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Staff turnover and organizational performance: The case of a microfinance organization

Abstract

Aim/purpose – This study examines the relationship between staff turnover and performance in the microfinance industry in a dynamic perspective and investigates some contingency factors that moderate this relationship.

Design/methodology/approach – We ran random-effects and GMM models based on a database of 2,814 branch-month observations from a specific microfinance organization.

Findings – It takes three months to see a significant negative impact of turnover on the volume of a branch's loan portfolio. Moreover, it takes four months after the turnover event for this negative impact to be counterbalanced. After four months, turnover stops having negative consequences and even becomes advantageous in terms of loan portfolio growth, but this positive effect lasts only one month. The effect of turnover thus appears to be particularly limited in time. Finally, we find that the negative relationship between

turnover rate and performance is weakened by the seniority level of departing loan officers and by the recruitment rate.

Originality/value/contribution – First, this paper examines the duration of the consequences of turnover event, which is poorly studied in the literature. Second, it focuses on microfinance, an industry where relational capital is of high importance. Third, it extends the theory on turnover by highlighting that the seniority level of departing employees is a moderator in the relationship between turnover and organizational performance.

Keywords: staff turnover, performance, context-emergent theory, microfinance, GMM.
JEL Classification: J63, G21.

1. Introduction

The microfinance industry has received little attention when analyzing the consequences of turnover (Mia et al., 2022). Yet, this industry, which is involved in the provision of financial services to micro-entrepreneurs who are excluded from the traditional banking system (Hudon & Sandberg, 2013), and which is mainly active in developing countries, may be particularly relevant to the study of turnover. Indeed, beyond the loss of social and human capital induced by turnover, microfinance organizations may also particularly suffer from the loss of relational capital, created through the close relationship microfinance employees develop with their clients. As mentioned by Mia et al. (2022, p. 867), such relational capital is "very significant and crucial for the sustainability of the industry", industry that Mia (2023) characterized as a "low-tech high-touch banking system". Indeed, in microfinance, most organizations rely on relationship lending which is based on the acquisition of soft information – "information about character and reliability of the firm's owner, that may be difficult to quantify, verify and communicate through the normal transmission channels of a banking organization" (Berger & Udell, 2002, p. 3) – in order to be able to offer loans to people who are highly informationally opaque and who have almost no guarantees. Such soft information is mainly held by loan officers and not by the microfinance organizations (Doering & Wry, 2022). Therefore, loan officers' turnover may have prejudicial effects because soft information highly depends on the loan officers' interpretation and cannot be transferred easily (Scott, 2006), with as a consequence, a reduction of the credit availability for small firms (Scott, 2006).

Scholars have long been debating if the relationship between staff turnover and organizational performance is negative or curvilinear. While the results of three meta-analyses (Hancock et al., 2013; Heavey et al., 2013; Park & Shaw,

2013) tend to show a negative linear relationship between these variables, more recent studies such as the one conducted by De Winne et al. (2019) rather suggest a non-linear or curvilinear relationship. Developed ten years ago, the CET theory goes further in the study of turnover by highlighting the importance to consider collective turnover in a dynamic perspective.

Some studies also highlight potential moderating factors in the relationship between turnover and organizational performance. In this study, we particularly examine the recruitment rate and the leaving employee's seniority level. Indeed, we could think that more experienced microfinance loan officers are also the ones who have acquired, through privileged contacts with clients, the higher quantity of soft information. In this vein, losing more experienced microfinance loan officers may have more detrimental effect. We could also think that the potential negative effects on performance may be reduced when the organization tends to recruit people to compensate the departures. Indeed, as mentioned by Nyberg and Ployhart (2013, p. 118), "flows of human capital resources into the unit will affect the quality and consequence of collective turnover flows". Therefore, one may ask: How does turnover affect financial performance in the microfinance industry, and is this relationship moderated by the employees' seniority level and by the recruitment rate?

The goal of this paper is thus to understand the relationship between turnover and performance and to examine whether the seniority level of departing employees and the recruitment rate may moderate this relationship, in a sector when the personal contacts with clients are essential.

To answer this research question, this paper builds on the context-emergent turnover (CET) theory, which analyzes human resource flows. Through a quantitative analysis mobilizing both random-effects and GMM models and using an unbalanced panel of 2,814 branch-month observations from a Latin American microfinance organization, this paper studies the duration of the consequences of turnover in microfinance by adopting a dynamic perspective and examines the potential moderating effect of the recruitment rate and of the seniority level of departing employees in the relationship between staff turnover and organizational performance.

This paper contributes to the literature on turnover in several ways. First, it analyzes the temporal dynamics around turnover, while relatively few studies have taken these into consideration. Furthermore, very few scholars have focused on the duration of the consequences of turnover events. For instance, Hale et al. (2016) analyzed coordination problems among employees of a large re-

gional bank in the United States over a period of one year. Our study differs from theirs since our dataset covers a much longer period. We thus respond to their call that "future research should examine longer windows of performance in order to better understand the long-term effects of a turnover event" (Hale et al., 2016, p. 924). Second, it contributes to the ongoing debate about the type of relationship between employee turnover and organizational performance. Third, our paper extends the theory on turnover by highlighting that the seniority level of departing employees, a factor which is poorly documented, is a moderator in the relationship between turnover and organizational performance, whereas Hale et al. (2016) did not find any moderating effect of employees' seniority. Fourth, we focus on microfinance, an industry where the trust between loan officers and clients is probably even more crucial than in the banking sector. Fifth, we contribute to the literature on turnover by using an econometrical method which avoids the risk of endogeneity et reverse causality, the GMM models. Finally, it contributes to the literature on SME banking and microfinance by showing that turnover is not necessarily always detrimental.

The remainder of this paper is structured as follows. Section 2 mobilizes main theories about the relationship between turnover and organizational performance. Section 3 presents the potential factor moderating this relation. Section 4 and 5 exhibits the data and the methodology. Section 6 shows our main results. Section 7 concludes.

2. Relationship between turnover and organizational performance

There is still no clear consensus on the type of relationship between turnover and organizational performance.

First, there are three main meta-analyses (Hancock et al., 2013; Heavey et al., 2013; Park & Shaw, 2013) showing a negative relationship. Indeed, numerous empirical studies have found a negative relationship between turnover and various performance indicators, such as service quality or customer satisfaction (Batt & Colvin, 2011; Hausknecht et al., 2009; McElroy et al., 2001; Mohr et al., 2012; Ton & Huckman, 2008), profitability (Hurley & Estelami, 2007; McElroy et al., 2001; Morrow & McElroy, 2007), and manufacturing efficiency (Shaw et al., 2005). To justify such negative relationship, scholars have adopted three types of perspectives: a human capital perspective, a social capital perspective, and a cost-based perspective (Hancock et al., 2013).

The first two perspectives are related to the concept of tacit knowledge, defined as "the set of 'mental models' employees have about the organization and its procedures" (Mohr et al., 2012, p. 217), which is usually obtained through work experience. The human capital theory argues that workers' skills, as well as tacit and explicit knowledge, are important resources for organizations (Mohr et al., 2012). When staff members leave their organization, all these skills and knowledge are lost (Lin et al., 2016). Losing tacit knowledge is particularly challenging for organizations (Kacmar el al., 2006; Reilly et al., 2014) because this kind of knowledge is slow to acquire (Grant, 1996; Kogut & Zander, 1992). The social capital theory argues that it is not workers' skills that are considered as a valuable resource, but their interpersonal relationships (Shaw et al., 2005). It is through such relationships that tacit knowledge is transferred (Hansen, 1999; Uzzi & Lancaster, 2003). In case of workers' departures, the interpersonal relationships are destroyed, and the transfer of tacit knowledge is interrupted (Huckman & Pisano, 2006; Kacmar et al., 2006).

As for the cost-based perspective (Dalton & Todor, 1979), scholars have put forward that turnover can also entail substantial costs for organizations. First, this phenomenon induces direct expenses linked to the replacement process, such as the costs for the recruitment, training, and socialization processes of new employees (Waldman et al., 2004; Zhang et al., 2012). Organizations may also face separation costs (Cascio, 1991). Furthermore, as highlighted by Cascio (1991), organizational performance may be negatively affected by turnover through the losses incurred by a break in production and sales (Tziner & Birati, 1996), demoralization of the remaining employees (Hom & Griffeth, 1995; Staw, 1980), and lower efficiency of newcomers (Batt, 2002).

Second, we also find recent studies which argue that the relationship between turnover and performance can be non-linear (Lee, 2018; Meier & Hicklin, 2008; De Winne et al., 2019). The negative effect of turnover on organizational performance may be attenuated for organizations with a high level of turnover (Shaw et al., 2005; Ton & Huckman, 2008). Indeed, Park and Shaw (2013, p. 269) suggest that "organizations with high turnover rates have workforces that lack accumulated human capital; replacements can quickly build equivalent capital and rapidly negate human capital losses". Some scholars also explain that the relationship between turnover and performance follows an inverted U-shape curve (An, 2019; Lee, 2018; Meier & Hicklin, 2008; Siebert & Zubanov, 2009). According to most of these authors, turnover is detrimental for organizations with very low and very high turnover rates, but an optimal turnover rate can be

found at the center of the curve (Hancock et al., 2013; Hausknecht & Trevor, 2011). Regarding this optimal turnover rate, Williams (1999) highlights the existence of "functional turnover", referring to "an exit from an organization that is beneficial to the organization" (Price, 1999, p. 392). Turnover may be particularly beneficial when those leaving the organization are the less performing or less committed employees (Allen & Griffeth, 1999; Mohr et al., 2012). An and Meier (2023) and Lee (2018), for their part, only find an inverted U-shape relationship when considering transfers and involuntary turnover respectively, but do not find such type of relationship between voluntary turnover and organizational performance. However, De Winne et al. (2019) found a more complex relationship between turnover and productivity: a combination of an inverted U-shape with a negatively attenuated relationship.

In microfinance, the literature on the effect of turnover remains limited. Furthermore, it mainly uses the loss of relational capital between the microfinance loan officer and his/her clients and the loss of the soft information that this employee acquires on these clients to explain the deterioration of both the financial and social performances of microfinance organizations experiencing turnover. Mia et al. (2022), examining an unbalanced panel of 1,561 microfinance organizations from 2010 to 2018, found a negative effect of employee turnover on financial performance. Hossain, Mia, & Hooy (2023) show that employee turnover increases the credit risk and Drexler and Schoar (2014) show that borrowers are less likely to receive new loans and are more likely to miss repayments when they interact with a loan officer who is on leave.

3. Factors that matter when studying the relationship between turnover and organizational performance

The context-emergent turnover (CET) theory (Nyberg & Ployhart, 2013) highlights some factors moderating the effect of turnover on performance. It examines the influence of collective staff turnover on performance within a dynamic temporal system (Call et al., 2015; Hale et al., 2016; Reilly et al., 2014). Time is thus a factor to consider when studying the relationship between turnover and organizational performance. Based on the CET theory and on the team adaptation theory, Hale et al. (2016) argue that two distinct, consecutive phases should be considered when analyzing the impact of turnover on team performance: disruption and recovery. The disruption phase refers to a transition that induces coordination problems (Lang & Bliese, 2009). Consequently, a turnover

event directly induces a decrease in organizational performance. Then, during the recovery phase, organizational performance starts to increase because "members acquire new knowledge, […] adapt their social relationships, and establish different routines and interaction patterns" (Hale et al., 2016, p. 908; Messersmith et al., 2014).

In our study, based on Hale et al.'s (2016) approach, we argue that microfinance branch performance may be negatively affected by turnover at first, but recovers afterwards.

H1: Turnover is initially negatively related to microfinance branch performance, but the effect of turnover becomes positive afterwards.

The CET theory also analyses turnover within human resources flows (Call et al., 2015) and considers that the timing of action and reaction within these flows influences the duration and the magnitude of the impact of turnover on performance (Reilly et al., 2014). As an example, when departing employees are directly replaced, the effect of turnover will be lower. Indeed, as explained by Reilly et al. (2014, p. 770), "inflows affect the quantity dimension of the human capital resource by increasing the number of employees in the unit. If everything is held constant, greater inflows lower job demands". This argument is in line with several studies showing that when a departing employee is not replaced, either the employee's tasks are not taken over, which may negatively affect the organization's offer of products or services (Tziner & Birati, 1996), or the remaining employees have to face higher job demands and work overtime because they have to take over that employee's tasks (Ton & Huckman, 2008; Tziner & Birati, 1996). Reducing job demands through recruitment appears to be particularly crucial in service provision settings, as it is the case in microfinance, because "reducing average job demands should increase the time for employee-customer interaction, resulting in increased satisfaction" (Reilly et al., 2014, p. 770). We thus expect that the consequences of turnover may be less detrimental to organizations when loan officers' departures are directly followed by the recruitment of new officers.

H2: The quantity of recruitments weakens the negative relationship between turnover and microfinance branch performance.

The CET theory also argues that both the quantity and quality of collective turnover matter when analyzing its consequences (Call et al., 2015; Nyberg & Ployhart, 2013). When both the quantity and quality of collective turnover are high, which means that the organization loses many employees with high KSAOs ("knowledge, skills, abilities, and other characteristics" (Call et al.,

2015, p. 1208), the consequences of turnover on organizational financial performance will be strongly negative (Call et al., 2015; Nyberg & Ployhart, 2013). In microfinance, the seniority level of employees may be used to proxy high-quality departures as it is highly related to KSAOs. Indeed, microfinance loan officers' skills are acquired mainly through job trainings – either theoretical or practical – and experience (Ledgerwood, 2013). As the position of loan officer does not require a high level of qualification, the seniority level thus appears as a better measurement to consider than the education level when examining the quality of turnover.

We can argue that losing high-seniority employees may be more detrimental than losing low-seniority ones due to a loss of social, human, and relational capital (relational capital is the capital induced by the relationship between microfinance loan officers and their clients) as these three forms of capital are higher for high-seniority loan officers. In fact, the opposite may also be true: the seniority level of departing microfinance loan officers may be a factor that reduces the negative effects of turnover. Loan officers with high seniority are more likely to be demotivated, so replacing them may lessen the detrimental consequences of turnover. Indeed, microfinance organizations are hybrid organizations that pursue both financial and social objectives. This puts loan officers under high pressure from their management (Dixon et al., 2007): they are asked to increase the volume of their credit portfolio (by finding new clients), to recover delinquencies, and to develop close relationships with their clients, but these three tasks sometimes appear to be conflicting with each other. As the microfinance loan officers' role requires dealing with high pressure, we can suppose that, after a certain time, loan officers may become demotivated. Indeed, Doering and Wry (2022) highlight that dealing with poor people, as microfinance loan officers do, is particularly challenging since it requires travelling to unsafe areas with poor infrastructures and that the challenges they experience are not offset by the pro-social motivation they may have for serving poor clients. Therefore, losing demotivated loan officers, who are also probably the ones with higher seniority, may be less detrimental for microfinance organizations. This leads us to suggest the following hypotheses:

H3a: The departure of high-seniority loan officers strengthens the negative relationship between turnover and microfinance branch performance.

H3b: The departure of high-seniority loan officers weakens the negative relationship between turnover and microfinance branch performance.

4. Method

4.1. Research setting

To conduct this study, we used data obtained from a large microfinance organization active in a single Latin American country. Our focus on the microfinance industry is of particular interest because turnover is an important issue in this industry. Indeed, according to a survey conducted by Microfinance Insights (2008), 46% of interviewed microfinance managers mentioned turnover as a topic of concern.

At the time of the study (in 2016), the studied organization had more than 100,000 active borrowers (both rural and urban), for a total loan portfolio of over $85 million. It employed more than 1,100 staff members, including 600 loan officers. This organization is currently experiencing high growth.[1] Despite its encouraging results in terms of portfolio growth, the organization has been suffering from a high level of turnover, especially of voluntary turnover. Loan officers' annual turnover reaches 57.6% in this organization compared to an average of 24% in the microfinance sector (as calculated based on the microfinance organizations reporting to the Mixmarket (2007), a database of the World Bank gathering information from numerous organizations of the microfinance sector).

4.2. Sample

To conduct our empirical analysis, we used data collected in November 2016 at the headquarters of the organization. Our dataset is a combination of two datasets covering the years 2008-2016. The first concerns all the loans disbursed by the organization during the period under analysis. The second one, issued by the organization's human resource department, includes data on loan officers, such as their gender, education level, start date, and end date (for those who left the organization). We first structured our data into branch-month observations (3602 observations). Then, we screened our dataset for outliers in all variables. We define an outlier as an observation that is either 1.5 inter-quartile-ranges (IQR) below the first quartile or 1.5 IQRs above the third. We dropped observations concerning months and branches where no loan officer was active. Our final sample consists of an unbalanced panel of 2,814 branch-month observations. We triangulated this dataset with data

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[1] As we have signed a contract of confidentiality with the organization, we are not authorized to cite the country where it is active nor to give more precise information that could help to identify this organization.

from annual reports and from field observations and interviews[2] conducted in different branches of the organization in order to have a better understanding of the context of our study, with a view to facilitate the interpretation of the results.

4.3. Methods and measures

Our estimated equation to test Hypothesis 1 is inspired by the studies conducted by Call et al. (2015) and by Glebbeek and Bax (2004). The relationship between turnover and performance is represented by the following equation:

$$
\begin{aligned}
Volume\ of\ the\ portfolio_{\ i\ (t+1)} = {}&\alpha + \beta_1 Volume\ of\ the\ portfolio_{\ i\ (t)} + \\
&+ \beta_2 Turnover_{\ i\ (t)} + \beta_3 Turnover_{\ i\ (t-1)} + \beta_4 Turnover_{\ i\ (t-2)} + \\
&+ \beta_5 Turnover_{\ i\ (t-3)} + \beta_6 Turnover_{\ (t-4)} + Control\ variables + \varepsilon_{it}
\end{aligned} \tag{1}
$$

where:

$Volume\ of\ the\ portfolio_{\ i\ (t+1)}$ is a proxy for branch performance and represents the total amount of new credits offered by the branch (i) for each month. This variable is used in its logarithm form and is calculated in time $t+1$[3] because our independent variable (turnover rate) and our control variable "Number of active employees" are evaluated at the end of a month and may thus influence the branch performance of the following month rather than the branch performance of the current month. It should be noted that it is a financial performance indicator but as microfinance organizations are financial organizations, their organizational performance may thus be proxied by financial performance indicators.

$Volume\ of\ the\ portfolio_{\ i\ (t)}$ is the volume of the portfolio at time t. This variable is used in its logarithm form and is calculated at time t as we argue that the performance of a month is influenced by the performance of the previous month.

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[2] We conducted interviews in November 2016 with 15 loan officers of the microfinance organization (in the headquarter and in three branches), with four branch managers, with three HR employees and with the CEO in order to have a better idea of the functioning of the organization and to better understand the reasons and potential consequences of turnover. Furthermore, the 15 days we spent in this organization enabled us to collect some observations about the organization and the way of working. To conduct the interviews, an interview protocol was used and was adapted for the different categories of interviewees, but new questions also emerged during interviews. All interviews were conducted in Spanish, the official language of the country, and were recorded and transcribed in Spanish in order not to lose any fundamental information. The verbatim were then translated in English by a graduate in translation who is fluent in English and Spanish. Details about the interviews are available in Appendix.

[3] t represents a period of one month.

Turnover rate is calculated as the number of departures of loan officers for a branch in a given month, divided by the number of loan officers who were active in the branch during the same month before these departures. All loan officers leaving within a month (whether leaving at the beginning or at the end of the month) are taken into account when calculating the number of departures for that same month. We also take some lags for this variable as we want to determine the effect of turnover in a dynamic perspective. This will enable us to observe how long it takes for turnover to influence performance.

Control variables include characteristics related to the branch and to loan officers. Regarding branch features, we use the total number of active borrowers to control for branch size. We include a dummy to distinguish small and large branches: its value is 1 for large branches (branches where the total number of active borrowers is greater than the mean), and 0 otherwise. We also include dummies (7) for the regions where the organization is active, in order to control for characteristics that may be related to the geographical area. As for loan officers' characteristics, we first control for gender using two dummies: 1) the dummy "More active male loan officers" takes the value of 1 if there were more men than women among the active loan officers in a specific branch, and 0 otherwise; and 2) the dummy "More departing male loan officers" takes the value of 1 if there were more men than women among the departing loan officers in a specific branch, and 0 otherwise. Second, we control for the type of contract with two dummies: 1) the dummy "More active permanent contracts" taking the value of 1 if there were more active loan officers with a permanent contract than with a fixed-term contract in a specific branch, and 0 otherwise; and 2) the dummy "More departing permanent contracts" takes the value of 1 if there were more departing loan officers with a permanent contract than with a fixed--term contract, and 0 otherwise. Third, we control for loan officers' level of education using two dummies: 1) the dummy "More active highly educated loan officers" takes the value of 1 if there were more officers with a high level of education (at least high school) than with a lower level of education among all active loan officers in a specific branch, and 0 otherwise; and 2) the dummy "More departing highly educated loan officers" takes the value of 1 if there were more departing loan officers with a high level of education (at least high school) than with a lower level of education in a specific branch, and 0 otherwise. Finally, we control for time trends. ε_{it} is the error term.

We also investigate whether the quantity of recruitments moderates the negative relationship between turnover and microfinance branch performance. We therefore estimate the following variant of Equation (1):

$$Volume\ of\ the\ portfolio_{i\,(t+1)} = \alpha + \beta_1 Volume\ of\ the\ portfolio_{i\,(t)} +$$
$$+ \beta_2 Turnover\ r_{i\,(t-2)} + \beta_3\ Turnover_{i\,(t-2)} * Recruitment\ rate_{i\,(t-2)} +$$
$$+ Control\ variables + \varepsilon_{it}. \qquad (2)$$

where *Recruitment rate* represents the ratio between the number of newly recruited loan officers for a given month in a specific branch and the number of active loan officers in this branch during that same month.

Then, we examine whether the departure of high-seniority loan officers moderates the negative relationship between turnover and microfinance branch performance by estimating the following equation:

$$Volume\ of\ the\ portfolio_{i\,(t+1)} = \alpha + \beta_1 Volume\ of\ the\ portfolio_{i\,(t)} +$$
$$+ \beta_2 Turnover\ r_{i\,(t-2)} +$$
$$+ \beta_3\ Turnover_{i\,(t-2)} * Seniority\ of\ departing\ loan\ officer_{i\,(t-2)} +$$
$$+ Control\ variables + \varepsilon_{it}. \qquad (3)$$

where *Seniority of departing loan officers* is measured monthly for each branch and represents the mean of the number of months between the start date and the end date of all loan officers who left the organization.

In Equations 2 and 3, our interaction terms and the turnover rate are calculated in *t*-2 as the turnover rate appears to have a significant negative influence on organizational performance only at this time.

Finally, we investigate whether the relationship between turnover and organizational performance may be curvilinear, as argued by some scholars (Glebbeek & Bax, 2004; Meier & Hicklin, 2008), using the following model:

$$Volume\ of\ the\ portfolio_{i\,(t+1)} = \alpha + \beta_1 Volume\ of\ the\ portfolio_{i\,(t)} +$$
$$+ \beta_2 Turnover\ r_{i\,(t-2)} + \beta_3\ Turnover\ rate^2_{i\,(t-2)} + Control\ variables + \varepsilon_{it}. \quad (4)$$

We first test our models using standard pooled OLS. However, this method is particularly sensitive to endogeneity issues. Endogeneity occurs when an independent variable is correlated with the error term (Wooldridge, 2013) or when the explanatory variable is jointly determined with the dependent variable. This last issue, called a simultaneity bias, is a problem to address when analyzing the impact of turnover on organizational performance. Indeed, in our case, this reverse causality

issue can exist. One may argue that when organizational performance is low, turnover can increase, be it involuntary turnover, when the organization has to fire some staff members, or voluntary turnover, when staff members are disappointed by the financial results of the organization. Indeed, when the organization performs poorly, loan officers may not receive financial bonuses, which may lead to a loss of motivation. Consequently, they may be more likely to leave the organization. This issue is first addressed in Equation (1) by regressing the turnover rate on branch performance with lags. Indeed, as explained by Park and Shaw (2013), this risk of simultaneity is lower when the turnover rate and organizational performance are not measured concurrently. However, the solution that consists in lagging the independent variables should be taken with caution because of the very high correlation existing between these variables at time t and at time t-1. We then perform the Breusch–Pagan Lagrangian multiplier test (LM test), which indicates that we should not proceed with standard pooled OLS regressions. We thus estimate fixed-effects and random-effects models. Fixed-effects models control for time-invariant differences across branches to assess the net effect of the independent variables on the dependent one. Random-effects models assume that variations across branches are random and uncorrelated with the independent variables. Next, we perform a Hausman test (Hausman, 1978) to determine which kind of model – fixed-effects or random-effects – is the most appropriate for our analysis. The results show that we cannot reject the null hypothesis, suggesting that random-effects models should be preferred. Finally, to ensure that we avoid simultaneity issues, we estimate our models using the dynamic system GMM estimator. GMM is based on a system of two equations: one differenced and the other in level. We instrument the variables in the differenced equation by their lagged levels, and the variables in the level equation by their lagged differences.

5. Results

Table 1 shows the descriptive statistics for the selected variables: the number of observations, the means, the standard deviations, and the min and max values. We observe that the volume of the portfolio for a given month reaches, on average, $102,327. The average monthly turnover rate among branches is 4.8%, with a standard deviation equal to 14.3%. On average, the seniority level of the loan officers who left the organization was nine to ten months. 50% of the departing loan officers left the organization within six months after they started working.

Table 1. Descriptive statistics

Variable	Obs	Mean	S.D.	Min	Max
Amount of the branch portfolio (t+1) (in local currency)	2813	2.93e+08	1.76e+08	800,000	1,665,374,800
Turnover rate (t)	2814	0.048	0.143	0	0.667
Recruitment rate	2814	0.088	0.192	0	2
Seniority of departing loan officers (in months)	541	9.63	10.12	0	46

Our main results from the random-effect models, summarized in Table 2, bring overall support to Hypothesis 1 even if the effect of turnover at time t-3 on branch performance at time t+1 is positive and significant, though only at the 10% significance level. The interaction term between turnover rate and recruitment rate is significant ($\beta = 1.10$, $p < 0.01$). The results show that the interaction term between the seniority level of departing loan officers and turnover is positive and statistically significant ($\beta = 0.11$, $p < 0.05$), which means that the departure of more experienced loan officers may have less detrimental consequences for the organization. This is in line with Hypothesis 3b, suggesting that the negative relationship between turnover and branch performance is weakened by the seniority level of departing loan officers. This relationship thus becomes less negative.

Table 2. Turnover rate and volume of the loan portfolio: Random-effects results

Volume of the portfolio (t+1) (ln)	Model 1 (H1)	Model 2 (H2)	Model 3 (H3)	Model 4 (Curvilinear)
1	2	3	4	5
Constant	9.39*** (0.90)	9.29*** (0.64)	9.93*** (2.60)	
Volume of the portfolio (t) (ln) (in local currency)	0.53*** (0.05)	0.54*** (0.03)	0.60*** (0.13)	0.54*** (0.05)
Turnover rate (t)	–0.48* (0.26)			
Turnover rate (t-1)	0.14 (0.15)			
Turnover rate (t-2)	–0.30** (0.15)	–0.41*** (0.11)	–1.28** (0.65)	–0.54* (0.30)
Turnover rate (t-3)	0.25* (0.14)			
Turnover rate (t-4)	0.13 (0.14)			
Turnover rate (t-5)	0.06 (0.13)			

Table 2 cont.

1	2	3	4	5
Turnover rate (t-6)	0.09 (0.13)			
Turnover rate (t-2) ^2				0.40 (0.58)
Turnover rate (t-2) * Recruitment rate (t-2)		1.10*** (0.22)		
Turnover rate (t-2) * Seniority of departing loan officers (t-2)			0.11** (0.05)	
Control	OK	OK	OK	OK
Trend	OK	OK	OK	OK
R2 (overall)	0.50	0.54	0.46	0.49
Wald chi2	280.95***	417.22***	84.83***	285.82***
Number of observations	791	1060	212	791

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

**Note:** Standard errors are shown in brackets.

The moderating effect of the recruitment rate is highlighted in Figure 1, showing that the relationship between turnover and branch performance exhibits a less negative slope when the number of new recruits is high.

Figure 1. Moderating effect of the recruitment rate
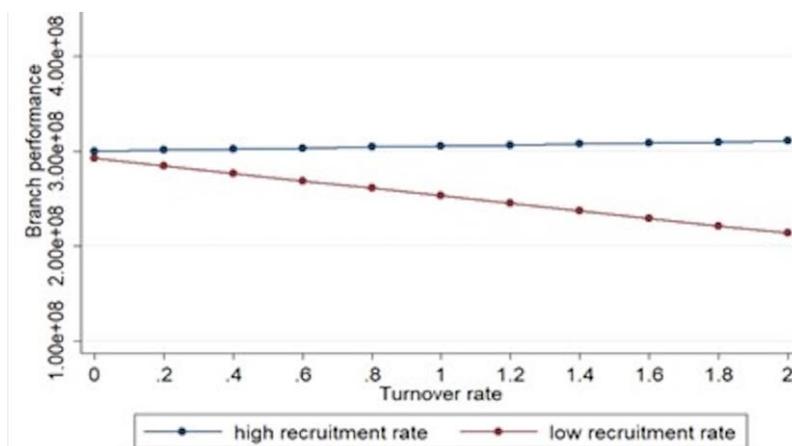
The moderating effect of the seniority level of departing loan officers is illustrated in Figure 2, showing a more negative relationship between turnover rate and branch performance when the departing loan officers are those with lower seniority.

Figure 2. Moderating effect of the seniority level
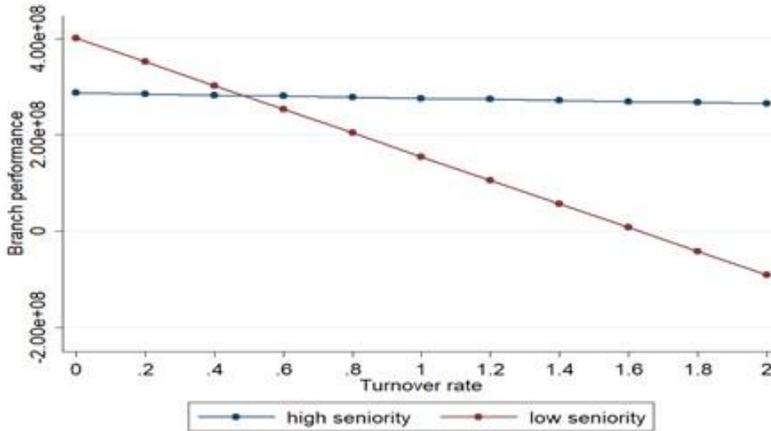
The results from the GMM model are presented in Table 3.

Table 3. Turnover rate and volume of the loan portfolio: GMM results

Amount of the branch portfolio (t+1) (ln)	Model 1 (H1)	Model 2 (H2)	Model 3 (H3)
1	2	3	4
Amount of the branch portfolio (t) (ln) (in local currency)	1.00*** (0.01)	1.01*** (0.00)	–1.15* (0.67)
Turnover rate (t)	–0.50 (0.36)		
Turnover rate (t-1)	0.09 (0.12)		
Turnover rate (t-2)	–0.41** (0.13)	–0.43*** (0.12)	–3.59*** (1.03)
Turnover rate (t-3)	0.27** (0.13)		
Turnover rate (t-4)	0.15 (0.12)		
Turnover rate (t-5)	0.08 (0.10)		
Turnover rate (t-6)	0.11 (0.09)		
Turnover rate (t-2) * Recruitment rate (t-2)		1.11*** (0.32)	

Table 3 cont.

1	2	3	4
Turnover rate (t-2) *			0.33**
Seniority of departing loan officers (t-2)			(0.13)
Control	OK	OK	OK
Trend	OK	OK	OK
Hansen statistic	38.99	34.32	9.16
p-value	1.00	1.00	1.00
Arellano-Bond statistic (AR2)	0.85	1.46	–1.92
p-value	0.40	0.144	0.05
Wald chi2	8.33e+06***	1.06e+07***	309539.37***
Number of observations	791	1060	212

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.0$.

Note: Standard errors are shown in brackets.

The Hansen test shows that we do not reject the null hypothesis of valid instruments. However, this test is probably weakened by the presence of too many instruments compared to our number of observations. The Arellano–Bond's test (AR2) shows that, for Models 1 and 2, we do not reject the null hypothesis of no autocorrelation, unlike for Model 3. The results from our GMM models should thus be taken with high caution and considered only as a robustness check for the results obtained with random-effect models.

The results from the GMM models also seem to confirm Hypothesis 1, as we find a negative and significant coefficient ($\beta = -0.41$, $p < 0.05$) for turnover at t-2 and a positive and significant coefficient ($\beta = 0.27$, $p < 0.05$) for turnover at t-3. They also bring support to Hypothesis 2, as the coefficient of the interaction term between turnover and the recruitment rate is positive and significant ($\beta = 1.11$, $p < 0.01$), and to Hypothesis 3b, as the interaction term between turnover and the seniority level of departing loan officers is positive and significant ($\beta = 0.33$, $p < 0.05$).

6. Discussion

Our main findings show that the turnover rate for a specific month negatively influences the volume of the branch's portfolio three months later. This negative effect is in line with the human and social capital theories, as the deterioration of tacit knowledge induced by employee departures may negatively affect organizational performance. However, the negative consequences of turnover only last for a short period of time: one month. Indeed, our results show that turnover stops hav-

ing negative consequences on performance four months after the turnover event and then, even starts having a positive influence on branch performance, although this positive effect also lasts only one month. This result may be explained by the context-emergent turnover (CET) theory and corroborates the findings of Hale et al. (2016), who conclude that two distinct phases should be considered when analyzing the impact of turnover on team performance: a disruption phase and a recovery phase. However, these authors found that a turnover event should have negative consequences on team performance during up to ten or eleven months after the event, which is much longer than what we observe in our analysis. This difference may be explained by the particularly high turnover rate in the microfinance organization we studied. Indeed, as argued by some scholars, in organizations experiencing a high level of turnover, the level of accumulated human capital is relatively low, and it will therefore not be so hard to rebuild such a capital. In the studied organization, loan officers can indeed be replaced relatively easily as large training programs are organized every month during the recruitment phase. Based on the literature on imprinting in the organizational setting (Marquis & Tilcsik, 2013; Stinchcombe, 1965), we can also suggest that this short-term effect may be explained by early imprinting. During the socialization process, the new employees' early exposure to the high level of turnover experienced by this organization may have an immediate long-term effect on their behavior, allowing them to develop characteristics or work habits to deal with this high level of turnover. The high pressure exerted by the branch managers of this organization may also explain why the effect of turnover disappears so quickly. Indeed, because of this pressure, loan officers feel obliged to work even more to accomplish the intended objectives for the branch they work in, these objectives remaining the same even if the number of loan officers in the branch fluctuates.

Moreover, contrary to what Hale et al. (2016) showed, we found that turnover had no immediate effect on branch performance, probably because the remaining loan officers take over the tasks of their departing colleagues just after the turnover event, even if there is no clear rule to that effect within the organization. And, after a certain period during which the remaining loan officers have to work overtime to manage their former colleagues' loan portfolios in addition to theirs, the risk of fatigue-related performance decrement tends to increase. This argument seems to be confirmed by an employee of the human resource department, who explained that, right after a loan officer has left the organization, branch directors may be tempted to redistribute the portfolio of that officer to those remaining, which increases the pressure put on the latter. We can also suppose that clients are not immediately informed

about their loan officer's departure, and that it is only when they receive this information that they may be less tempted to renew their credits, which would explain why the negative effect of turnover does not occur immediately after the turnover event.

Our results also show that, in the studied microfinance organization, the seniority level of departing officers weakens the negative relationship between turnover and organizational performance, contrary to what the human capital theory predicts. Such a result may be partly explained by the specificities of the microfinance industry, as the position of microfinance loan officer is particularly demanding and exhausting, both emotionally and mentally. In this vein, the General Director of the studied microfinance organization mentioned that "the loan officer gets tired, does not understand the mission, does not connect to the mission we complete, does not reach high level of productivity, and it becomes an arduous task." From our interviews with some loan officers who had left the organization and with an employee of the human resource department, we were also able to highlight that the continuous pressure put on loan officers by managers deteriorates the working atmosphere and that, after a certain time, loan officers may become totally demotivated. As a result, rather than leaving the microfinance organization for another one, some officers prefer changing their career path. The General Director explained that most of the loan officers who had left the organization after 12 to 24 months[4] of service had moved on to another sector. If some loan officers of the studied microfinance organization become demotivated after a certain time spent in the organization, losing these demotivated employees may reduce the negative consequences of turnover. This seems to refer to what Williams (1999) called "functional turnover". Our findings regarding seniority are of particular interest to the literature on turnover, since Hale et al. (2016) did not find any significant moderating effect of departing employees' tenure on the relationship between turnover and organizational performance.

Finally, our results highlight the influence of the recruitment rate as a moderator for the relationship between turnover and branch performance. This result is in line with the CET theory underlining the importance of considering both out-flows and in-flows of human resources when investigating the consequences of turnover on organizational performance. In the studied organization, thanks to the training programs organized during the recruitment process, it should be relatively easily for those who start working as loan officers after having completed their training to take

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[4] Loan officers who left the organization after 12 to 24 months are considered as having high seniority since the mean and median values for seniority are 6 and 9.63 months, respectively.

over the portfolio of a departing loan officer even if they may still need the help of more experienced loan officers during the first few months. Conversely, we may argue that in microfinance organizations where such training programs are not organized, newly recruited loan officers may be more likely to be poorly productive. In this case, the moderating effect of the recruitment rate may be less evident.

To summarize, we highlight both similarities and differences with the existing findings in the literature. In terms of similarities, we show, as in the literature, that the relationship between turnover and performance is curvilinear. Indeed, turnover induces two different stages: a disruption stage and a recovery phase. Furthermore, our findings also highlight that recruitment act as a moderator in the relationship between turnover and performance. In terms of differences, we can say that our findings show a disruption stage that is much shorter in microfinance than what has been shown in empirical studies on other types of industries. Furthermore, contradictory to the human capital theory, seniority does not seem to strengthen the negative effect of turnover. Finally, contradictory to some empirical studies, we show here that the effect of turnover on performance is not immediate, and that the seniority level is a moderating factor that weakens the negative relationship between turnover rate and performance.

7. Conclusions

This paper studied the effect of staff turnover on organizational performance in microfinance, an industry where close relationships between loan officers and clients are essential for the funding of poor entrepreneurs with no collateral. More specifically, we analyzed the duration of the consequences of turnover on the portfolio volume of branches of a microfinance organization and examined some factors that may moderate the relationship between staff turnover and organizational performance. To this end, we estimated random-effects and GMM models on panel data coming from a microfinance organization active in Latin America for the 2008-2016 period.

7.1. Main findings

Our results show that it takes three months to see a significant negative impact of turnover on the volume of a branch's loan portfolio. Moreover, it takes four months after the turnover event for this negative impact to be counterbalanced. After

four months, turnover stops having negative consequences and even becomes advantageous in terms of loan portfolio growth, but this positive effect lasts only one month. The effect of turnover thus appears to be particularly limited in time. Finally, we find that the negative relationship between turnover rate and performance is weakened by the seniority level of departing loan officers and by the recruitment rate.

7.2. Theoretical implication

This paper contributes to the literature on human resource management in different ways. First, by highlighting a curvilinear relationship between turnover and performance, it contributes to the ongoing debate in the literature about the form that the relationship between these variables. Second, it supports the CET theory (Nyberg & Ployhart, 2013) in the sense that we confirm that the consequences of turnover on organizational performance should be analyzed in a dynamic perspective. Many scholars in the HRM literature claim that timing and duration are important factors to take into account in this field (Call et al., 2015; Gerhart, 2005; Ployhart & Hale, 2014; Wright & Haggerty, 2005), and this paper represents a step in that direction as it underlines that turnover may have different effects on organizational performance over time. Third, we also contribute to the literature on turnover by using an econometrical method which avoids the risk of endogeneity et reverse causality, the GMM models. Fourth, we show that even in a sector where the human touch is key, turnover is not necessarily always detrimental. In this vein, we thus contribute to the literature on SME banking and microfinance since our results contradict the theoretical assumption that we can find in the literature in microfinance that loan officers' departures may be particularly detrimental because they induce a deterioration of the human and social capital, as well as the loss of the relational capital that those officers have built thanks to their close relationships with clients.

7.3. Managerial implications

From a practical point of view, this paper may be useful for microfinance practitioners as it shows them that turnover may be less detrimental than they could imagine. Particularly, managers should be less concerned about turnover when the loan officers who are leaving are the ones with higher seniority, proba-

bly more exhausted by their position. However, we should also keep in mind that managers, in the microfinance sector or any other sector, should remember that turnover may have detrimental consequences other than a deterioration of financial performance in a short-term run. Indeed, when the level of turnover is too high, organizations may face a dilution of their organizational culture, with the potential consequences of weakening the whole organizational processes and governance over a long-term horizon.

7.4. Limits and future research directions

This paper presents some limits. First, although studying a single organization in a specific country may have "some internal validity advantages" as explained by Call et al. (2015: 1226), our results can hardly be generalized. Therefore, we suggest to conduct analyses in other countries where microfinance is active in order to ensure that the results we obtained are not specific to the Latin--American culture. Second, we were not able to precisely differentiate voluntary and involuntary turnover for each loan officer in our study. Yet, this distinction may be important in examining the impact of turnover on organizational performance as involuntary turnover appears to be less detrimental than voluntary turnover. In our case, even if involuntary turnover also occurs, most of the loan officers decided to leave the organization on a voluntary basis. For the future, we thus suggest distinguishing both types of turnover. Third, although examining an organization with so high a level of turnover offered us the opportunity to triangulate quantitative data with qualitative data from interviews focused on this particular topic, we also argue that our results may differ in organizations experiencing a low level of turnover. Therefore, examining a larger sample with multiple microfinance organizations may be useful in this way. Fourth, there are other factors that may influence branch performance and that we were not able to capture, such as the quality of the branches' managers. Finally, because we examined a sector where both social and financial performance and often generate trade-offs, future studies could examine whether employee turnover tends to exacerbate or attenuate such trade-offs.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix 1. Interviews

Interviewees	Title/position	Location	Method	Duration of interviews (min:sec)
Loan officers (Lo # in the text)				
Loan officer #1	Loan officer	Headquarters	Face to face	22 :34
Loan officer #2	Loan officer	Headquarters	Face to face	16 :53
Loan officer #3	Loan officer	Headquarters	Face to face	22 :05
Loan officer #4	Loan officer	Headquarters	Face to face	44 :22
Loan officer #5	Loan officer	Headquarters	Face to face	13 :38
Loan officer #6	Loan officer	Branch 1	Face to face	27 :41
Loan officer #7	Loan officer	Branch 1	Face to face	20 :38
Loan officer #8	Loan officer	Branch 1	Face to face	17 :58
Loan officer #9	Loan officer	Branch 1	Face to face	22 :22
Loan officer #10	Loan officer	Branch 1	Face to face	14 :20
Loan officer #11	Loan officer	Branch 2	Face to face	21 :40
Loan officer #12	Loan officer	Branch 2	Face to face	40 :33
Loan officer #13	Loan officer	Branch 2	Face to face	23 :24
Loan officer #14	Loan officer	Branch 2	Face to face	12 :08
Loan officer #15	Loan officer	Branch 3	Skype	10 :51
Loan officer #16	Loan officer	Branch 3	Skype	19 :05
Loan officer #17	Loan officer	Branch 3	Skype	23 :35
Loan officer #18	Loan officer	Branch 3	Face to face	21 :04
Executives (Execu # in the text)				
Executive #1	CEO	Headquarters	Face to face	31 :03
Executive #2	Branch manager	Branch 2	Face to face	25 :51
Executive #3	Branch manager	Headquarters	Face to face	46 :09
Executive #4	Branch manager	Branch 1	Face to face	35 :33
Executive #5	Branch manager	Branch 3	Skype	27 :30
Executive #6	Data manager	Headquarters	Face to face	13 :42
Executive #7	Legal manager	Headquarters	Face to face	26 :10
Executive #8	Manager of environmental issues	Headquarters	Face to face	42 :25
Administrative employees (Admin # in the text)				
Administrative employee #1	HR employee	Headquarters	Face to face	46 :33
Administrative employee #2	HR employee	Headquarters	Face to face	54 :17
Administrative employee #3	HR employee	Headquarters	Face to face	64 :00
Administrative employee #4	Executive secretary	Headquarters	Face to face	55 :12