by developing general skills that enhance worker performance

An important way in which firms obtain competitive advantage is by investing in the human capital of workers, that is, in knowledge and skills with the potential to create economic value (Barney & Wright, 1998; Campbell et al., 2012; Coff & Kryscynski, 2011). While the economic value of certain skills can be specific to an industry or firm (Becker, 1962; Coff, 1997; Starr et al., 2018), other types of skills—known as *general human capital*—are transferrable across organizations and contexts (Barney, 1991; Campbell et al., 2012; Coff, 1999).

Understanding how firms create value via investments in general human capital is a topic extensively studied in the literature on strategic human capital (Campbell et al., 2012; Coff & Kryscynski, 2011; Starr et al., 2018; Wang et al., 2009). Providing basic management training (Bloom et al., 2012) or assistance to obtain basic education (Cappelli, 2004; Manchester, 2012; McKenzie & Woodruff, 2014) can enhance worker productivity in organizational tasks. For instance, for workers involved in production or supply-chain activities, general managerial skills may result in reduced costs and improved service delivery (Bloom et al., 2012). Training programs to develop sales team members' general communication and social skills may boost sales and increase customer satisfaction with the firm's products and services (Dimitriadis & Koning, 2022). Because skill-based effects are well understood and discussed in the literature, the performance effects of investments in general human capital are represented as a baseline proposition:

> **H0.** (baseline): *Firm-sponsored investments in the general human capital of contract workers increase the workers' performance.*

This article focuses on value creation mechanisms when organizations invest in the general human capital of workers employed via *flexible work arrangements*, i.e., arrangements

characterized by the high flexibility of their duration, their temporary location of work, or their informality (Spreitzer et al., 2017). Examples of contract workers under flexible work arrangements are gig workers (Burbano, 2021; Burbano & Chiles, 2022; Horton, 2011; Paik et al., 2019), direct sales agents (Scott et al., 2012), and individuals operating "micro" franchises (Kistruck et al., 2011). Henceforth, workers hired via such arrangements are described in this article as "contract workers." Studies have shown that firms operating in low-income markets often use flexible work arrangements to hire local contract workers who, due to limited exposure to formal education and to basic management principles, may have lower productivity (Banerjee & Duflo, 2007; Khanna & Palepu, 2000; Kistruck et al., 2011; Perez-Aleman, 2011; Pietrobelli & Rabellotti, 2006). Thus, investments in the general skills of these contract workers may increase worker productivity and enhance overall firm performance.

However, firms may face blunted incentives to invest in developing the general skills of contract workers. Flexible work arrangements are designed for ready termination by either the firm or worker. They rest on no expectation of longevity either by a worker or by the firm's managers (Anderson & Bidwell, 2019; Cropanzano et al., 2023; Spreitzer et al., 2017). Empirical evidence shows that some organizations that hire contract workers in low-income markets may face annual churn in worker retention of up to 80% (Hystra, 2013), and workers in such settings may simultaneously contract with multiple firms. Under these circumstances, early studies on human- capital development suggest that firms would not invest in developing the general human capital of workers since the benefits from such investments could rapidly erode if the worker deployed newly acquired general skills elsewhere (Becker, 1962; Coff, 1997).

Research in labor economics and in strategic human capital has found that general human capital investments may nonetheless be justified when there are high mobility frictions in the labor market (Acemoglu & Pischke, 1999; Campbell et al., 2012; Starr et al., 2018). Market frictions preclude workers from switching jobs or renegotiating their wages due to formal contractual constraints such as noncompete clauses (Balasubramanian et al., 2022; Marx et al., 2009), and/or asymmetric information about outside work opportunities, and/or lack of worker understanding of the exchange value of their human capital (Autor, 2001; Campbell et al., 2012; Coff & Raffie, 2015). Under these conditions, firms may have incentives to invest in general skills training as workers are more likely to continue deploying their human capital in the firm (Starr et al., 2018).

Questions persist, nonetheless, about the incentives of firms to invest in the general human capital of contract workers hired via flexible work arrangements when worker turnover is high and when workers may interact with several firms simultaneously (Cropanzano et al., 2023). The following subsection addresses these questions.

2.2 | Creating value in the form of relational benefits that prolong work arrangements

Firms may create value by investing in the general human capital of contract workers even when restrictions on worker mobility are low. This occurs because, as workers repeatedly engage with the firm and interact with other individuals therein, the relationships that develop may be shaped and influenced by the firm's actions (Gibbons & Henderson, 2012, 2013; Shah et al., 2019). These repeated interactions occur even when the work arrangement is flexible. For instance, a firm may shape these relationships through investments in general skills training. If these investments convey sufficient benefits, then they encourage workers to achieve higher

performance levels and prolong their engagement with the firm. Analogously, they encourage the firm to continue the flexible work arrangement with the contract worker if the benefits from the worker's enhanced productivity and commitment are sufficiently high. If the worker and the firm both benefit from the training, then the firm has the incentive to invest in the general human capital of workers even if there are low mobility frictions.

The relational benefits from firm's investments in the general human capital of contract workers under flexible work arrangements may arise from two types of mechanisms. First, general human capital investments may trigger *instrumental mechanisms* that mutually benefit the contract workers receiving the training and the firm providing it. These mechanisms affect the perceived economic gains of maintaining a collaboration (Gibbons & Henderson, 2012; Klein et al., 2012). Instrumental mechanisms leverage the additional economic value that general human capital investments create by supplementing productivity gains with greater longevity in the productive exchange between the firm and the trained contract workers. The firm has incentives to share some of the additional economic value with the worker to prevent turnover, and the trained contract worker has incentives to prolong the flexible work arrangement to obtain these gains.

The literature in economics and strategic management has discussed several instrumental mechanisms that emerge from firm-sponsored investments in general skills training, although with a focus on traditional employment arrangements (Acemoglu & Pischke, 1999; Campbell et al., 2012; Coff, 1999; Starr et al., 2018; Wang et al., 2009). For instance, investments in general skills may increase the economic value of co-specialized assets between workers and firms (Leuven & Oosterbeek, 2001; McGahan, 2020; Molloy & Barney, 2015) or create complementarities between general skills and other resources that are either unique to the firm or that are uniquely valuable within the firm (Brynjolfsson & Milgrom, 2013; Crocker & Eckardt, 2014; Lazear, 2009; Nyberg et al., 2019). Furthermore, workers may interpret general skills training as a signal of the firm's willingness to continue investing in their human capital (Baron & Kreps, 2011).

Second, general human capital investments may create value by affecting the commitment of contract workers to the firm (Chadwick et al., 2015; Klein et al., 2012; Molloy & Barney, 2015). *Commitment-based mechanisms* affect a worker's dedication and feeling of responsibility toward an organization (Klein et al., 2012) as well as the sense of mutual appreciation between a worker and other organization members, including the worker's immediate manager (Graen & Uhl-Bien, 1995). Increasing commitment creates value by fostering superior worker effort and by increasing the attachment of productive workers to the firm (Chadwick et al., 2015; Chang & Chen, 2011; Collins & Smith, 2006; Macduffie, 1995; Meyer & Smith, 2000). Therefore, commitment-based mechanisms create conditions that make leaving the firm less attractive to contract workers (Kryscynski, 2020; Kryscynski et al., 2021).[1]

General human capital investments trigger commitment-based mechanisms in multiple ways. Contract workers may interpret investments in their general human capital, at least in part, as a "gift" provided by the firm in the sense that these investments increase expected wages outside the current employment arrangement (Galunic & Anderson, 2000; Leuven et al., 2005). Contract workers may also interpret these investments as a signal that the firm will continue nurturing their personal development and growth. Upon perceiving such actions from the firm toward them, workers may develop a sense of reciprocity manifested in enhanced

[1]The term "firm-specific incentives" has been used to describe mechanisms through which a firm can uniquely increase the willingness of workers to stay within the firm (Kryscynski et al., 2021).

dedication and responsibility toward the firm (Fehr & Gächter, 2000; Klein et al., 2012; Leuven et al., 2005). Indeed, studies have found a positive association between firm-sponsored investments in workers and workers' commitment to the organization (Allen et al., 2003; Galunic & Anderson, 2000; Griffeth, 2000; Manchester, 2012; Mueller & Straatmann, 2014). Enhanced organizational commitment leads to increased effort and reduced turnover (Cohen, 2017; Tett & Meyer, 2006), potentially resulting from feelings of reciprocity toward the firm (Gilchrist et al., 2016; Gneezy & List, 2006).

Furthermore, general human capital investments may also nurture a mutual commitment in the relationship between the contract worker and the immediate manager. Recent research in strategy incorporates insights from studies on human resources to highlight how relationships between individuals within organizations can explain worker performance and turnover (Agarwal, 2019; Kryscynski et al., 2021; Shah et al., 2019; Shapiro et al., 2016; Wright et al., 2014). Based on this literature, managers have the critical work of promoting firm-sponsored training opportunities to contract workers and of creating conditions that enable an attachment of each worker to the firm (Chadwick et al., 2015; Shapiro et al., 2016). When promoting general skills training to a contract worker, a manager signals a willingness to support the worker's development. This signal may foster the contract worker's reciprocal dedication toward the immediate manager. Value creation for the firm originates in part from the commitment of the worker to the relationship with the manager, which is associated with a higher willingness to continue in the work arrangement (Graen & Uhl-Bien, 1995; Martin et al., 2016; Yammarino et al., 2005).

In sum, while investing in general human capital may increase workers' productivity even if they pursued alternative job opportunities—a concern that is particularly relevant for firms employing a flexible workforce that faces few mobility barriers—investing in workers and developing their general skills can trigger instrumental and commitment-based mechanisms that create relational benefits and foster a longer-term, recurring collaboration. As a result, contract workers may be more likely to remain in their current flexible work. This logic leads to the following hypothesis:

> **H1.** *Firm-sponsored investments in the general human capital of contract workers prolong the expected duration of work arrangements between contract workers and the firm.*

2.3 | Firm-sponsored human capital investments: The enabling role of relational framing

Even if there are opportunities for firms to create value and nurture stronger relationships by investing in the general human capital of contract workers, realizing benefits from them depends on whether immediate managers promote the training and whether contract workers enroll voluntarily in it. As the decisions of the manager to promote and of the worker to enroll precede the occurrence of the training, a mutual understanding that the training will strengthen the work arrangement must emerge ex ante. Yet, such mutual understanding may not occur spontaneously. Managers may be uncertain about whether a contract worker will commit to the firm if the worker can easily access outside opportunities. In turn, contract workers may be unsure about whether the firm will remain committed to nurturing their growth within the flexible work arrangement.

A strategy through which a firm may influence managers to promote and contract workers to accept the skill development opportunity involves communicating the purpose and benefits of the training. Communications may be designed to induce contract workers to engage in training programs while simultaneously motivating managers to promote them to contract workers. Failure to convey a message that appeals to both managers and contract workers could result in the former not promoting existing training opportunities created by the firm or the latter not enrolling in them. Consequently, fostering a mutual understanding between the contract worker and the manager about the expected benefits that accrue simultaneously to the firm and to contract workers becomes critical to their realization in the first place. In other words, the firm's *framing strategy* when communicating training opportunities is a crucial instrument to create such mutual understanding.

Framing is a heuristic that affects how individuals cognitively interpret the world (Gigerenzer & Gaissmaier, 2011). In complex organizational situations, framing directs an individual's attention to specific aspects of a given problem and away from others, that is, it provides saliency to a subset of elements of a problem (Bettis, 2017). While individuals may have different frames, organizations can create and deploy framing strategies for managers and workers to form shared interpretations of reality (Isenberg, 1986; Kaplan, 2008). Research has shown how framing can affect individual effort in flexible work arrangements and the perceptions of contract workers about the organization (Burbano, 2016, 2021; Burbano & Chiles, 2022). Scholars have also studied how firms can frame training programs to foster the willingness of workers to engage in these initiatives (Baldwin & Magjuka, 1991; Gegenfurtner et al., 2009; Holladay et al., 2003; Tai, 2006). This research has demonstrated that success in the uptake of training depends on clearly framing its benefits to decision-makers who must promote and enroll in it.

Firms have several options for framing the benefits of investments in the general human capital of contract workers. First, the firm may frame a training opportunity in terms that reflect the expected performance benefits that workers would obtain after participating in it. For instance, the firm may focus on training as an initiative to develop skills that will increase the *internal productivity* of workers. With this framing, firms communicate to workers and their managers that the training program would enable the worker to achieve superior performance in tasks conducted within the work arrangement (e.g., higher sales revenues achieved by workers involved in sales activities). While those gains are not necessarily unique to the firm (i.e., workers may benefit from productivity enhancement or perceive gains to flexibility), such framing highlights the potential benefits to the firm most directly.

A second possibility is to adopt a *general worker benefit* framing. In this framing, the firm communicates that the training provides skills that workers may deploy to advance their careers generally, without necessarily indicating that the investments would benefit the firm. This alternative framing explicitly highlights how the training might allow workers to perform and thrive in their careers outside the focal firm sponsoring the skill development opportunity.

These two options, however, can be problematic. While communicating internal productivity and general worker benefits indicates potential performance gains of engaging with the training program, those framings may elicit different levels of desirability by the firm's managers and contract workers. If the managers interpret the *general worker benefit framing* as an indication that the training will allow workers to pursue alternative job opportunities, or even to apply these skills in a simultaneous employment in competing firms, they may not have incentives to promote general skill development (Barney & Wright, 1998; Hatch & Dyer, 2004; Wang et al., 2009). This concern is salient because of the absence of mobility frictions under

flexible work arrangements. Alternatively, managers may be more willing to promote training programs if they understand that they lead to internal productivity gains because this framing underscores how the firm—and, by extension, its managers—would benefit from these investments.

An analogous, opposing effect might arise from the point of view of contract workers. Suppose contract workers interpret the *internal productivity framing* as an indication that a training program will primarily generate internal productivity gains. Then, they might be more reluctant to pursue such program because they perceive that the training may raise performance expectations without any commensurate benefit for them (Wang et al., 2009; Wang & Barney, 2006), even if some of the newly acquired skills could be partially valuable elsewhere (Coff & Raffie, 2015; Raffie & Coff, 2016). The framing that appeals to workers thus may not appeal to managers.

A third framing strategy—consistent with hypothesis H1 and in line with the idea of deepening and extending ongoing relationships under the flexible work arrangement—is to establish a mutual understanding of the relational benefits of human-capital investments. Specifically, a *relational benefits framing* that emphasizes how the training program can enhance the connection between the firm and the contract worker would address the conflicting incentives that managers and workers face, ultimately encouraging their mutual engagement in the initiative.

A *relational benefits framing* indicates an intention to develop a cooperative exchange, which depends on a mutual understanding of the value of continuing the relationship (Gibbons & Henderson, 2012; Helper & Henderson, 2014). Under this framing, managers would understand that, with the training program, workers might attribute a higher value to continuing the current work arrangement and even become more committed to sustaining the ongoing relationships under it. Analogously, contract workers would understand that the firm is committed to prolonging their work arrangement and even expect the firm and its managers to endorse future initiatives to nurture their professional development. Therefore, instead of emphasizing benefits that accrue to the firm or to the contract worker uniquely, the *relational benefit framing* underscores a potential strengthening of the ongoing flexible work arrangement in a way that generates mutual gains. In sum, this framing fosters a mutual understanding, shared by managers and contract workers, that the training program could result in a committed firm-worker collaboration. In this collaboration, contract workers plan to prolong their engagement with the firm (despite low mobility barriers). At the same time, the firm and its managers promote initiatives that generate internal gains while fostering the personal development of workers.

In line with the reasoning above, this study proposes that a framing that emphasizes the expected strengthening of the relationship will mitigate managerial concerns about workers leaving the firm after acquiring new general skills. Such emphasis will increase the manager's willingness to promote the training program compared to the alternative case where the framing highlights the training as an opportunity to obtain general worker benefits:

> **H2a.** *A relational benefits framing to a training program leads to a higher likelihood that managers promote the training program to contract workers than a framing that emphasizes general worker benefits.*

In turn, from the point of view of contract workers, the relational benefits framing addresses concerns that the training might require engagement in activities that primarily benefit the firm—a perception that the internal productivity framing could trigger. Instead, by presenting

the training as an opportunity to develop an ongoing relationship, the relational benefits framing can increase the likelihood that contract workers will enroll because they understand the training program as an initiative that will foster continued cooperation between the firm and themselves:

> **H2b.** *A relational benefits framing to a training program leads to a higher likelihood that contract workers engage with the training program than a framing that emphasizes internal productivity benefits.*

3 | CONTEXT: CONTRACT WORKERS IN THE COSMETICS INDUSTRY

This research studies investments in the general human capital of contract workers hired by SalesNow, the Brazilian subsidiary of a large multinational firm that produces and commercializes personal hygiene products, cosmetics, household utensils, clothing, and electronics. The company primarily serves low-income and middle-to-low-income customers.

SalesNow sells through sales representatives who purchase products directly from SalesNow and resell them through their social contacts. To manage sales representatives, the company implements a "local manager program." Under this program, SalesNow hires *contract workers* to recruit, motivate, and support sales representatives.[2] The compensation of contract workers hired under the local manager program is fully variable and based on sales commissions and bonus payments.[3] This study focuses on human capital development opportunities for these contract workers. Hereafter, we refer to the local managers as "contract workers."

The average contract worker hired by SalesNow resides in a low-income region and is not highly educated. Eight-five percent of those active between 2015 and 2017 had no college degree. Furthermore, 40% of these individuals lived in regions with a per capita income lower than the minimum wage. SalesNow does not require contract workers to dedicate a minimum number of hours per week to their activities; however, as reported in an anonymous survey sent by SalesNow to contract workers, 75.4% of the 1547 respondents dedicated more than 21 h per week to their activities with SalesNow. Of these, 59.0% dedicated more than 31 h per week.[4]

SalesNow divides the country into more than 800 geographic "zones," each supervised by a company employee called a "firm manager." This manager is responsible for the recruitment and overall management of contract workers. One of the tasks under the responsibility of managers is the promotion of training opportunities to contract workers. Hereafter, we refer to these employees as "managers" or "immediate managers." Figure 1 illustrates SalesNow's commercial structure.

[2]SalesNow's commercial model is a partial multi-level marketing model: contract workers hired as a part of the "local manager" program recruit other sales representatives to the company, but the direct sales representatives do not.

[3]Commissions are a percentage of each sales order posted by sales representatives managed by a focal contract worker. Bonuses are either associated with a target set by the company (e.g., recruitment of a minimum number of new sales representatives within a time period) or "spot-bonuses" that are valid within a short period of time (e.g., based on the sale of products linked to a particular marketing campaign). The commission/bonus split of the gains of the average entry-level contract worker is 37%/63%. For late-stage contract workers, the split is 64% commission and 36% bonuses, a difference that reflects sales volumes and more favorable maximum commissions per sale (of up to 7%).

[4]In the 2018 anonymous survey, 67.9% of the contract workers reported being self-employed and only selling cosmetic/hygiene products. Only 7.5% of the respondents reported a simultaneous formal employment.

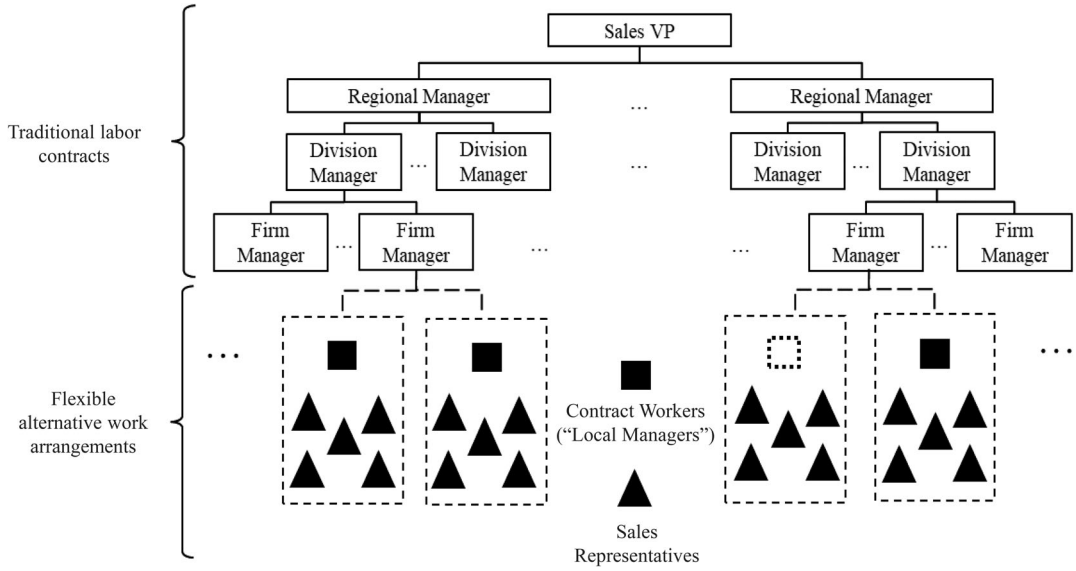

FIGURE 1 SalesNow's commercial structure (produced by the authors).

4 | STUDY 1: GENERAL SKILLS TRAINING FOR CONTRACT WORKERS

4.1 | Context

The typical length of the work arrangement between SalesNow and a contract worker is short: 36% of all contract workers leave within 4 months of starting the work arrangement, and 75% leave within a year.[5] In 2015, SalesNow launched a non-mandatory training program targeting contract workers. Study 1 focuses on the performance of contract workers who elected to enroll. Eligible contract workers were in early stages of their flexible work arrangements at SalesNow.

The training consisted of three one-on-one, in-person mentoring sessions with managers and two online training sessions, totaling 6 h of training. Besides facilitating the three in-person sessions, managers were also responsible for promoting participation in the training program to contract workers and for signing off on worker enrollment. The training focused on developing two core general skills: (1) knowledge about tracking performance indicators and (2) general interpersonal communication skills. Although these skills are applicable in many industries, they are also directly valuable for the contract workers at SalesNow.[6]

4.2 | Data and variables

Study 1 tests hypotheses H0 and H1. For this study, SalesNow provided individual-level data about all contract workers who were active between 2015 and 2017. The data includes aggregate performance indicators for each team of sales representatives under the supervision of a single

[5]High churn is a common occurrence in alternative work arrangements (Ashford et al., 2007; Spreitzer et al., 2017).
[6]One of the authors accessed the training material to validate its content.

(or no) contract worker for 52 sales campaigns from 2015 to 2017. Each sales campaign corresponds to approximately three working weeks, which is also the base period that SalesNow uses for paying contract workers. Under a confidentiality agreement, the company granted access to all training material, information on all contract workers who finished the entry-level general skills training, and completion dates. The data included socioeconomic information about contract workers' education, age, and geocoded address (all constant throughout the entire period).

The research team supplemented the company's dataset with public administrative data. To obtain additional socioeconomic information, the delivery addresses of close to 90% of contract workers were mapped into census tracts available in the 2010 Population Census collected by the Brazilian Institute of Geography and Statistics. The remaining cases were inputed using the mean values of the contract worker's municipality.

4.2.1 | Dependent variables

The analysis uses two performance measures to test the baseline hypothesis H0: the *standardized sales* and the *standardized individual gains*. These variables are available at the level of the contract worker per sales campaign. The sales of a contract worker correspond to the total value of sales orders across all direct representatives managed by the worker. Individual gains are contract workers' compensation, which is the sum of commissions and bonuses for achieving specific short-term targets that SalesNow defines (e.g., recruitment of new sales representatives or the spot sale of specific products). Both variables are standardized so that their means equal zero (0) and standard deviations equal one (1) within each sales campaign.[7]

The study adopts four dummy variables to test hypothesis H1. Each of the variables represents retention in sales campaigns occurring 3, 6, 12, and 18 months after training. Specifically, these dummy variables receive a value of one (1) if the contract worker continues in the work arrangement after concluding the general skills training, and zero otherwise.[8]

4.2.2 | Main independent variables

The study uses an event-study, differences-in-differences specification to test hypothesis H0 across matched pairs of trained and non-trained contract workers. The main explanatory variable is the interaction between (i) a dummy variable with a value of one if an entry-level contract worker completed the entry-level general skills training and zero otherwise, and (ii) a dummy variable with a value of one for periods after the treated contract worker of a matched pair concluded the training and zero otherwise. This interaction term captures the post-training difference between the group of trained contract workers and the comparison group of matched, never-trained workers. The study reports the results of linear probability models to test

[7]Using standardized sales within a sales period adjusts for seasonality. This practice is common when comparing the performance of educational institutions over time (Bloom et al., 2015). Table A9 in the online Appendix reports results with the logarithmic of sales and logarithmic of individual.

[8]By design of SalesNow's program and dataset, any contract worker who reported no sales in a particular sales campaign had their arrangement with SalesNow terminated. There were 151 cases where a contract worker had their arrangement discontinued and subsequently re-instated after one sales campaign. These contract workers were considered as having remained active. The data do not allow a discrimination of voluntary and involuntary turnover.

hypothesis H1, where the main explanatory variable is the dummy variable with a value of one if an entry-level contract worker has completed the general skills training and zero otherwise.

4.2.3 | Control variables

Control variables match trained and untrained individuals to create a comparison group observably similar to contract workers who completed the training. The main specification also controls for the following socioeconomic variables at the level of the contract worker's census tract of residence: income per capita, illiteracy rate across households' main provider, and share of households with per capita income below a quarter of a minimum wage. Specifications include a dummy variable representing whether the contract worker has a college degree. Selected econometric specifications account for the following socioeconomic characteristics of contract workers' municipality of residence: the municipality's mean income per capita, illiteracy rate, the share of households with per capita income below a quarter of a minimum wage, the yearly growth rate in the number of formal employment contracts, and the whether the region is a state capital.

4.3 | Econometric strategy

The analysis combines matching with a differences-in-differences approach to estimate effects in units that receive treatments at different periods (Goldschmidt & Schmieder, 2017; Jaravel et al., 2018). First, each entry-level contract worker who had positive sales in at least three campaigns before completing the entry-level general skills training was matched to a "counterfactual" entry-level contract worker with the same pre-training performance trend, educational background and "effective" or a "laggard" status as an entry-level contract worker.[9] An entry-level contract worker is a potential counterfactual for a treated entry-level contract worker if: (1) the contract worker had never participated in the entry-level general skills training, (2) the contract worker had positive sales in the three sales campaigns before the training of the treated contract workers, and (3) the contract worker had the same educational background (college degree or not) and status as an "effective" or "laggard." The matching process entailed stacking all the possible counterfactuals for each treated contract worker and estimating a propensity score for the probability of being trained as a function of pre-training performance, the socioeconomic control variables, and dummies for education-laggard-period fixed effects (as well as quadratic terms on continuous variables). The matching proceeded by pairing each treated contract worker with a single counterfactual contract worker with the closest estimated propensity score observed in the same periods and with the same education-laggard-period characteristics.[10] The matching process accounted for past sales performance in three pre-treatment periods to mitigate self-selection bias on sales after the training

[9]In SalesNow's program, entry-level contract workers are recommended—though not mandated—to advance to another level of the program after 10 sales campaigns. If a contract worker has 10 or fewer campaigns of experience as a SalesNow contract worker, then the worker is an "effective" entry level. A worker that remained active within SalesNow for 11 or more campaigns without advancing to higher levels are "laggard" entry-level workers.

[10]The sample only keeps pairs where the difference in the propensity score of treatment and comparison units was lower than a quarter of the standard deviation of all estimated propensity scores.

(Chabé-Ferret, 2015).[11] Within each treatment-control matched pair, the post-treatment period is any sales campaign after the treatment unit received training.

Within the matched sample, the baseline hypothesis H0 (the effect of the training on contract worker's performance) is tested via the difference-in-difference model in Equation (1):

$$y_{it} = \delta T_{it} + \mu_i + \tau_t + \epsilon_{it}, \tag{1}$$

where y_{it} is one of the performance variables (standardized sales or standardized gains) for contract worker i at period t, T_{it} is a dummy variable receiving value one if i had already received training by period t, μ_i represents contract worker fixed effects, and τ_t represents period fixed effects. Periods are centralized so that $t = 0$ is the period when the treated worker within the matched pair concluded the general skills training. Here, δ is the average effect of the general skills training.[12] Because only 1% of the contract workers in the data had ever changed zones, the specification also controls for fixed, unobserved actions that managers might have adopted to boost sales (e.g., provision of personalized coaching to the contract workers beyond the training).

The analysis reports the result from linear probability models within the matched sample to test hypothesis H1. The model estimates the probability of a contract worker remaining active (i.e., having positive sales) in the program after τ sales periods after the period when the treatment unit of the matched pair received training (represented by a dummy variable $A_i(\tau)$). The specification follows Equation (2).

$$A_i(\tau) = \delta T_i + X_i\beta + \epsilon_i. \tag{2}$$

In the above equation, T_i is a dummy variable representing whether the individual was treated or not, and X_i is a vector of control variables, which includes zone-level dummies and variables used in the matching procedure.

4.4 | Results

The matched sample consists of 1143 matched pairs (i.e., 1143 treatment entry-level contract workers and 1143 comparison entry-level contract workers). The matched comparison and treatment groups have an average sales performance of −0.549 and −0.565 standard deviations below the mean of all contract workers at SalesNow, respectively, as this sample considers entry-level workers. Individual gains are also below average (−0.333 for the treatment group and −0.295 for the matched comparison group). Entry-level contract workers in the matched sample reside in low-income census tracts. The average household had an income per capita of about BRL 600 in 2010, equivalent to about 1.4 times the minimum wage. Only 14.3% have a college degree. Workers operate mainly outside state capitals (22.2% and 23.5% operate in state capitals in the treatment and comparison groups, respectively), and their regions also have similar proportions of females and

[11]The propensity score matching considered all control variables described in the text, pre-treatment standardized gross sales, gross gains, and team size, as well as quadratic terms for the continuous variables.

[12]All control units never received treatment within the sample used in this study, Thus, the estimation strategy does not suffer from issues raised by the literature on differences-in-differences with staggered treatment (Roth et al., 2023).

similar income. Table A1 in the online Appendix shows that the matching procedure resulted in treated and comparison groups that are similar in observable characteristics.

Table 1 displays the results of the econometric specifications testing the baseline hypothesis H0. Panel A reports the effects of the general skills training about interpersonal communication and performance indicators on standardized sales performance. Panel B shows the results for standardized individual gains (in terms of payment by the end of the sales campaign). Columns 1 and 2 use an unbalanced panel of all individual-period observations on the matched pairs. This panel is unbalanced because entry-level contract workers leave the sample. Columns 3 and 4 reproduce the results using only individual-period observations in which both the treatment and comparison units within a matched pair are active contract workers in the period (i.e., in a sample of complete cross-sectional pairs). In this sample, each period may differ in the number of pairs used to identify treatment effects. The analyses reported in columns 5 and 6 use the subsample of matched pairs for which both treatment and comparison units are active in any of the three sales campaigns after the training of the treated worker. Columns 7 and 8 report the results of an analysis on an even stricter subsample of matched pairs for which both treatment and comparison units are active contract workers for up to six sales campaigns after the training of the treated worker. Odd columns add sales zone fixed effects, period fixed effects, pair-level fixed effects, and baseline control variables. Even columns add period and individual fixed effects.

On average, the general skills training increased the performance of the contract worker in sales and individual gains. Through all specifications in Panel A and depending on the subsample/model, the general skills training increased average standardized sales by 0.028–0.036 standard deviations. Taking column 2 as the benchmark specification, this implies an increase of 5.8% above the baseline sales performance ($p < .001$).[13] Similarly, panel B shows that the training increased individual gains by 0.100 standard deviations (with estimates varying from 0.093 to 0.108 across specifications). These results represent an increase of almost 30% in the mean contract worker's gains compared to the baseline performance ($p < .001$). The stability of the point estimates and of the exact p-values across columns suggest that the results are robust.

Table 2 displays the results of specifications based on equation (3), which tests H1: the effect of the general skills training on the duration of the relationship between the firm and contract workers. Columns 1–2, 3–4, 5–6, and 7–8 report the results of linear probability models that estimate the differences across matched treatment and comparison units in the probability that the treated worker remains active after 3, 6, 12, and 18 sales campaigns after completion of the training. All columns include baseline control variables and matching cell fixed effects. Odd columns include baseline control variables at the zone level. Specifications reported in even columns include zone-level fixed effects. Considering these last specifications, an entry-level contract worker is 9.3 percentage points ($p < .001$), 10.9 percentage points ($p = .001$), 4.1 percentage points ($p = .125$), and 1.3 percentage points ($p = .579$) more likely to remain in the work arrangement with SalesNow after 3, 6, 12, and 18 sales campaigns, respectively, subsequent to completion of the training. The results are similar in magnitude and standard errors in specifications without zone-level fixed effects but with zone-level baseline characteristics.

The results reported in Tables 1 and 2 align with the argumentation that general skills training of contract workers can create value by leading to superior performance and prolonging their flexible work arrangements with the firm.

[13]In the text, the statistical reporting focuses on the magnitude of the coefficients and reports exact p-values. The exception to the reporting of exact p values occurs when the p value is lower than .001. In these cases, the text reports "$p < .001$" to maintain consistency on the use of three decimal points.

TABLE 1 Study 1: Effects of general skills training on performance (test of baseline hypothesis H0).

	Full sample		Cross-sectional complete pairs		Cross-sectional complete and balanced until period t+3 pairs		Cross-sectional complete and balanced until period t+6 pairs	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Effects of general skills training on standardized sales								
Received training X post-training	0.032 [0.000]	0.033 [0.000]	0.035 [0.000]	0.036 [0.000]	0.031 [0.003]	0.031 [0.002]	0.028 [0.026]	0.028 [0.020]
Average standardized sales at t-1	*−0.565*	*−0.565*	*−0.565*	*−0.565*	*−0.514*	*−0.514*	*−0.480*	*−0.480*
Panel B: Effects of general skills training on standardized individual gains								
Received training X post-training	0.097 [0.000]	0.100 [0.000]	0.103 [0.000]	0.108 [0.000]	0.101 [0.000]	0.106 [0.000]	0.094 [0.002]	0.096 [0.001]
Average individual gains at t-1	*−0.333*	*−0.333*	*−0.333*	*−0.333*	*−0.245*	*−0.245*	*−0.179*	*−0.179*
Individual-period observations	19,836	19,836	17,778	17,778	13,754	13,754	9799	9800
Number of pairs in period t-1	1143	1143	1143	1143	741	741	490	490
Normalized period FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zone FE	Yes	No	Yes	No	Yes	No	Yes	No
Baseline control variables	Yes	No	Yes	No	Yes	No	Yes	No
Pair FE	Yes	No	Yes	No	Yes	No	Yes	No
Individual FE	No	Yes	No	Yes	No	Yes	No	Yes
Normalized period FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: [1] All standard errors are clustered at the individual level, and the *p* values of a *t*-test are shown in brackets. [2] All columns present results from Differences-in-Differences regression models where the dependent variable is a measure of individual performance. All models only consider individuals in the matched sample described in Table A1 in the online appendix. [3] Columns 1 and 2 use all individuals in the sample. Columns 3 and 4 restrict post-treatment observations to pairs where treated and matched control individuals are observed within the same cross-sectional period. Columns 5 and 6 restrict all observations to pairs with active treated and matched control individuals between periods −3 and +3. Columns 7 and 8 restrict all observations to use the set of pairs with active treated and matched control individuals between periods −3 and +6. [4] All models add normalized period fixed effects by adding fixed effects for the interaction between the focal period and the period when the treated unit received treatment. [5] Models in odd columns add matched-pair fixed effects and all baseline control variables reported in Table A1 (from period t-1). [6] Models in even columns add individual-level fixed effects.

TABLE 2 Study 1: Effect of general skills training on the probability of continuing in the work arrangement after +T periods from training (test of hypothesis H1).

	Active in t+3		Active in t+6		Active in t+12		Active in t+18	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Received training	0.066 [0.000]	0.093 [0.001]	0.092 [0.000]	0.109 [0.001]	0.056 [0.000]	0.041 [0.125]	0.019 [0.157]	0.013 [0.576]
Individuals	2286	2286	2286	2286	2286	2286	2286	2286
Number of pairs in period t-1	1143	1143	1143	1143	1143	1143	1143	1143
Matching cell FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Baseline control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Baseline zone-level characteristics	Yes	No	Yes	No	Yes	No	Yes	No
Zone FE	No	Yes	No	Yes	No	Yes	No	Yes

Note: [1] All standard errors are robust to heteroskedasticity, and the p-values of a *t*-test are shown in brackets. [2] All columns report estimates from linear probability models estimating the probability of an individual remaining active in its relationship with SalesNow after +T sales campaigns from the treated individual participating in the training program. All models only consider individuals in the matched sample described in Table A1 in the online appendix. [3] Models in odd columns add all baseline performance, individual, municipality-level, and zone-level baseline control variables reported in Table A1 (from period t-1). Models in even columns remove zone-label baseline control variables and add zone-level dummies. All models add fixed effects for the experience-college-period-level cells used in the matching process.

4.5 | Does general skills training pay off?

A back-of-the-envelope calculation suggests that SalesNow achieved considerable financial benefits from investments in general skills training. Based on the reported estimates, the average increase in sales from the training was 5.8% per campaign.[14] For simplicity and to be conservative, assume a net sales increase of 5% after discounting commission and bonuses. Considering the average sales of an entry-level contract worker in a sales campaign in 2017 (BRL 10,998) and considering that the effect of the training lasted for six sales campaigns (as in Figure A1 in the online Appendix), each trained contract worker would have experienced, on average, an increase in sales of BRL 3299 due to the training. Taking a within-sample approach, SalesNow would have obtained a total benefit of BRL 3.77 million if all the 1143 trained workers in the matched sample remained active for at least six sales campaigns.

SalesNow reported that the financial cost of the general skills training was BRL 50,000 in total between 2015 and 2017. This figure includes development and ongoing costs associated with paying the firm that hosted the online training platform. An additional cost incurred by SalesNow was the time that managers spent meeting with contract workers as a part of the training (3 h per contract worker). At 3 h for each contract worker trained, this would amount to 3429 manager hours (3 h × 1143 contract workers). Based on communications with SalesNow, a conservative estimate of the hourly cost of a manager was BRL 60. Thus, the costs of managerial time amount to approximately BRL 0.21 million to the firm (1143 workers × 3 h × BRL 60), leading to a total cost of BRL 0.26 million across all categories. Thus, under the assumption that all trained workers remained active for at least six sales campaigns, the net positive return of the general skills training would be BRL 3.51 million.

Because trained contract workers are less likely to leave the arrangement, another benefit of general skills training arises from reducing the costs associated with turnover. The analysis in the online Appendix (Figure A2) uses synthetic control methods (Abadie et al., 2010) that rely on evidence from regions that lost contract workers to estimate the high cost of worker churn. The analysis uses data on the historical sales in every area under the responsibility of a contract worker to estimate the extent of sales losses in a local market when the contract worker quits and the area remains without a contract worker for at least five sales campaigns. There is an average 33% fall in total sales in the 5th sales campaign after a region loses a contract worker who is not immediately replaced. These results provide evidence of the advantages that SalesNow reaps by prolonging the tenure of contract workers, an outcome achieved by investing in developing their general skills.

4.6 | Additional analyses supporting a stronger relationship post-training

This section presents additional analyses that support the instrumental and commitment-based mechanisms underlying the strengthening of the bond between SalesNow and contract workers. It also describes robustness checks for Study 1.

[14]This increase is net of the time spent on training as the firm reported that workers often concluded the 6-h program on the same sales campaign as they start (t = 0 across specifications).

4.6.1 | Heterogeneous effects by baseline tenure

Theory suggests that firms and workers develop knowledge about cooperating over time (Hatch & Dyer, 2004). Building such knowledge increases the instrumental value created under the flexible work arrangement (Byun et al., 2018), and thus creates greater prospective instrumental value of general skills training for early-stage contract workers in contrast with more advanced contract workers. Furthermore, early-stage workers may have had less exposure to situations that lead them to develop a strong sense of dedication and responsibility toward the company, thus strengthening commitment-based effects of general skills training for early-stage contract workers in contrast with more advanced workers.

These theoretical stipulations suggest that early-stage workers who have just begun a work arrangement would have a higher potential to increase the instrumental value of the collaboration with SalesNow and their commitment to the firm as compared to workers with a long history of interactions with the focal firm.[15] The results reported in Tables A3 and A4 in the online Appendix support these suggestions. Early-stage contract workers with experience in 10 or fewer campaigns drive the finding that associates general skills training with a higher likelihood of continuing in the flexible work arrangement. This result may occur because newer workers benefit more intensively from receiving investments to develop general skills than those with a longer tenure with the firm. The longer time horizon of newer workers also may lead to an elevated expectation that strengthening the firm-worker tie will have greater benefits on both sides.

4.6.2 | Split-sample analysis by workers with distinct mobility frictions

As low-educated contract workers are prevalent in the empirical setting, a question arises about their potential mobility. Arguably, workers with college degrees may face weaker mobility barriers than workers with less education. Thus, if general skills training only leads to an immediate productivity gain that could be transferrable to any firm, its effects in terms of prolonging relationships between the firm and contract workers would be lower for workers facing lower mobility frictions. In alignment with this logic, split-sample analyses suggest that general skills training is similarly associated with superior performance and with a higher likelihood of sustaining the work arrangement for workers with and without college degrees (Tables A5 and A6 in the online Appendix). These results indicate that the effects of general skills training do not arise only among workers with fewer opportunities to move to other work arrangements.

4.6.3 | Split-sample analysis by firm managers' propensity to train workers

Although the specifications already account for zone-level fixed effects and individual fixed effects, the online Appendix (Data S1) reports additional analyses to mitigate concerns about the observed effects arising from an unobserved disposition of certain managers to mentor contract workers. These analyses rest on ruling out that the effects of general skills training

[15]Table A2 (online Appendix) reports anonymous survey results that align with this argument. While only 48% of contract workers with less than 6 months at the firm worked more than 30 h/week for SalesNow, this number was 72.1% for contract workers who had worked for SalesNow for longer than 49 months.

concentrated only in contract workers who were supervised by an immediate manager who achieved a high training enrollment rate. If the effect concentrated in these contract workers, it would suggest that the post-training increase in performance and reduction in churn could have originated from characteristics of managers regardless of the value of the general skills training. By ruling out this possibility through split-sample analyses (reported in Tables A7 and A8 in the online Appendix), the robustness test shows that the main results hold even for contract workers reporting to managers for which fewer than 25% of directly reporting contract workers completed the general skills training.

4.7 | Additional robustness checks

The online Appendix includes results to validate that the effects of general skills training are robust to the use of alternative performance variables (Table A9 in the online Appendix). These results also show that general skills training enabled contract workers to benefit in absolute terms by increasing sales (and thus commission) and bonus payments. The online Appendix also reports robustness analyses on the effect dynamics and pre-treatment trends across treatment and control groups (Figure A1 in the online Appendix). Finally, the results are robust to using subsamples of contract workers who had participated in at least two sales campaigns within the firm, at least four sales campaigns, or at least five sales campaigns (Tables A10 and A11 in the online Appendix).

4.8 | Qualitative evidence: Benefits and constraints to general human capital investments

Although the results from Study 1 support the hypotheses that contract workers' participation in general skills training increases performance and prolongs their flexible work arrangements with SalesNow, the enrollment rate in the general skills training for this study was low: less than 10% of contract workers had completed the training. The low take-up rate raises questions about what prevented effective participation in the opportunity sponsored by SalesNow for workers to develop their general skills. To identify potential barriers to the general skills training and understand why contract workers did not participate in it, one of the authors conducted 20 phone interviews, each lasting 15 min, with randomly selected contract workers from SalesNow. In these interviews, contract workers answered questions about three topics: (1) their awareness about training opportunities sponsored by SalesNow, (2) which knowledge they would like to receive in a training program, and (3) who/what could motivate them to begin a training sponsored by SalesNow. The reported evidence comes from interview notes.[16]

The interviews suggest that contract workers valued the opportunity to obtain knowledge and skills through early-entry training: 45% of interviewees reported that they would like access to training covering general skills associated with their activities as contract workers. The statements below illustrate these preferences:

> *[...] a useful training would cover generic abilities such as communication, time management, and tips on how to manage your activities and entrepreneurship.*

[16]Table A12 (online Appendix) reports the interview questions and the response categories suggested by SalesNow.

I would pursue opportunities to develop skills that enable me to communicate better with sales representatives and SalesNow while helping me in my day-to-day activities.

The interviews also indicate that contract workers perceived training as deepening their relationship with SalesNow—even beyond purely instrumental considerations as 80% of the interviewees reported that they would pursue opportunities to strengthen their relationship with the company. Furthermore, interviewees indicated that contract workers appreciate developing a long-term relationship with the firm. These reports are consistent with the commitment-based mechanism. One interviewee reported engaging with SalesNow for several decades and that "the learning opportunities" that the company provided over the years were "wonderful" and helped her stay engaged. Another interviewee reported that she engaged in the training to increase her motivation to continue in the flexible work arrangement with the firm.

Results from an anonymous survey conducted by SalesNow align with these perceptions. Contract workers were asked about their awareness of any training sponsored by SalesNow (yes/no), their level of satisfaction with SalesNow (5-point Likert scale), and how "proud" they felt for working for SalesNow (5-point Likert scale). Respondents who were aware of training opportunities reported higher levels of satisfaction with the firm (0.15 s.d. difference in mean standardized score, $p = .009$) and of feeling prouder for working for SalesNow (0.12 s.d. difference in mean standardized score, $p = .037$).

Interviews also provide evidence supporting the importance of managerial promotion of general skills training to contract workers, while 15% of interviewed contract workers reported first learning about SalesNow's training opportunities independently, 45% were exposed to the training opportunity by their direct managers. These reports confirm that managerial engagement is central to promoting training initiatives.

5 | STUDY 2: EXPERIMENTAL EVIDENCE ON RELATIONAL FRAMING AND INCENTIVES TO INVEST IN HUMAN CAPITAL DEVELOPMENT

5.1 | Experimental context and design

In May 2018, SalesNow replaced its 2015–2017 online training (evaluated in Study 1) with a new training program. This change led to a greenfield opportunity for assessing the importance of the framing of the newly launched program. The new training featured a mix of general skills and skills specific to the activities of SalesNow. The specific content was unknown to contract workers or managers before Study 2, although both workers and managers knew that at least some of the content would be on general skills. In the description below, we refer to this program as "general skills training" because of that content.

SalesNow worked with the research team to devise a communication package that incorporated alternative framings of the new training. The package consisted of two communications targeting contract workers directly and two communications targeting their direct managers. The communications targeting contract workers directly were: (1) an online text addressing contract workers, which advertised the expected benefits of the new general skills training and provided further standardized information about it, and (2) a rolling banner with a short sentence highlighting the expected benefits of the general skills training, and a link for contract

workers to "click here" to learn more. The communications to the manager were: (1) an online text that described the expected benefits of the training to contract workers and provided standardized guidelines about how contract workers could access the training; and (2) an online phone banner highlighting the benefits of the training to the contract worker, which managers could download and distribute to their respective contract workers via smartphone. SalesNow posted communications targeting contract workers in an area of the company's intranet system exclusively accessible to them and which was accessed by contract workers at the start of every sales period. Analogously, the company posted communications targeting its managers in an intra-firm online environment exclusively accessible to them, and accessible via their smartphones.

To test the hypothesized impact of the relational framing in comparison to either an internal productivity framing or a general worker benefit framing, SalesNow and the research team created three versions of the communication package. Each version had the same four communications as above and only differed in one way: the framing of the expected benefit of undertaking the training.

The first version of the communication package used an *internal productivity framing*, which described the expected benefits of the general skills training as increased productivity in worker tasks under the arrangement with SalesNow (e.g., achievement of superior sales performance and gains within the firm). The second version adopted a *general worker benefit framing* of the expected benefits of the new training, which emphasized the skills obtained via the program that could be transferrable and increase the performance of contract workers in their professional lives (e.g., leadership and entrepreneurial skills). The general worker benefit framing did not mention how the training could benefit SalesNow. The third and final version of the communication package used a *relational benefit framing*. Instead of focusing on internal productivity or general worker benefits, this last framing advertised the expected benefits of the new training as the strengthening of the partnership between the firm and the contract worker. For example, a message with a relational benefit framing expressed that the new training would enable contract workers to "strengthen their connection between you [the contract worker] and SalesNow." Tables A13–A16 in the online Appendix contain the translated text of the communications associated with each of the framing versions.[17]

Of the 807 sales zones in which SalesNow operated, 585 participated in this study (each with a single manager to which all contract workers reported). The remaining sales zones were excluded from the study because SalesNow was piloting other initiatives in them that could have affected training uptake. There were no differences in observable characteristics between zones that participated and that did not participate in Study 2 (Table A17 in the online Appendix).

To causally evaluate how the three framings affect manager's promotion of the training and contract workers' engagement with the program, each of the 585 sales zones was randomly assigned to receive one of the three versions of the communication package. The design followed a clustered randomized trial, summarized in Figure 2.

The randomization process entailed four steps (also illustrated in Figure A3 in the online Appendix). First, the 585 sales zones were separated into 17 groups based on SalesNow's internal categorization of geographic regions based on socioeconomic characteristics. Second, within each of the 17 groups, SalesNow predicted the share of individuals trained (as of the time of the randomization).[18] Third, within each of the 17 socioeconomic groups, sales zones were ordered

[17]The translated versions have slight adaptations to protect the anonymity of SalesNow.

[18]SalesNow used information on baseline sales and orders of each sales zone, share of contract workers that had participated in previous training programs, share of entry-level contract workers, and number of new contract workers.

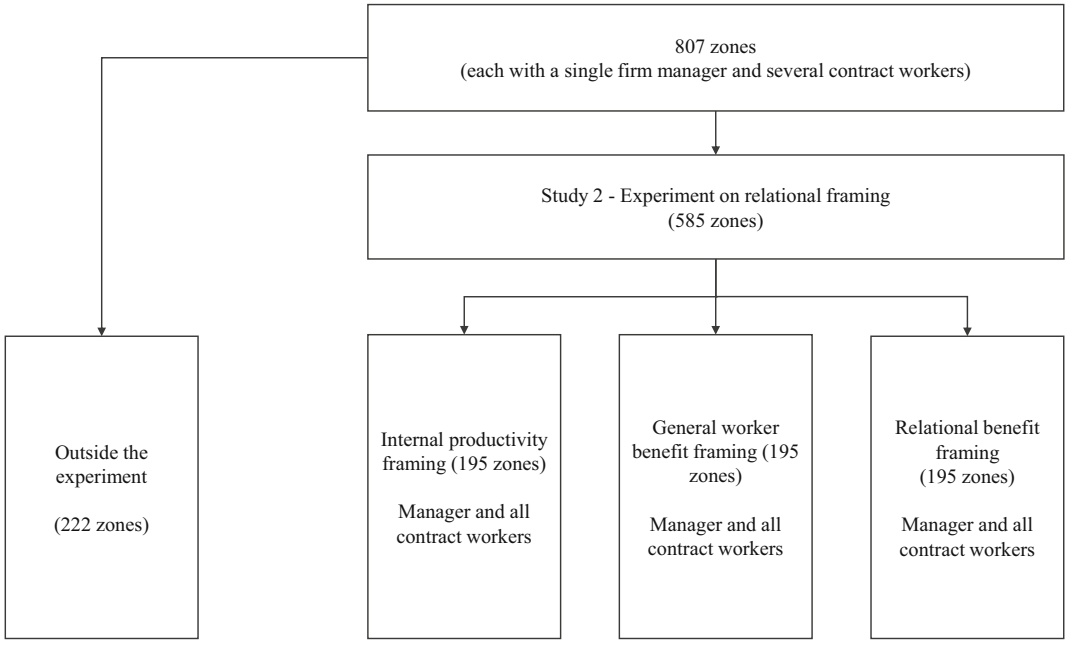

FIGURE 2 Study 2: Experimental design (produced by the authors).

based on the predicted share of individuals trained. The ordering was then converted into a division of triplets for each of the 17 socioeconomic regions in the following way: the three sales zones with the lowest expected share of individuals trained formed the first cluster; the sales zones with the fourth to sixth lowest predicted shares of individuals trained formed the second cluster; and so on until creating the last cluster. By the end of this process, all 585 sales zones were in one of 195 triplets, each with three sales zones. In the final step, sales zones within each triplet were randomly assigned each to one of the versions of the communication package. Following a company's request, no group was a pure control. Table A18, also in the online Appendix, shows that sales zones across the treatment arms were similar in the pre-intervention period.

Study 2 lasted for 8 weeks, beginning with the release of the communication package and ending with the measurement of the outcome variables. The study's length resulted from a trade-off between waiting for results and the firm's demand to deploy the new training quickly.

5.2 | Data and variables

SalesNow provided data on whether each contract worker started and completed the new training. The data also described whether each manager had downloaded a message to promote the new training to contract workers by the 8th week after the communication policy started.

5.2.1 | Dependent variables

This study reports the effects of the different communication strategies as estimates on three dependent variables. *Contract worker started the training* and *Contract worker concluded the*

training are two dummy variables that are equal to one for the respective events and zero otherwise. These variables measure engagement with the general skills training from the workers' perspective. *Firm manager promoted the training* measures whether the firm's managers decided to promote the training. This variable is equal to one if the manager downloaded and sent the online phone banner promoting the training to contract workers and zero otherwise.[19] Measurements were collected at the end of the experiment.

5.2.2 | Main independent variables

The main independent variables across all analyses are dummy variables indicating which communication strategy the contract worker and firm manager received. All specifications use the internal productivity framing as the comparison group.

5.3 | Econometric strategy

This article reports the results of linear probability models that estimate the differences in the probabilities that a contract worker started or completed the training as a function of the worker's assigned group and control variables. The analysis uses an analogous specification to estimate the differences in the probability that managers promoted the training.

5.4 | Main results

Tables 3 and 4 display the main results of the experiment. Table 3 shows estimates associated with hypothesis H2a, which predicts that communications with a relational benefit framing of the expected benefits of the training would increase promotion by the firm's managers. Columns 1 through 6 show different specifications used to estimate the differences in the likelihood of managerial promotion across treatment conditions. Column 1 reports a specification without control variables, and column 2 includes baseline socioeconomic and regional control variables. Column 3 adds baseline sales zone performance as a control variable. Columns 4 through 6 report the analogous specifications with the inclusion of randomization triplet dummies.

The results of the preferred specification in Table 3 (column 6) show that the likelihood of managers downloading and sending the message promoting the new training was 13.5 percentage points higher in the relational benefit framing than in the general worker benefit framing (column 6, $p < .001$). Furthermore, the difference in the likelihood of managerial promotion via this message was smaller and less significant when comparing those exposed to the relational benefit framing with those exposed to the internal productivity framing (−5.1 percentage points, $p = .278$). A general worker benefit framing reduced the likelihood of managerial promotion by 18.6 percentage points compared to the internal productivity benefit group (column 6, $p < .001$). These patterns were consistent across all other specifications.

[19]Managers received a message to download and send this communication via their smartphones. SalesNow provided information on whether managers clicked the option to download and send the message to their contract workers.

TABLE 3 Study 2: Effect of framing expected benefits from training on firm managers' promotion of the training to contract workers (test of hypothesis H2a).

	=1 if the firm manager promoted the training					
	(1)	(2)	(3)	(4)	(5)	(6)
Internal productivity framing	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
General worker benefit framing = 1	−0.174 [0.000]	−0.176 [0.000]	−0.176 [0.000]	−0.174 [0.000]	−0.184 [0.000]	−0.186 [0.000]
Relational benefit framing = 1	−0.051 [0.265]	−0.047 [0.307]	−0.047 [0.314]	−0.051 [0.265]	−0.050 [0.284]	−0.051 [0.278]
N	585	585	585	585	585	585
p value of comparison general worker benefit framing and relational benefit framing	[.000]	[.000]	[.000]	[.000]	[.000]	[.000]
Baseline socioeconomic and regional control variables	No	Yes	Yes	No	Yes	Yes
Baseline performance control variables	No	No	Yes	No	No	Yes
Randomization triplet FE	No	No	No	Yes	Yes	Yes

Note: [1] All standard errors are clustered at the randomization triplet level, and the *p* values of a *t*-test are shown in brackets. [2] All columns present results from linear probability models. The dependent variable measures whether the firm managers downloaded and sent a digital message to contract workers to promote the new training program. [3] Baseline socioeconomic and regional control variables and baseline performance control variables (measures in the random assignment period) are the same as those reported in Table A18. Models 4–6 further control for the randomization triplet fixed effect.

TABLE 4 Study 2: Effect of framing expected benefits from training on contract workers' incentives to engage with the training (test of hypothesis H2b).

	=1 if contract worker started the training			=1 if contract worker concluded the training		
	(1)	(2)	(3)	(4)	(5)	(6)
Internal productivity framing	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
General worker benefit framing = 1	0.058 [0.016]	0.058 [0.016]	0.057 [0.020]	0.052 [0.038]	0.050 [0.042]	0.048 [0.053]
Relational benefit framing = 1	0.055 [0.024]	0.059 [0.016]	0.058 [0.017]	0.060 [0.018]	0.062 [0.013]	0.062 [0.014]
N	9090	9090	9090	9090	9090	9090
p value of comparison General Worker Benefit Framing and Relational Benefit Framing	[.903]	[.969]	[.949]	[.739]	[.612]	[.575]
Baseline socioeconomic and regional control variables	No	Yes	Yes	No	Yes	Yes
Baseline performance control variables	No	Yes	Yes	No	Yes	Yes
Randomization triplet FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm manager promoted the training.	No	No	Yes	No	No	Yes

Note: [1] All standard errors are clustered at the zone level, and the *p* values of a *t*-test are shown in brackets. [2] All columns present results from linear probability models. In columns 1–3, the dependent variable measures whether the contract worker started any new training program. In columns 4–6, the dependent variable measures whether the contract worker concluded any new training program. Both variables are measured in the 8th week following the start of the communication policy. [3] Baseline socioeconomic and regional control variables and baseline performance control variables (measures in the random assignment period) are the same as those reported in Table A18. Models 4–6 further control for the randomization triplet fixed effect. Models in columns 3 and 6 further control for a dummy variable indicating whether the firm manager downloaded and sent the digital message promoting the training program.

The results in Table 3 suggest two insights. First, managers effectively behaved as predicted in theory, that is, they were less likely to promote the training when the framing emphasized general worker benefits as compared to a framing that emphasized internal productivity benefits. Second, as predicted by hypothesis H2a, the relational benefits framing mitigated managerial concerns. A manager primed to consider that the training strengthened the collaboration between the firm and the worker tended to promote the training as aggressively as those

managers that received the internal productivity framing. The relational benefits framing outperformed the general worker benefit framing in encouraging managers to promote the training opportunity.

Table 4 reports linear probability model specifications to test hypothesis H2b, which predicts that contract workers enroll more frequently in the training when the firm frames the expected benefits as relational rather than as increases in internal productivity. The table reports estimated differences in the probability that contract workers start the new training (columns 1–3) and complete the new training (columns 4–6) as a function of the framing they receive about the expected benefits. All models control for randomization triplet fixed effects. Specifications in columns 2 and 5 add baseline socioeconomic, regional, and baseline performance as control variables. Columns 3 and 6 report results from specifications that control whether the manager downloaded and sent the digital message about the new training.

The results from the preferred specifications (columns 3 and 6) show that contract workers receiving communications that framed the benefits of the new training as relational were +5.8 percentage points more likely to begin the training (column 3, $p = .017$) and + 6.2 percentage points more likely to complete the training (column 6, $p = .014$) than workers receiving the internal productivity framing. These specifications show that contract workers exposed to the general worker benefit framing version of the communication package were also more likely to begin (+5.7 percentage points, $p = .020$) and to conclude (+4.8 percentage points, $p = .053$) the training than those receiving the internal productivity framing. Indeed, general worker benefit and relational benefit framings yielded similar outcomes in motivating contract workers to enroll.[20] The magnitude and standard errors of these results are similar across all specifications. Thus, the results reported in Table 4 support hypothesis H2b.

In line with hypotheses H2a and H2b, these experimental results demonstrate that framings focused on either internal productivity or general worker benefits could lead to diminished uptake of the training either because managers reduced promotion or workers reduced enrollment. However, priming managers and contract workers to associate the training with stronger worker-firm collaboration their engagement, thus increasing uptake.

5.5 | Additional analyses

This subsection summarizes analyses to assess the robustness of the findings and interpretations of Study 2. The online Appendix (Data S1) contains details.

5.5.1 | Robustness to different timings of training start and completion dates

Table A19 in the online Appendix reports results using uptake data registered in the 2nd, 4th, and 6th week after the release of the initial communication. The results show that differences in completion rates are lower in the second week (+3.9 and +2.6 percentage points of the relational and general worker benefit framings compared to the internal productivity framing, respectively) and gradually increase until the sixth week following the inception of

[20]Table 4 reports the exact p values of t-tests showing that the point-estimates of the effects of the general worker benefit framing and of the relational benefit framing were not sufficiently different in absolute terms (or not precisely estimated enough) to conclude that the effects of these framings were different from one another.

communication. These results suggest that contract workers are more likely to enroll in the training after exposure to several communications.

5.5.2 | Role of managers' promotion via downloading and sharing the online banner with contract workers

Managers may have promoted the training in ways other than downloading and sharing the online banner (e.g., in-person interactions). As a result, the research team assessed whether such a message was a meaningful method of promotion by the manager to the worker. Table A20 in the online Appendix shows that, when managers downloaded and shared the communication about the training, only those workers who had received the relational benefit framing were more likely to enroll. Alternatively, contract workers who were exposed to the general worker benefit framing tended to enroll in the training regardless of whether their managers endorsed it. These results suggest that while awareness about general worker benefits may be sufficient to foster worker enrollment, a framing that reinforces the relational benefits depends on the cultivation of mutual commitment between workers and managers.

5.5.3 | Heterogeneity by contract workers with shorter tenure in the arrangement

Additional analyses assess whether the relational benefit framing had a greater impact on contract workers with weaker ties to the firm (or the manager) *ex ante*. To accomplish this, the research team analyzed separately the subset of randomization triplets in which contract workers had below-median and above-median experience at SalesNow. Tables A21 and A22 in the online Appendix show that the effects of the relational benefit framing on managerial promotion and on worker enrollment were stronger in randomization triplets representing below-median experience. These results are consistent with those of Study 1, which showed that general skills training prolong work arrangements with contract workers in the early stages of the relationship with SalesNow.

5.6 | Qualitative assessments from the managers' perspective

Qualitative information from interviews illustrates the critical importance of bonds between contract workers, managers, and SalesNow to the longevity of flexible work arrangements. One of the co-authors interviewed SalesNow's headquarters managers and 22 direct managers of contract workers.[21] The interviews confirmed that these managers recognized the value of establishing strong relationships with contract workers hired via flexible work arrangements. For instance, a headquarters manager from the training department reported that:

> *SalesNow is particularly proud of how the personal relationship between firm managers and contract workers differentiates us from our competitors. [...] This*

[21]The three interviews with headquarter managers were exploratory. The 22 interviews with firm managers were open-ended responses to structured questions. The questions are in the online Appendix (Table A23).

> *relationship is built around mutual trust between the parties, which then leverages performance and facilitates the flow of knowledge and information throughout the supply chain.*

Similarly, managers of contract workers perceived their function as relevant because of the relationships they built with workers, and general skill development as a meaningful way to accomplish this. For instance, one firm manager described SalesNow's managers as:

> *[...] motivators in every sense of the word: we must motivate contract workers to meet their targets, we must train them, go to the field. That is what a firm manager is all about: helping, training, developing, engaging, selling. We must be the helping hand that supports contract workers when they are under stressful conditions.*

All managers reported that building and nurturing a relationship with contract workers and developing them via knowledge transfer were primary responsibilities. 73% reported their one-on-one meetings with contract workers to transfer knowledge as core to their roles, and 55% of managers reported regularly catering to the needs of less experienced contract workers with training. However, the interviews also revealed that without support from SalesNow, managers might fail to appreciate the instrumental and commitment-based mechanisms through which general skills training creates value. Only 22% of the interviewed managers reported that promoting SalesNow's general skills training was essential in developing contract workers. Thus, in line with this study's quantitative results, the qualitative evidence suggests that managers understood the benefits of a strong relationship with contract workers, but depended on a relational benefit framing for insight into how the training opportunity created relational benefits.

6 | DISCUSSION

6.1 | Contributions

This study shows how a firm can create value through investments in the general human capital of workers (Campbell et al., 2012; Coff, 1997; Galunic & Anderson, 2000) even when workers are contracted under flexible arrangements and even when mobility barriers are low (Anderson & Bidwell, 2019;Burbano, 2021; Burbano & Chiles, 2022; Cropanzano et al., 2023; Horton, 2011). The empirical evidence provided in this article supports theory stipulating that general human capital investments create value for firms. This value originates from instrumental and commitment-based mechanisms. Both mechanisms enable general skill development to yield increased worker productivity, accrual of relational benefits, and prolonged flexible work arrangements (Klein et al., 2012; Kryscynski et al., 2021; van Rossenberg et al., 2022). A finding is that general human capital investments foster a mutually committed relationship in which contract workers and the firm together create value by upgrading worker skills, deepening worker-manager relationships, fostering mutual loyalty, and raising expectations for continuing the flexible work arrangement (Kryscynski, 2020; Kryscynski et al., 2021).

This article also expands understanding of the importance of framing by the firm the expected benefits of human-capital investments (Holladay et al., 2003; Tai, 2006). Specifically, this study shows the importance of a relational framing that conveys expectations to both the manager and the worker that general human capital development will benefit both the worker

and the firm. Communications using such framing encourage managers to promote general skills training and contract workers to enroll in it. Such a mutual understanding is essential because training uptake is critical for realizing value from investments in general skill development. The managers of contract workers are crucial intermediaries that enable firms to benefit from human-capital investments (Chadwick et al., 2015). This implies that a firm must alleviate concerns that the worker and the manager may have when deciding to engage in training opportunities (Coff, 1997; Wang et al., 2009; Wang & Barney, 2006). This article shows that firms benefit from explicitly communicating that strengthened firm-worker bonds will arise through general human capital investments. In this sense, adopting a relational framing facilitates skill development and mutual value creation from investments in general human capital. The results further advance the literature about how firms can design communications to achieve superior performance when hiring workers using flexible work arrangements (Burbano, 2016, 2021; Burbano & Chiles, 2022).

These two contributions advance the literature on how the relationships that arise under flexible work arrangements shape how firms benefit from the human capital of their workers (Agarwal, 2019; Martin et al., 2016; Shapiro et al., 2016). First, the results reported in this article suggest that contract workers may interpret general human capital investments as a signal of commitment to their growth, therefore eliciting their willingness to remain engaged with the firm. Second, this article shows that a manager's understanding of the relational benefits of general human-capital investments influences the manager's decision to promote opportunities to workers. Evidence of these mechanisms in highly flexible work arrangements (Burbano, 2021; Burbano & Chiles, 2022; Cropanzano et al., 2023; Horton, 2011) thus expands strategic human capital research on the drivers of contract workers' attachment to firms (Campbell et al., 2012; Klein et al., 2012; Kryscynski et al., 2021; Starr et al., 2018; Tett & Meyer, 2006; van Rossenberg et al., 2022) and on the importance of managers for the realization of benefits from human-capital investments (Chadwick et al., 2015; Shapiro et al., 2016).

Finally, this study encourages a more nuanced understanding of how general human capital investments create value. It suggests that the beneficiaries of investments in general human capital may not only be workers. Drawing an analogy to the argument that workers could obtain superior returns from firm-specific investments if firms perceive a worker's willingness to invest in firm-specific skills as a form of general human capital (Morris et al., 2017), this article shows that firms can obtain gains by fostering the development of general skills. Whether by eliciting reciprocal commitment from workers or by increasing the expected returns of continuing in the work arrangement, this study suggests that firms may benefit from general human capital investments even when workers can change jobs swiftly. As a result, this article reinforces the call for a comprehensive exploration of the mechanisms that influence how firms and workers can obtain advantages from varied forms of firm-sponsored human capital investments.

6.2 | Suggestions for future research and limitations

The results have limitations that require further investigation. First, this study is limited to a single type of training. As a result, it does not establish boundary conditions on the types of general skills or training characteristics that could foster strengthened firm-worker ties. Relatedly, this study considers the relationship between contract workers and managers within a single firm. Thus, it does not address whether different designs of flexible work arrangements could moderate the results. Overall, research in other settings would enhance our understanding of

the limits of general human capital investments for overcoming the disadvantages of flexible working arrangements. Much more knowledge is needed on when flexible work arrangements are compatible with the development by a firm of worker expectations of relationship longevity, and when human-capital investments can become a mechanism fostering such expectations.

A second research direction is on how the context in which a firm works influences its ability to create value by triggering instrumental and commitment-based mechanisms by investing in the human capital of contract workers. Various training programs may, for instance, develop general skills that contract workers may not necessarily require for their immediate tasks. If competitors are more agile in obtaining access to resources that complement these new general skills, then the sponsoring firm would face challenges in fulfilling instrumental mechanisms of value creation as competitors entice away trained workers. Future research on the competitive implications of worker mobility following general skills development.

Third, the results from Study 1 are limited by potential unobservable drivers of self-selection into training beyond the factors captured by the empirical strategy employed in this article. Although qualitative interviews suggested that the main bottleneck limiting access to training was a lack of awareness about the training per se, there could have been other unobservable bottenecks preventing manager or worker to pursue the training. Future research could provide experimental evidence on how general human capital transfer affects churning and performance of contract workers. The data in this article also do not allow for testing the relative strength of instrumental and commitment-based mechanisms. Indeed, these sub-mechanisms were probably co-existing and mutually reinforcing. Future studies could assess the relative weight of each sub-mechanism.

The results reported in this study also have known boundary conditions. For instance, a critical defining feature of the work arrangement used by SalesNow to hire contract workers is that it does not involve a fixed-term task or project. Instead, the relationship is open for continuation. The authors expect the findings to generalize to work arrangements with a potential for skill enhancement through the provision of general training and under conditions where an opportunity exists for the continuation of the flexible interaction between the firm and the worker. Such could be the case with service delivery platforms (e.g., ride-sharing and food delivery) or even hiring technical and support services such as technology repair services. Furthermore, the results could generalize to traditional employment, despite the argument that higher mobility barriers explain longer traditional work arrangements even without the commitment-based mechanisms laid out in this study. While SalesNow operates in an emerging economy, the authors expect the results to be generalizable to wealthier countries, where the institutional setting enables contract workers to derive benefits from general skills and actively participate in highly flexible work arrangements.

Scholars also have an opportunity to scrutinize the dynamic and complex relationships between general and specific skills by assessing their complementarity and substitutability. For instance, general education (e.g., a college degree) could be a positive or negative moderator of the effect of general training. The direction of the moderation effect would depend on how the skills provided via the training complement workers' skills obtained under the work arrangements. Similarly, labor market conditions could also affect whether general education becomes a negative or positive moderator. Although the theoretical arguments are not context-specific, future research could also assess how certain cultural, legal, or social conditions affect the commitment-based mechanisms emerging from general human capital investments.

Finally, as this study is limited to a single firm, it does not fully capture a critical value-creating mechanism from human-capital investments: the creation of unique firm-level

capabilities that make contract workers generally more productive or more committed to the firm.[22] For instance, investments in standardized training tools to build the general skills of contract workers may create a fungible resource for firms to train sequential waves of newly hired workers while minimizing the costs associated with training and adaptation. Such investments could enable firms to develop a strategic capability to increase the economic value produced by contract workers beyond what competing firms achieve. If such investments further empower managers to adapt fungible general training programs to the individual needs of contract workers, then these investments could foster an additional capability of signaling a commitment to nurturing the development of workers hired under flexible work arrangements. The latter capability would enable firms to increase worker retention even when engaging with *potentially* highly mobile workers. An opportunity for future study is to examine whether firms can transform their general human capital investments into a distinctive capability that grants them a competitive advantage.

7 | CONCLUDING REMARKS

This article relies on data from a large direct sales firm in Brazil to study how firms may benefit from general human capital investments in contract workers under highly flexible work arrangements. An empirical examination combining experimental and non-experimental data supports the theoretical predictions that firm-sponsored general human capital investments can improve performance and strengthen the collaboration between a firm and contract workers even when mobility barriers are low. The theory and results reported in this article also suggest that framing training opportunities around their relational benefits can simultaneously encourage firm's managers to promote training programs and contract workers to enroll in them. This framing overcomes managerial concerns that workers will appropriate the benefits by pursuing work outside the firm. A relational framing also overcomes workers' concerns that the training will lead to greater workplace demands without benefit to them. Through a relational framing, the firm encourages and evokes manager-worker bonds and cultivates expectations of a prolonged worker-firm collaboration. The results reported in this study thus extend theory in strategic human capital by showing that firm-sponsored initiatives to develop workers' general skills have the potential to prolong the relationship between workers and the firm even if mobility barriers are low. Relationships matter even for contract workers and their immediate managers.

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DATA AVAILABILITY STATEMENT

The data used in this project is protected under a confidentiality agreement and the authors can only disclose aggregate statistics.

ORCID

Thomaz Teodorovicz https://orcid.org/0000-0001-8210-8135
Sérgio Lazzarini https://orcid.org/0000-0001-8191-1241
Sandro Cabral https://orcid.org/0000-0002-8663-2441
Anita M. McGahan https://orcid.org/0000-0002-5584-8207

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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