



**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF BUSINESS AND ECONOMICS**  
**DEPARTMENT OF MANAGEMENT**

Doctoral Dissertation

Psychological Ownership of Employees: its antecedents and outcomes in Ethiopian  
organizations

Meba Tadesse Delle

May 2023



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Meba Tadesse Delle

A dissertation submitted in partial fulfillment of the requirements for the Degree of  
Doctoral Philosophy in Management

May 2023

# APPROVAL SHEET

This is to certify that the dissertation prepared by Meba Tadesse Delle, entitled "*Psychological Ownership of Employees: its Antecedents and Outcomes in Ethiopian Organizations*", complies with university rules and standards for originality and quality and was submitted in partial fulfillment for the Doctoral Degree of Philosophy in Management under the Department of Management, College of Business and Economics, Addis Ababa University.

Approved by the Board of Examiners:

Professor Lucia Naldi



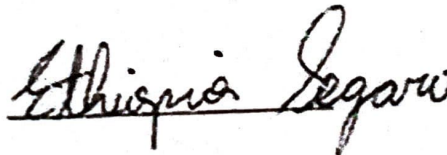
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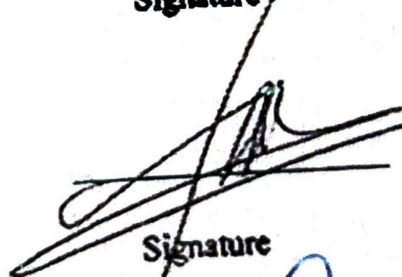
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## DECLARATION

This is to certify that the dissertation entitled "*Psychological Ownership of Employees: its antecedents and outcomes in Ethiopian organizations*", submitted in partial fulfillment for the Doctoral Degree of Philosophy in Management under the Department of Management, College of Business and Economics, Addis Ababa University, is a record of original work carried out by me and has not been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation have been duly acknowledged.

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## ABSTRACT

*Employees often feel a sense of ownership toward their organization, even without legal possession. This dissertation explores a phenomenon known as “psychological ownership” (PO) amongst employees in organizations. The primary goals of this dissertation are to investigate the understudied individual-level factors that influence PO and to examine the mediating role of PO in the relationship between those factors and employee workplace behaviors. The study further aims to develop a contextualized PO measurement scale suitable for the Ethiopian context and potentially other similar settings. The study explores both the antecedents and outcomes of PO within the specific context of Ethiopian organizations. The dissertation comprises three independent papers; in the first paper, the findings suggest that the temporal focus (past and future orientation) of employees determines their PO toward their organization and in turn influences their attitude toward women in management. In the second paper, the findings show that employees’ workplace spirituality influences their PO toward the organization and, in turn, on their entrepreneurial behavior. In both cases, PO is found to mediate the relationship. The third paper develops a contextualized psychological ownership measure that is applicable in Ethiopia and potentially in other East African countries. This dissertation aims to advance our understanding of PO in specific workplace settings and provide a valuable tool for assessing and fostering this crucial phenomenon in the Ethiopian context.*

**Keywords:** *psychological ownership, employees, individual-level factors, mediating role, Ethiopian context, contextualized measure*

## **ACKNOWLEDGEMENTS**

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## **LIST OF ABBREVIATIONS**

<b>AVE</b>	Average Variance Extracted
<b>CFA</b>	Confirmatory Factor Analysis
<b>CFI</b>	Comparative Fit Index
<b>CR</b>	Composite Reliabilities
<b>EFA</b>	Exploratory Factor Analysis
<b>MBA</b>	Master of Business Administration
<b>Mplus</b>	Statistical Modeling Program
<b>NGOs</b>	Non-Governmental Organizations
<b>PO</b>	Psychological ownership
<b>RMSEA</b>	Root Mean Square Error Approximation
<b>SE</b>	Standard Error
<b>SEM</b>	Structural Equation Modeling
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>SRMR</b>	Standardized Root Mean Square Residual
<b>TLI</b>	Tucker-Lewis Index
<b>WAMS</b>	Women as Managers Scale

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# **CHAPTER 1. INTRODUCTION AND SUMMARY OF THE DISSERTATION**

## **1.1 INTRODUCTION**

Some employees with no claims of legal or formal ownership of their employer organization display feelings of ownership toward it. This ownership feeling is called psychological ownership (PO) and is defined as a state in which individuals feel that the organization is theirs, i.e., they develop the impression "it is my organization" (Pierce et al., 2001, 2003). In their preliminary work on conceptualizing PO, Pierce et al. (2001, 2003) introduced why and how PO develops in individuals. They introduced the 'why' of PO by identifying the needs that its existence serves in organizations, i.e., the need for efficacy, self-identity, and belongingness. They introduced the 'how' of PO by identifying the routes through which it develops. The routes to PO considered are the following three main factors that give rise to feelings of PO toward the organization: experiencing control over the organization, intimately knowing the organization, and investing the self in the organization (Pierce et al., 2001, 2003). Building on these initial factors, researchers have further investigated various organizational-level antecedents to PO, including leadership, participation in decision-making, and the structure of the work environment (Dawkins et al., 2017). PO in turn influences a variety of outcomes in organizations, including many desirable employee attitudes, for example, overall organizational and affective commitment (Han et al., 2010, Mayhew et al., 2007) and job satisfaction (Avey et al., 2012, Bernhard & O'Driscoll, 2011).

Based on regulatory focus theory (Higgins, 1997, 1998), the PO literature further introduces the following two sides of PO that employees may develop in organizations:

promotion-focused PO and prevention-focused PO (Avey et al., 2009). In self-regulation theory, individuals have two approaches to goal selection, either a promotion-focused approach, where they pursue goals that reflect their hopes and aspirations, or a prevention-focused approach, where they pursue goals that avoid potential punishment by following the rules and meeting obligations (Higgins, 1997, 1998). Thus, in applying this theory to PO, employees with promotion-focused PO are concerned with obtaining their hopes and aspirations and view improvement in their organization as personally fulfilling (Avey et al., 2009). In contrast, those with prevention-focused PO become territorial regarding the target of ownership at the expense of their desired behavior and performance in the organization (Avey et al., 2009).

However, despite the rich literature on PO, the following gaps remain. First, while prior studies have shown several organizational-level antecedents of PO in organizations, our knowledge of individual-level factors that contribute to PO is limited. Additionally, antecedents to the prevention-focused side of PO remain unclear in PO literature. Second, we know little about the mediating role of PO among individual-level factors and the workplace behaviors of employees. Third, since PO was first introduced and measured in the Western context, most organizational studies have used the Western conceptualization and measures of PO. However, as contextual factors affect PO, scholars have suggested the need to consider other contexts (Pierce et al., 2001, Dawkins et al., 2017). Some attempts have been made to contextualize PO and its measurements (Dawkins et al., 2017, Shukla and Singh, 2015, Peng and Pierce, 2015, Olckers, 2013). For example, Shukla and Singh (2015) show that the unique context of India determines the measure of PO in organizations, while on the other hand, Peng and Pierce (2015) find that PO is manifested within the Eastern collectivistic culture in the same way as it is in the

Western individualistic context. Nevertheless, we lack a contextualized scale for capturing PO in East African countries and in Ethiopia in particular.

The main goal of this dissertation is to bridge these gaps in the following ways. First, it investigates the individual-level antecedents and outcomes of PO in organizations in the Ethiopian context. In more detail, this dissertation aims to investigate individual-level factors contributing to both promotion-focused and prevention-focused PO and different behavioral outcomes of PO in this context. Second, it explores the mediating role of PO in the relationship between individual-level antecedents and employees' workplace behaviors. Third, this dissertation aims to develop and validate a contextualized scale of PO that can be used in the Ethiopian context and other related contexts.

The findings of this dissertation indicate that the temporal focus of employees and workplace spirituality are individual-level antecedents to PO and that attitudes toward women in management and the entrepreneurial behavior of employees are behavioral outcomes of PO. Furthermore, the mediating role of PO between the antecedents and outcomes is explored in the study. A new context-specific measure of PO is also developed in this dissertation that could be applicable in East African countries that share common contextual characteristics with Ethiopia.

The rest of the chapter is organized as follows. Section 2 discusses the Ethiopian context. Section 3 covers the literature review of the PO of employees, including the antecedents, outcomes, and mediating role of PO. Section 4 reviews the existing measures of PO and shows the contextual nature of PO measures. Section 5 presents the scope of the study followed by section 6 where the method used in this dissertation is presented. Section 7 presents the overarching model of the dissertation; finally, Section 8 highlights the contribution of this dissertation and briefly describes the papers included.

## **1.2 THE ETHIOPIAN CONTEXT**

The Ethiopian context is characterized by many unique attributes, but in examining the antecedents and effects of PO, this dissertation focuses mainly on the three attributes that put the country in a very distinct position from the Western context. First, the patriarchal culture of the country is taken into consideration. Although there have been many successful attempts to ensure equal opportunity for women, there remain deeply rooted attitudes that discredit women as being less capable of assuming managerial positions (Haile, 2018). Discourses used in the form of proverbs are examples of the deeply rooted stereotyping of women (Hussein, 2009). Second, the existence of high 'power distance' in Ethiopia, where employees often expect and accept that power is distributed unequally and favors only those in top management, is another unique characteristic of the country. According to Hofstede's insights, Ethiopia scores 64 in power distance, which is an above-average score, where the highest score is 104 and the lowest is 11 (Hofstede's insights, 2022). Third, Ethiopia is characterized as being one of the most religious countries in the world (Gallup global reports, Crabtree, 2010), where almost 100% of the population believes that religion is an important part of their life.

PO researchers highlight that attention should be given to understanding that contextual personal differences and culture influence how PO develops and influences work outcomes (Dawkins et al., 2017, Pierce et al., 2001). Following such recommendations, these unique characteristics of the Ethiopian context are considered while investigating the antecedents and outcomes of PO. Additionally, in the Western context, PO is conceptualized and measured as a construct that fulfills certain psychological needs of individuals (Pierce et al., 2001, 2003). Building on this conceptualization, researchers continued developing PO measures that associate PO with human needs (Avey et al., 2009). To capture the true meaning of PO in the Ethiopian

context and other related contexts, a contextualized measure of PO that is associated with the specific needs of employees in this context is developed and validated.

### **1.3 EMPLOYEE PSYCHOLOGICAL OWNERSHIP**

#### ***1.3.1. Antecedents to employees' psychological ownership***

Building on the routes/paths leading to PO that were initially introduced by Pierce et al. (2001), which are controlling the target, knowing the target, and investing oneself in the target, a growing number of research works have begun to recognize factors that may contribute to the development of employees' PO (Dawkins et al., 2017). Most of these studies examined the organizational-level factors that contribute to PO, mainly focusing on the role of leaders in facilitating the routes/paths to PO (Pierce et al., 2001, Dawkins et al., 2017). In addition to the three classic factors of PO, Zhang et al. (2021) introduced 'safety' as an additional antecedent, proposing that the more employees feel their safety is ensured in the organization, the greater their PO can improve. Researchers have also examined the influence of the work environment structure (Pierce et al., 2004), finding that a less structured work environment promotes PO because it facilitates the required path to PO by providing greater autonomy for employees (O'Driscoll et al., 2006).

While there is much research on the organizational-level factors that contribute to the development of PO, individual-level factors have been overlooked in the literature. A very recent review on the 30 years of journey of the PO theory that focused on investigating topics of past research revealed that more research needs to be done on the cultural influences of PO and on the individual-level factors that contribute to PO (Renz and Posthuma, 2022). In addition, Dawkins et al., (2017) based on their review of PO literature, highlighted that PO research needs more

exploration on the influence of culture and individual differences on the development of PO. Based on the research directions from the two review papers, this study further investigates existing literature on PO, mainly focusing on the recent ones, and identifies that there is a research gap regarding individual-level factors that contribute to PO (see Table 1). Table 1 below depicts the antecedents and outcomes of PO identified in the existing literature, mainly focusing on organizational-level antecedents to PO. Furthermore, it is shown in the table, that existing literature did not give much attention to the influence of cultural contexts on PO.

Studies show that organization-level factors contribute to the development of PO, which in turn benefits the organization. In their introduction of the two sides of PO (Avey et al., 2009), the authors noted that it is possible for employees to feel either promotion- or prevention-focused PO toward the organization. That means employees might develop prevention-focused PO regardless of the effort organizations are making to increase their promotion-focused PO. By including individual-level factors in the development of PO, this study tries to address the question of why some individuals tend to develop prevention-focused PO, regardless of the effort organizations are making to increase their promotion-focused PO.

The employees' temporal focus, i.e., the extent to which employees devote their attention to perceptions of the past and future (Shipp & Aeon, 2019), is the first individual-level factor that is examined as an antecedent to PO. The second individual-level factor investigated in this dissertation is employee workplace spirituality, which entails the recognition that employees have inner lives that nourish and are nourished by meaningful work (Ashmos and Duchon, 2000). This implies that employee religion/spirituality plays a key role in influencing employee PO in the workplace. It is not surprising to identify workplace spirituality as an antecedent to PO,

especially given the context of the study, where almost the entire population believes that religion is an important part of their lives (Gallup Global Reports, Crabtree, 2010).

**Table 1 Antecedents and Outcomes of PO in existing literature**

<b>Author/Date</b>	<b>Antecedents to PO</b>	<b>Outcomes of PO</b>	<b>Theories</b>	<b>Context/Setting/Sample</b>	<b>Future research direction</b>
Azila-Gbettor et al., 2022  <i>Journal of Family Business</i>	Work engagement  Organizational Performance	No outcomes of PO	Job demand and resource model	Employees of family hotels in Ghana	Longitudinal survey
Renz, Posthuma and Smith, 2021  <i>Cross Cultural and Strategic Management</i>	No antecedents to PO	Organization-based self esteem  Paternalistic leadership behaviour	Extended self-theory and psychological ownership	Supervisors working in various organizations in the US and Mexico Diverse cultural contexts. <i>(Cultural values are found to be significant moderators)</i>	Continue examining the moderating effects of cultural values on ownership feelings.
Wang et al., 2019  <i>Journal of Applied Psychology</i>	Job engagement	In role performance  Territorial behaviour	Extended self-theory and Psychological ownership	Sales representatives and supervisors in a pharmaceutical company in China <i>(did not take cultural aspects into consideration)</i>	Consider possible cultural influences of collectivism and individualism on psychological ownership
Mustafa et al., 2016  <i>Journal of Leadership and Organizational Studies</i>	No antecedents to PO	Entrepreneurial behaviour  Job satisfaction		Middle level managers of large telecommunication firm in Singapore	Examine possible interactions between individual and organizational level factors to PO.
LI et al., 2015  <i>Journal of Knowledge Management</i>	Affective commitment		Affective commitment and psychological ownership	Employees working in 50 high tech firms found in different cities in China	Longitudinal survey

<b>Author/Date</b>	<b>Antecedents to PO</b>	<b>Outcomes of PO</b>	<b>Theories</b>	<b>Context/Setting/Sample</b>	<b>Future research direction</b>
Peng and Pierce, 2014 <i>Journal of Managerial Psychology</i>	Job-based psychological ownership	Job satisfaction	Perception and cognition theory	Employees working in 4 high tech companies in China.	Employing data from multiple sources Inclusion of cultural variables on the emergence and production of PO effects
Hensen et al., 2014 <i>Journal of Family Business Strategy</i>	No antecedents to PO	CEO Stewardship Behaviour	Stewardship theory	CEOs of 111 family firms in Finland	
Bernhard and O'Driscoll, 2011 <i>Group and Organization Management</i>	Transformational and Transactional Leadership	No outcomes of PO		Employees working in 52 small family-owned and managed businesses in South-West Germany	
Avey et al., 2009 <i>Journal of Organizational Behaviour</i>	Transformational Leadership	Job satisfaction Commitment Intention to stay in the organization Organizational citizenship behaviour	Regulatory focus theory	Employees working in different organizations in the US	Unpacking the relationship between PO and work attitudes.
Mayhew et al., 2007 <i>Journal of Social Psychology</i>	Autonomy	Organizational commitment		15 supervisors and 70 employees working in two branches of an accounting firm	Adress individual factors that influence PO
Van Dyne and Pierce, 2004 <i>Journal of Organizational Behaviour</i>	No antecedents to PO	Employee attitudes and positive work behaviours	Psychology of Possession and Psychological Ownership	Employees and supervisors working in multiple firms in the United States	Research in non-Western settings to see the behavioural effect of PO

### ***1.3.2. Outcomes of employees' psychological ownership***

A very recent study revealed that individuals with PO show more willingness to protect and responsibility regarding the protection of their natural surroundings than legal owners (Preston & Gelman, 2020). In their findings, although legal owners also experience "mine-ness", they felt more control and territoriality than psychological connection to the target they own (Preston & Gelman, 2020, p.1). In organizations, it is not uncommon to find employees with feelings of responsibility to the organization they work for, sometimes to a higher level than the legal owners. Just as research has found many factors contributing to the feelings of ownership of employees in organizations, the outcomes of such feelings in determining employee work behavior are also found. These include work attitudes and behaviors that benefit the organization eventually, if not momentarily (Dawkins et al., 2017). These desirable attitudes and behaviors include a commitment to the organization (Han et al., 2010, Mayhew et al., 2007), job satisfaction (Avey et al., 2009), becoming responsible and protective of the organization (Pierce et al., 2001), organizational citizenship behavior (Van Dyne & Pierce, 2004), innovation (Rau, Werner, & Schell, 2018), and entrepreneurial behavior (Seiger et al., 2013). Employees engaging in entrepreneurial behavior, i.e., employees engaged in corporate entrepreneurial activities in an organization (Mustafa et al., 2016), play the most crucial role in increasing the performance of the organization (Kuratko et al., 2005; Sieger et al., 2013). Studies indicate that individuals with PO in an organization are likely to feel a connection to the performance of their organization, as they find it personally fulfilling and are likely to behave entrepreneurially (Avey et al., 2009). Nonetheless, less attention is given to the study of the relationship between PO and employee entrepreneurial behavior. Therefore, this study investigates employee entrepreneurial behavior as an outcome of PO.

Furthermore, although there are plenty of studies discussing the various outcomes of PO in organizations, evidence is scant regarding contextual outcomes. Despite the long-rooted patriarchal system in Ethiopia (Haile, 2018) and despite the long-held attitude that women are less capable of assuming higher positions (Hussein, 2009), women in Ethiopia are assuming managerial positions, and this is one of the critical changes occurring in contemporary Ethiopian organizations. Studies show that individuals with PO are likely to embrace critical changes as long as they benefit the organization (Avey et al., 2009). Hence, this dissertation examines attitudes toward women in managerial positions, as an additional outcome of PO that is unique to the Ethiopian context.

### ***1.3.3. The mediating role of psychological ownership***

Researchers suggest focusing on PO as a mediator when examining relationships where the outcome variable contributes to the benefit of the organization (Li, et al., 2015). This is mainly because “employees’ sense of ownership can result in an altruistic spirit” (Li, et al., 2015, p.1147), leading them to a sense of responsibility and stewardship toward the organization (Pierce et al., 2001). It is further noted that since PO has important attitudinal and behavioral effects, it is proper to use it as a mediating variable that links an antecedent variable and pro-organizational behavior as an outcome variable (Sieger et al., 2013). Prior studies have mainly focused on the mediating role of PO in the relationship between organizational-level antecedents and different pro-organizational outcomes (K and Ranjit, 2022, Avey et al., 2012). In addition to investigating individual-level antecedents and outcomes of PO in Ethiopian organizations, this dissertation also examines the mediating role of PO in the relationship between these antecedents and outcomes. There are no empirical studies conducted on the mediation effects of PO in the relationships proposed in this study.

## **1.4. MEASURES OF PSYCHOLOGICAL OWNERSHIP**

PO in organizations was originally conceptualized as a construct that fulfills human needs (Pierce et al., 2001, 2003). The authors clarified that employees develop PO toward their organization because it fulfills their need for efficacy, self-identity, and accountability (Pierce et al., 2001, 2003). Based on this conceptualization, researchers continued associating PO with human needs and developing measurement scales by incorporating human needs as dimensions that measure PO in organizations (Avey et al., 2009, Olckers, 2013). For example, Avey et al. (2009) developed a PO measure with four dimensions that include the need for efficacy, self-identity, accountability, and belongingness. Moreover, Olckers et al. (2013) developed a PO measure that incorporates the need for identity, responsibility, and autonomy as three dimensions of PO.

As noted earlier, scholars suggest considering personal differences due to different contexts to understand the true meaning of PO in a given context (Dawkins et al., 2017, Pierce et al., 2001). There have been attempts to follow this suggestion and consider study contexts when developing PO measures (Olckers, 2013, Shukla & Singh, 2015). We do not know what PO means to employees in Ethiopian contexts or other East African country contexts. This dissertation amends this gap by developing and validating a contextualized measure of PO that incorporates the specific needs of employees in these contexts.

## **1.5. SCOPE OF THE STUDY**

The central theme of this dissertation is the examination of individual-level factors that contribute to psychological ownership of employees in their organizations and the investigation of the outcomes of PO in organizational settings. Both the individual-level factors and the

outcomes are studied in the context of the Ethiopian organizations. The study further aims to identify the context-specific measurement of PO.

Though PO has become the interest of many sectors, including marketing, tourism, and the environment, the focus of this dissertation is on PO in organizational settings. More specifically, PO is investigated from the perspective of employees working in various organizations.

Furthermore, existing studies acknowledge the distinction between organization-based and job-based PO, proposing the emergence of job-based PO leads to manifestation of organization-based PO (Peng and Pierce, 2015). But the focus of this study is only on organization-based PO.

## **1.6. METHODS**

This dissertation comprises three independent papers. The method of each paper, including sampling and analysis, is outlined below.

### ***1.6.1. Population and Sampling***

Employees working in different organizations in Ethiopia were the target population of all the papers. But since, we do not have a nationwide registers of all employees in the country, we were forced to use convince sampling technique to address the target population. To ensure an adequate number of participants, we used a convenient sampling method by involving employees working in different organizations and are currently enrolled in part-time MBA and related programs at various universities across the country.

In the first paper, our sample included 230 MBA and related program students from 6 major universities in the country, allowing us to involve employees from multiple organizations,

including privately owned (46%), government-owned (27%), and NGOs (nongovernmental organizations) (26%). We collected data by approaching the students in their classrooms at the end of their lecture hours. A total of 235 questionnaires were distributed, among which we were able to collect 230, securing a 98% response rate. The average age of the participants was 35 years, and females represented 31% of the sample. The average tenure in their respective organizations was 7 years.

The second paper used multiple studies and employed multiple methods because the study included scale development of *workplace spirituality*, which is applicable to the study context. We conducted four studies. In Study 1, we used a sample of 15 participants to generate items for the development of the new scale. In Study 2, we used a sample of 35 academics from different fields of study to assess the content validity of the scale generated in Study 1. In Study 3, we used a sample of 230 employees to further validate this scale. These are full-time employees of different organizations including privately owned, government, non-governmental organizations (NGOs), and part-time students enrolled at 6 different universities in the country studying MBA or related fields. Of these employees, 31% were female participants, and the participants' average age was 35. Finally, in Study 4, we used survey data from a sample of 351 employees to test the study hypotheses. These employees are also from privately owned, governmental and non-governmental organizations (NGOs), who were also MBA and related program students enrolled at 9 different universities in the country. Since questionnaires were distributed and collected by entering students' classrooms at the end of lecture hours, a 100% response rate was achieved. The participants in this survey had an average age of 35, and 34% were female participants. 55% had more than 5 years of work experience in their organizations.

Since the third paper involved scale development, four studies were conducted to ensure consistent reliability and scale structure. In the first study, to develop the initial list of scale items 15 employees were selected from various organizations. The second study involved 35 academicians to test the content validity of the items. In the third study, scale purification was conducted by involving a sample of 230 MBA students who were currently employed by various organizations (including privately owned, governmental, and non-governmental organizations). Of these working students, 69% were male participants, and the average age of the participants was 35. Finally, in the fourth study, we used a sample of 351 MBA and related program students who were also working in different organizations (including privately owned, governmental, and non-governmental organizations) to validate the scale, demonstrate reliability and scale structure, and verify convergent, discriminant, and nomological validity. Of the participants in the fourth study, 66% were male participants and had an average age of 35 years.

### *1.6.2. Empirical Analysis*

The variables in the study included latent variables, hence this study used structural equation modeling (SEM) to estimate the relationships between latent variables, which are not directly observed, but through indicator items. Structural equation modeling (SEM) is believed to facilitate the estimation of complex relationships between multiple independent and dependent variables which are typically unobservable and are indirectly measured by multiple indicators (Hair, 2021; Boomsma and Hoyle, 2012). Among the two most popular methods in SEM, this study applied the covariance-based SEM (CB-SEM) for two reasons. First, the statistical software that was employed for all analyses throughout the study was Mplus, where CB-SEM is the default method. Second, since this study is aimed at testing different hypotheses, we found CB-SEM the most appropriate method to confirm/reject hypotheses, compared to the partial least

square SEM (PLS-SEM) that follows a prediction-oriented approach to SEM (Hair et al., 2021, Hair et al., 2017).

#### **1.6.2.1. Reliability and Validity**

In all the papers, reliability was assessed by examining Cronbach's alpha values, where all the measures in the study resulted in acceptable values. In addition, we computed the composite reliability (CR) of all measures, and all were found to be above satisfactory levels (Bollen and Lennox, 1991). To validate the measurement models, a confirmatory factor analysis (CFA) of all measures was performed using Mplus software, and the acceptable criteria for the convergent validity was achieved, where all loadings of the items on their respective factors were greater than 0.5, significant at  $p < 0.01$  (Hair et al., 2012). The average variance extracted (AVE) of all measures (except for one measure, which resulted in AVE of 0.441) was above 0.5. Finally, discriminant validity was also found satisfactory where the value of each construct was higher than the shared variances with other constructs (Shook et al., 2004).

#### **1.6.2.2. Common Method Variance**

Recognizing the potential for common method bias due to our single-timepoint survey design for all papers, we employed a partial correlation method with a theoretically distinct marker variable (Podsakoff et al., 2003) to mitigate its influence and ensure the robustness of our findings (Tehseen et al., 2017).

#### **1.6.2.3. Treatment of Missing Values**

Given the substantial number of variables in our study, Mplus software proved invaluable in addressing missing data. Its ability to automatically estimate missing values using maximum

likelihood (ML) or MLR estimation for cases where at least some variables are observed in the analysis process.

## **1.7. OVERARCHING MODEL OF THE DISSERTATION**

The overarching model in **Figure 1** shows the different relationships hypothesized and investigated throughout the study. These relationships are based on the mediating role of employee psychological ownership. In the model, two individual-level factors are shown to influence employee psychological ownership (PO): temporal focus and workplace spirituality. As depicted in the model, future-temporal focus positively influences promotion-focused PO, while it negatively influences prevention-focused PO. On the other hand, a temporal focus on the past positively influences prevention-focused PO, while it negatively influences promotion-focused PO. Another form of an individual-level factor affecting PO, i.e., employee workplace spirituality, is also shown to positively influence the employee PO.

In the model, PO in turn influences the attitudes of employees toward women managers and the engagement of employees in entrepreneurial behavior. Promotion-focused PO has a favorable/positive effect on the attitudes of employees toward women in management, while prevention-focused PO unfavorably influences this attitude. PO also positively affects employee entrepreneurial behavior. In all the relationships shown in the model, the mediating roles of PO, as well as the direct and indirect relationships, are investigated thoroughly.

Finally, a contextualized psychological ownership measure that could apply to the Ethiopian context and other related contexts is developed and validated. As shown in the model, the contextualized PO comprises different dimensions than the original PO, where the contextualized PO possesses dimensions that are unique to the context of the study.

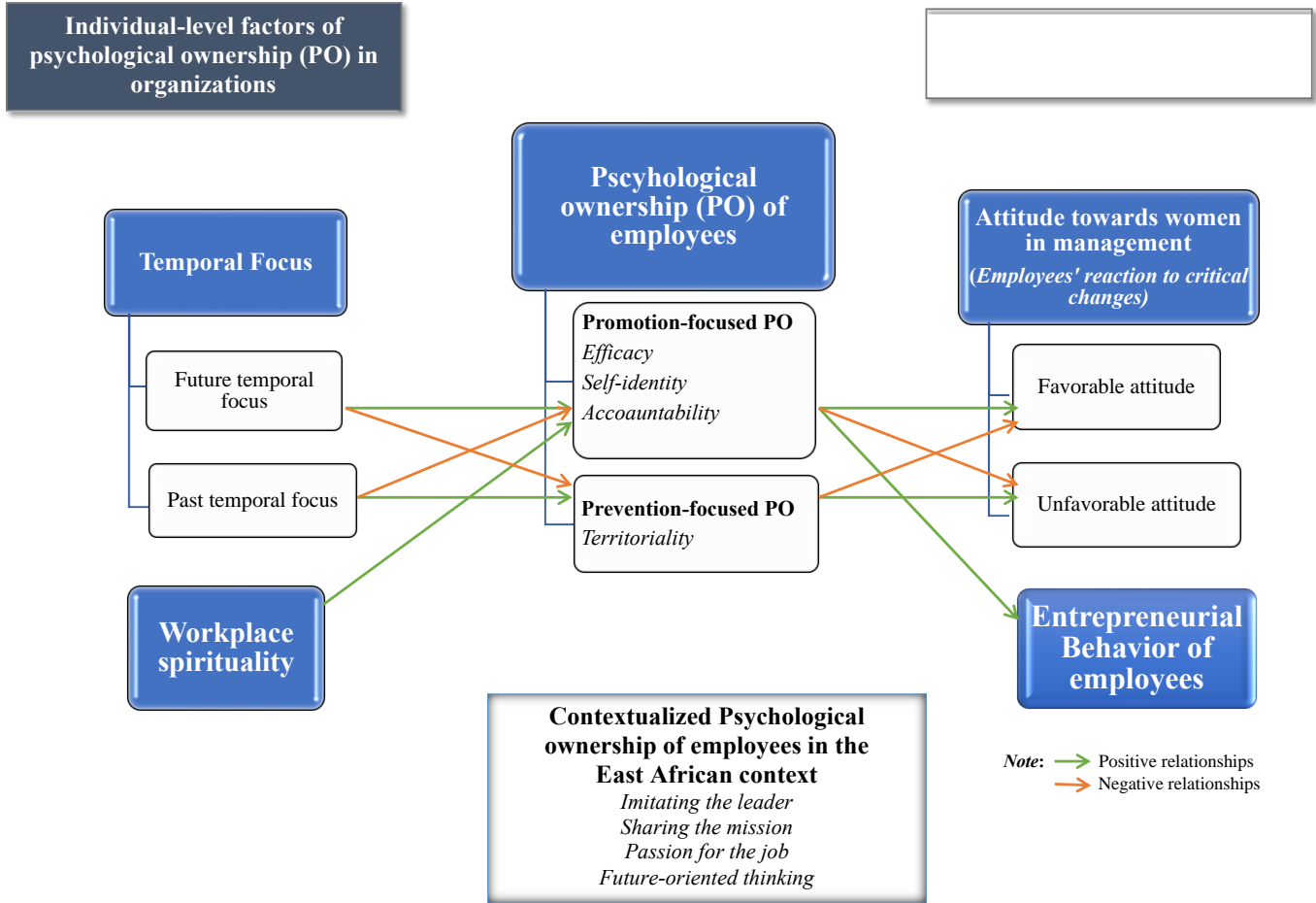


Figure 1: Overarching model

## 1.8. A BRIEF SUMMARY OF EACH PAPER

### *1.8.1 Time will tell: Psychological ownership, temporal focus, and attitudes toward women as managers in Ethiopia*

*(Published at International Journal of Organizational Analysis, in May 2022)*

*DOI 10.1108/IJOA-10-2021-3017*

This paper investigates the individual factors that directly and indirectly favor (or hinder) employees' attitudes toward women in management. It investigates the direct effects of the two sides of PO, i.e., promotion-focused and prevention-focused PO, on employees' attitudes toward women in management. Past and future temporal foci are examined as possible antecedents to the two sides of PO.

The study used survey questionnaires to collect data from 230 MBA and related program students from six different universities in Ethiopia who were also currently working in different organizations. The study hypotheses were tested using structural equation modeling in Mplus.

The study findings show that employees with promotion- and prevention-focused PO had favorable and unfavorable attitudes toward women in management, respectively. In addition, a significant positive effect of future temporal focus on promotion-focused PO and that of past temporal focus on prevention-focused PO were discovered. Furthermore, promotion-focused PO partially mediates the relationship between future temporal focus and attitudes toward women managers, while prevention-focused PO fully mediates the relationship between past temporal focus and attitudes toward women managers.

*1.8.2. Workplace spirituality and entrepreneurial behavior among employees in organizations:  
the role of psychological ownership*

*(Published at Journal of Enterprise in Communities: People and Places in the Global Economy,  
on February 28, 2023)*

*(DOI 10.1108/JEC-10-2022-0161)*

This paper aims to understand the mechanisms through which workplace spirituality affects employee entrepreneurial behavior. It proposes and tests a mediation model in which psychological ownership (PO), i.e., a feeling of ownership regardless of legal ownership, mediates the relationship between workplace spirituality and employee entrepreneurial behavior. Furthermore, the study develops and validates workplace spirituality measurement scales that could apply to the study context, following guidelines and best practices for scale development in entrepreneurship and management research.

This study conducted an empirical analysis using survey data collected from 351 postgraduate students who were also currently working. Structural equation modeling (SEM) was applied to test the study hypotheses using Mplus software.

The findings of the study show that workplace spirituality is associated with employee entrepreneurial behavior and that psychological ownership (PO) fully mediates this relationship. The findings highlight that psychological ownership (PO) is the missing link that connects workplace spirituality and employee entrepreneurial behavior.

### *1.8.3. Developing a contextualized psychological ownership measurement scale in the East*

#### *African context*

*(Under-review at Africa Journal of Management)*

This paper aims to understand the psychological ownership construct in Ethiopia and other East African country contexts. The paper investigates the needs of individuals who are associated with PO in this context. To this end, the study develops and validates a contextualized measure of employee PO to be used in the context of East African countries.

Four studies were executed to develop the measure by utilizing samples of employees. In the first study, employees working in diverse types of organizations were interviewed to develop the initial list of items. In the second study, these items were categorized into proper dimensions, and a content validity test was conducted. The third study purified the scale using a sample of 230 MBA students employed by various organizations. The fourth study validated the scale and showed reliability and scale structure, convergent, discriminant, and nomological validity. It involved a sample of 351 MBA students who were also employees of different organizations.

A contextualized measure of psychological ownership is developed and validated for use in the East African context. The final scale is a 19-item four-dimensional measure of contextualized PO as a second-order construct.

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# **Paper 1**

## **Chapter 2. Time will tell: psychological ownership, temporal focus and attitudes toward women as managers in Ethiopia**

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## **Abstract**

*This study aims to investigate the individual factors that directly and indirectly favor (or hinder) employees' attitudes toward women in management. Two sides of psychological ownership (PO), promotion-focused PO and prevention-focused PO, are studied as having a direct effect on employees' attitudes toward women in management. Past and future temporal focuses are examined as possible antecedents to the sides of PO, and as indirectly affecting employees' attitudes toward women in management. Survey questionnaires were collected from 230 MBA and related program students who were currently working and enrolled in one of six different universities in Ethiopia. Confirmatory factor analysis was applied to validate all measurement scales, and structural equation modeling was used to test the study hypotheses using Mplus software. Employees with promotion-focused PO and employees with prevention-focused PO had a favorable and unfavorable attitude, respectively, toward women in management. In addition, a future temporal focus had a significant positive effect on promotion-focused PO, and a past temporal focus had a significant positive effect on prevention focused PO. Overall, this mediation model showed that promotion-focused PO partially mediates the relationship between future temporal focus and attitudes toward equal opportunity for women managers, whereas prevention-focused PO fully mediates the negative relationship between past temporal focus and attitudes toward women in management. This study provides new insight for organizations by showing how employees' temporal focus explains their side of PO and how that affects their reaction toward women in management.*

**Key words:** *attitudes toward women managers, future temporal focus, past temporal focus, prevention-focused PO, promotion-focused PO, psychological ownership (PO).*

## **2.1. INTRODUCTION**

People worldwide seek fairness and equality. While some people are well off, many people are still seeking gender equality (Margolis and Walsh, 2003; Joshi et al., 2015; Aldossari and Calvard, 2021). Although the number of women in management positions is increasing worldwide (Joshi et al., 2015), attitudes toward women as managers remain the same, especially in developing countries (Owen and Todor, 1993; Khedr, 2017; Boyol Ngan and Litwin, 2019). There has been an expansion of research concerning how gender diversity in management (Bowen et al., 2007; Burkhardt et al., 2020) has positive organizational-level outcomes. However, our knowledge of the drivers of employees' attitudes toward women as managers is

limited (Joshi et al., 2015). In particular, the literature has glossed over the individual-level factors that likely favor or hinder employees' positive attitudes toward women as managers. One such potential factor is employees' psychological ownership (PO) toward the organization or the state in which employees feel as though the organization is "theirs" (i.e., "It is mine!") (Pierce et al., 2001. p. 299). The PO construct has been used in organizational research as a predictor of workplace motives, attitudes and behaviors (Jussila et al., 2015; Pierce et al., 2009) and may thus provide a lens through which we could understand employees' attitudes toward women in management.

In this paper, we address this gap by proposing and testing a theoretical framework that explains when and how employees' psychological ownership (PO) promotes (or hinders) employees' attitudes toward women as managers. First, building upon Avey et al.'s (2009) work, we acknowledge that there are two sides of PO as follows: promotive PO and preventive PO. This distinction is based on regulatory focus theory (Higgins, 1997, 1998) and the notion that self-regulation systems determine whether individuals set personal goals for themselves concerning positive or negative outcomes. More specifically, individuals who use a promotional self-regulation approach develop goals that reflect their hopes and aspirations toward positive outcomes. In contrast, individuals who employ a preventive self-regulatory approach develop goals to reduce their concern with negative outcomes. According to Avey et al. (2009), these self-regulation approaches result in different forms of PO. Prevention-focused PO centers on protecting and guarding the target of ownership to serve oneself and ensure stability in the organization, while promotion-focused PO centers on protecting the target of ownership for improvement in and the promotion of the organization (Avey et al., 2009). Thus, drawing upon this theory, we hypothesize that prevention-focused PO harms employees' attitudes toward

women in management, while promotion-focused PO has a positive effect on employees' attitudes toward women in management.

Second, we contend that a temporal focus is a critical individual difference construct that is pertinent to better understanding the triggers of promotive and preventive behaviors among employees. Temporal focus “describes the extent to which people characteristically devote their attention to perceptions of the past and future” (Shipp et al., 2009, p. 1). In the context of promotive and preventive PO, an employee's temporal focus is relevant because thinking about the past and the future affects one's goal setting, including the use of a preventive or promotive self-regulatory approach (Bandura, 2001). Thus, we hypothesize that an employee's past focus, i.e., his or her attention toward to the past, is a critical antecedent to prevention-focused PO, while an employee's future focus, i.e., his or her attention to the future, is a critical antecedent to promotion-focused PO.

Organizations in Ethiopia are our empirical context. Ethiopia has for long been under a patriarchal structure, where it is believed that only men are entitled to assume managerial positions, and women are considered less capable of assuming managerial positions and, thus, should not be given the opportunity (Hussen, 2009; Hussein, 2009). Currently, the picture is not rosier. While there are major changes in the leadership of the country (i.e., currently, the country has a female president, and exactly half of the cabinet members are female), the representation of women in leadership positions overall is lacking. Most organizations are still led by male managers, and even the newly appointed “National Dialogue Commission” is male dominated, suggesting that the attitudes toward women managers may still be an issue in the country (Owen and Todor, 1993; African Arguments, 2022).

We tested our hypotheses on a sample of 230 employees in organizations in Ethiopia. Overall, we found support for our hypotheses. In contrast to previous work concerning PO, which tended to consider only the consequences of promotion-focused PO, this study develops a novel understanding of how these two dimensions of PO might differently impact one's attitude toward women as managers. In addition, our findings extend our understanding of the antecedents of PO, highlighting, in particular, the effect of one's temporal focus on promotion-focused and prevention-focused PO. Therefore, we develop knowledge of the mechanisms through which gender inequality is infused into organizations. An understanding of these mechanisms is becoming increasingly important, particularly in the context of our study, which we present next.

## **2.2. THE CONTEXT OF THE STUDY**

Ethiopia is known to be an independent country that has never been colonized, unlike many African countries. In Ethiopia, there is a 2.83% rate of population growth per annum, with a current population of 108.4 million, giving it the second largest population in Africa. Despite progress toward eliminating extreme poverty, Ethiopia remains one of the poorest developing countries in the world due both to rapid population growth and a low starting base (The World Fact Book, 2021).

As in many developing countries, Ethiopia is characterized by a patriarchal system where women are often marginalized (Hussein, 2009; Singh and Belwal, 2008). Despite the efforts exerted to ensure equal opportunity for women in many aspects, there are still “a handful of means that are used to discredit women in the deep-rooted patriarchal system of Ethiopia” (Haile, 2018). Among this handful of means are “discourses,” which are used in a form of proverbs (as most Africans use proverbs to interpret their everyday lives), revealing the deep-

rooted stereotyping of women as less capable of assuming higher positions (Hussein, 2009). Hussein (2009) further explains how proverbs have been used to downgrade women to a secondary position in the patriarchal system in Ethiopia. Some of the examples of proverbs noted by Hussein (2009) include “The breasts that contain milk cannot contain intelligence”, “Woman can grow tall but without wisdom”, and “The leadership of a woman makes the water flow upwards”. The last example of the proverbs implies that when women assume a leadership position, things go wrong or in an unusual way. These proverbs about women reflect the existence of stereotyping of women as less capable of assuming managerial positions.

Another unique characteristic of a developing country such as Ethiopia is the existence of high ‘power distance’ (Ethiopia scores 70 in power distance, according to Hofstede insights), which indicates that the less powerful members of institutions and organizations expect that power is distributed unequally. In addition to the high-power distance score, the proverbs used in the country also reflect how some power holders tend to take advantage of their power for their benefit. When there is an assignment for higher positions in Ethiopia, people use this proverb in the form of advising the position holder. The proverb is translated as “one that did not collect (take advantage of the position for himself) as much he can when given a top position, will regret it when the position is taken away from him.” This proverb is a good example that reflects the prevention-focused (territorial) orientation of some leaders when they assume managerial positions.

In contrast, studies indicate that efforts are being made to improve the entrepreneurial ability of women in Ethiopia, as in many African countries, considering their impact on improving the lives of their families and their significant role in poverty reduction (Singh and Belwal, 2008). There are indeed many practical changes occurring in Ethiopia, which has its first

female president, and exactly half of the cabinet is female. Furthermore, some organizations are bringing women into power, as awareness regarding the wrongly held attitudes toward women in management is increasing. Hence, this context is well suited for studying how various dimensions of PO might hold or promote attitudes toward women in managerial positions.

## **2.3. THEORETICAL FRAMEWORK**

### ***2.3.1. Psychological ownership***

The psychology of possession is used as a foundation for the study of psychological ownership (Van Dyne and Pierce, 2004). Studies indicate that people tend to have a sense of ownership toward a certain target regardless of the legal ownership of the target (Pierce et al., 2001). Based on the psychology of possession studies, we can understand that sense of ownership feelings can stem from the following motives. The fact that possession represents accomplishments could drive individuals to have ownership feelings over a certain target (Furby, 1978). Furby (1978) additionally indicates that people want to own an object toward which they have a positive effect, to the extent that they consider the object an extension of themselves. Pierce et al. (2001) further noted that feelings of accomplishment, which they refer to as “efficacy” and the motive to identify oneself with one’s possessions, which is self-identity, are the reasons for the psychological ownership of a certain target.

In addition, other studies indicate that as resources are scarce, not everyone can legally or actually own a certain target, and in such cases, people tend to psychologically own the target (Etzioni, 1991). According to Etzioni (1991), property is “a dual creation, part attitude, part object; part in mind, part real” (p. 466).

### ***2.3.2. The two sides of psychological ownership***

Organizational studies investigating PO indicate that this concept is an antecedent to or a mediator of the relationship between other positive organizational behaviors and outcomes, such as organizational commitment, OCB, job satisfaction and extra-role behaviors (Mayhew et al., 2007; Pierce et al., 2009; Vandewalle et al., 1995). Recently, looking at it from a different angle, studies have pointed out the “dark side” of PO (Cocieru et al., 2019). This dark side is termed prevention-focused PO by Avey et al. (2009), as they explain how some individuals with PO become territorial – focusing on themselves instead of the organization. Individuals with prevention-focused PO resist changes in the organization because they feel threatened with losing control of the target for which they have PO (Avey et al., 2009; Cocieru et al., 2019). In contrast, individuals who have a promotion-focused PO tend to promote the organization and embrace changes to the organization because they believe the change will benefit the organization (Avey et al., 2009). For example, if an individual owns some information and has a promotion-focused PO, he/she will tend to share the information with others to promote and improve the organization, whereas if the individual has a prevention-focused PO, he/she withholds information for fear of the negative consequences of changes and loss of stability (Avey et al., 2009). Thus, prevention-focused PO pushes away others and serves the self, while promotion-focused PO involves others serving the organization.

Avey et al. (2009) used regulatory focus theory (Higgins, 1997, 1998) to build on the two distinct PO dimensions, promotion- vs prevention-focused PO. Regulatory minimizes the negative outcome, while those who have positive outcomes in mind use a promotional strategy (approach) to maximize the positive outcome (Higgins, 1997, 1998; Scholer and Higgins, 2008). Higgins et al. (2001) highlight the various strategies people use by adding the “subjective

history” of success through promotion and prevention strategies. They note that those who have a subjective history of success through a promotion strategy will be enthusiastic to approach the new task ahead of them to achieve positive outcomes. On the other hand, those who have a subjective history of success through prevention strategies will be reluctant to take on new tasks to avoid negative outcomes. Thus, as also pointed out by Avey et al. (2009), regulatory focus theory explains why some individuals tend to have promotion-focused PO, while others adhere to prevention-focused PO. However, the factors that contribute to the tendency of individuals to become promotive or preventive are unknown. To understand the possible antecedents to the various dimensions of PO, we introduce the concept of temporal focus (Shipp et al., 2009) in this study.

Researchers have acknowledged that temporal focus, which is defined as “the degree to which people focus their attention on the past, present and future periods of their lives” (Shipp et al., 2009, p. 15), determines how individuals react toward the future. Although the concept of temporal focus concerns the three-time periods of past, present and future, in this paper, similar to some temporal-focus studies, more attention is given to the past and future periods for the following reasons. First, when a certain event occurs in the present, people focus on the period of either the past, where the present event was not present, or the future, i.e., the results of the present event. Salmon and Wohl (2020) noted that people give meaning to their “past lived experience” with regard to the present event and to the “future they envision,” still with regard to the present event. Second, studies indicate that past and future focus influence behavioral changes (Salmon and Wohl, 2020). In this paper, we examine the influence of past focus on preventative behavior and the influence of future focus on the promotive behavior of individuals.

As mentioned earlier, Avey et al. (2009) used regulatory focus theory to study the two forms of PO. In this study, we further use regulatory focus theory to examine the two temporal focuses (past and future) and their relationship with the two independent forms of PO. According to the theory, there are two groups of people in terms of individuals' behaviors in decision making and goal attainment (Kark et al., 2007). When applying regulatory focus theory to examine temporal focus, individuals with a past temporal focus show behavior in decision making and goal attainment that differ from that of individuals with a future temporal focus. Those concerned with accomplishments and aspirations who are willing to use approach strategy to embrace the future (Kark et al., 2007) can be considered individuals who see a bright future, i.e., as individuals who have a future temporal focus. In contrast, those concerned with duties and obligations can be considered individuals who use avoidance strategies to prevent the future (Kark et al., 2007), i.e., individuals who have a past temporal focus.

Therefore, those who focus highly on the past disengage from acting toward the future and become preventative of what the future might bring, while those who focus on the future are planful, goal-oriented and ambitious and thus become promotional of changes in the future (Shipp et al., 2009). Nadkarni and Chen (2014) also note that CEOs who focus on the past limit their perception according to what happened in the past and thus will have a limited scope when they plan for the future, and their strategies will be prevention-focused, as they want to stay in a stable environment and “get stuck in an existing mindset and fail to detect new opportunities” (Nadkarni and Chen, 2014, p. 1815). Whereas “probing into the future” is what future-focused CEOs do in promoting futuristic ideas in a dynamic environment (cf. Brown and Eisenhardt, 1997, p. 16; Nadkarni and Chen, 2014). A very recent work by Shipp and Aeon (2019) reveals that a review of temporal-focus studies indicates that focusing highly on the past leads to

expectations of negative outcomes in the future, whereas focusing highly on the future leads to setting goals and acting proactively. The authors conclude their findings that, in general, “thinking about the future may be the most beneficial to life and work outcomes” (Shipp and Aeon, 2019, p. 40). Although studies have shown the possible effect of temporal focus on various outcomes, its effect on PO has never been considered. In this study, we argue that temporal focuses on the past or the future are critical antecedents to prevention-focused or promotion-focused PO, respectively. Furthermore, the effect of the two sides of PO on the feedback of changes in an organization will be examined.

### ***2.3.3. Temporal focus and psychological ownership***

In the literature, there are several antecedents identified for regulatory focus dimensions (promotion focus and prevention focus). For example, optimism, positive and negative effects, anxiety, neuroticism and extraversion are some antecedents identified by Gorman et al. (2012) in their meta-analysis of the regulatory focus nomological network. However, temporal focus, as an important antecedent for regulatory focus and by extension for PO, has not been studied.

Both Shipp et al. (2009) and Shipp and Aeon (2019) clarified that temporal focus refers to the degree to which people focus on the past, present and future, and that focusing on one period does not prevent them from thinking about the other periods. Therefore, it is indicated that people have a temporal focus on either mainly the past or mainly the future, and as we mentioned above, our tenet is that the behavioral outcomes of the two distinct temporal focuses are related to the two distinct strategies people use to attain goals according to regulatory focus theory (Higgins, 1997, 1998). Individuals with a future temporal focus are optimists who see a bright future and prepare themselves for the future (Shipp et al., 2009). In addition, the authors also indicate that extraverted and conscientious individuals focus on the future. These personalities

imply that future-focused individuals are ready for the future, engage themselves toward the future because they expect positive outcomes, and hence are promotion-focused individuals.

In contrast, individuals with a past temporal focus are less optimistic and more neurotic, which results in depression (Shipp et al., 2009). Such past-focused individuals are not ready for the future; they rather disengage themselves from acting toward the future because they expect negative outcomes and hence are prevention-focused individuals.

Therefore, in this study, we argue that prevention-focused individuals are past-focused individuals who fix their minds in the past and tend to use avoidance strategies to minimize the negative outcomes they expect. In contrast, promotion-focused individuals are believed to be future temporal focused, as they are forward movers because they expect positive outcomes in the future.

Hence, we hypothesize that those with a high degree of past temporal focus tend to have prevention-focused PO, while those with a high degree of future temporal focus tend to be promotional and have promotion-focused PO.

Therefore:

*H1a. Past temporal focus is positively related to prevention-focused PO.*

*H1b. Future temporal focus is positively related to promotion-focused PO.*

#### ***2.3.4. Psychological ownership and attitudes toward women as managers***

Some people are willing to embrace changes in organizations, as the Ethiopian context entails, for example, a positive attitude toward women in management. We argue that these individuals have promotion-focused PO because they are open and eager to change, and they expect positive outcomes from the changes (Higgins, 1997, 1998; Scholer and Higgins, 2008). Scholars have

noted that individuals need to have openness and eagerness to embrace changes and become part of them (Higgins, 2001).

Other individuals will have a negative attitude toward women in management. We argue that these individuals have prevention-focused PO for at least two reasons. First, because they expect negative outcomes from changes, they are not open to changes in the organization; they are rather resistant (Higgins, 1997, 1998; Scholer and Higgins, 2008). Second, all they want is to ensure that things remain stable and, hence, become preventive of changes to feel secure (Cocieru et al., 2019).

In summary, as mentioned earlier, because of the patriarchal system in Ethiopia and the long-rooted stereotyping of women that places them in a “less capable” managerial position, it takes a promotion-focused PO holder to accept changes that bring women to the top positions. As changes are underway, i.e., women in Ethiopia assume higher managerial positions in many organizations, we argue that it takes individuals with promotion-focused PO who are eager to embrace changes and accept women in management positions. However, individuals with prevention-focused PO, who prefer to avoid changes, will show unfavorable attitudes toward women in management positions.

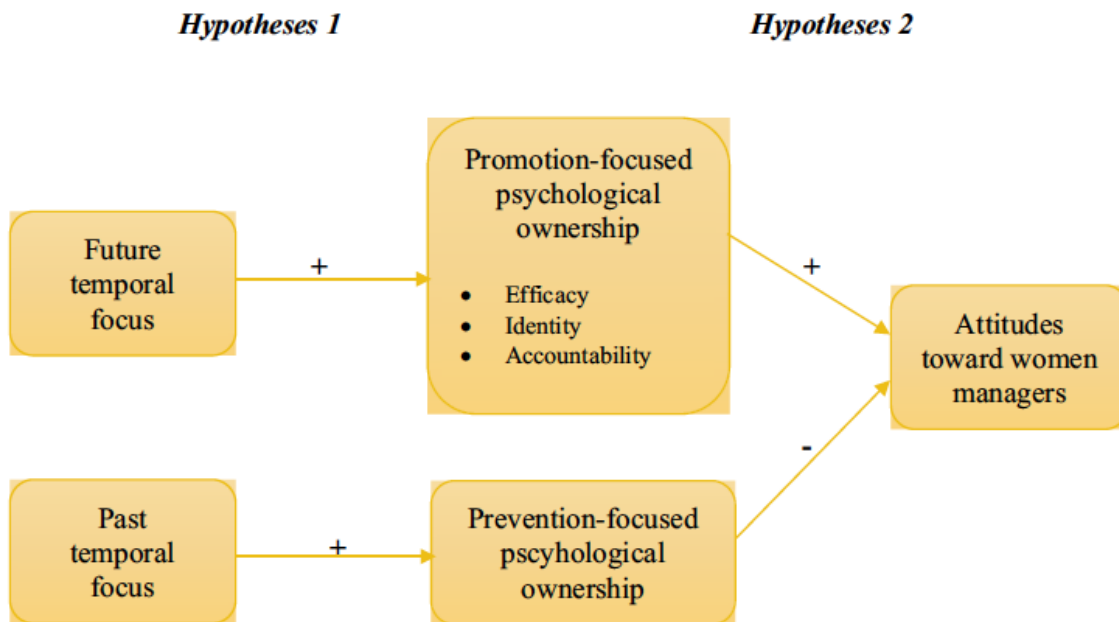
Therefore, we hypothesize:

*H2a. Prevention-focused PO is negatively related to attitudes toward women as managers.*

*H2b. Promotion-focused PO is positively related to attitudes toward women as managers.*

## 2.4. CONCEPTUAL MODEL

**Figure 2** shows the proposed model of the study, indicating the causal relationship of the study variables. In the conceptual model, temporal focus is hypothesized to be an antecedent to PO, where future temporal focus has a direct positive effect on promotion-focused PO, while past temporal focus has a direct positive effect on prevention-focused PO. In addition, PO is hypothesized to affect attitudes toward women managers, where promotion focused PO has a positive direct effect on attitudes toward women managers and prevention-focused PO negatively affects attitudes toward women managers.



**Figure 2: Conceptual model of the antecedents and consequences of promotion and prevention-focused PO**

## **2.5. METHOD**

We use quantitative research methods, especially structural equation modeling (SEM), to test our hypotheses<sup>1</sup>. Below, we present the sample and measures before we illustrate SEM as an estimation technique

### ***2.5.1. Sample***

Our target population was employees working in different organizations in Ethiopia. However, in Ethiopia, there are no nationwide registers containing the full information of all employees in the country. Therefore, we could not derive a random sample from the population of employed individuals in the country and we had to resort to a convenience sample. In more detail, our convenience sample comprised the participants of MBA and related program students from the 6 major universities in the country; all participants were currently working. This sampling strategy allowed us to sample employees from multiple organizations, including privately owned organizations (46%), government/publicly owned organizations (27%) and NGOs (26%). The universities comprise one private university and five public universities. A total of 235 questionnaires were distributed to the students by visiting their classrooms at the end of their lecture hours. Most of the completed questionnaires were returned on the same day of distribution by awaiting the students around their classrooms until they completed and returned the questionnaire. This facilitated the high response rate (98%). A few other questionnaires were returned after the students took the questionnaires to their homes and returned them in less than a week. The working students had a mean age of 35, males constituted 69% of the sample and held varying positions in their respective organizations: CEOs and owners (16%), middle-level

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<sup>1</sup> In terms of research philosophy, as suggested by Muiis (2004), we have a pragmatist approach. We use quantitative research methods as our aim to test a theoretical model.

managers (42%), and employees with nonmanagerial positions (40%). The tenure in their respective organizations ranged from 1 to 29 years, with a mean of 7 years.

### **2.5.2. Measures**

Our measures include latent variables, which are not directly observed but are observed through indicators or observed variables. All the indicators had a range of scores on a Likert scales ranging between strongly disagree and *strongly agree*.

*Psychological ownership.* Promotion-focused PO and prevention-focused PO were measured using the 16 items PO measurement scale developed by Avey et al., (2009). The promotion-focused PO scale has four dimensions, namely, efficacy, accountability, sense of place and identity, with three items each. The prevention-focused PO is unidimensional, is also named territoriality, and has four items. Sample items for the promotion-focused PO include (one sample item from each dimension); *“I am confident in my ability to contribute to my organization’s success”* (efficacy), *“I would challenge anyone in my organization if I thought something was done wrong”* (accountability), *“I feel I belong in this organization”* (sense of place), and *“I feel this organization’s success is my success”* (self-identity). Cronbach’s alpha value of the sub-dimension “efficacy” was 0.887, that of “accountability” was 0.75, and that of “self-identity” was 0.816. The sub-dimension “sense of place” was excluded from the study because it resulted in a bad model fit. The Cronbach’s alpha value of promotion-focused PO (including the three sub-dimensions) was 0.723. Sample items for prevention-focused PO include *“I feel I need to protect my ideas from being used by others in my organization”* and *“I feel that people I work within my organization should not invade my workspace.”* The Cronbach’s alpha value of prevention-focused PO was 0.831.

*Temporal focus.* Temporal focus was measured using the temporal-focus measure developed by Shipp et al., (2009). Although the original scale developed by Shipp et al., (2009) measures past, present and future temporal focuses, as the study concerns only the past and future temporal focuses of individuals, we measured only the past and future temporal focuses of the respondents. Both dimensions (past and future) of temporal focus have four items each. We used a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. The sample items for a temporal focus on the past include “*I replay memories of the past in my mind*” and “*I reflect on what has happened in my life.*” The sample items for a temporal focus on the future include “*I think about what my future has in store*” and “*I think about times to come.*” Cronbach’s alpha value of past temporal focus was 0.878, and that of future temporal focus was 0.912.

*Attitudes toward women managers.* To assess the respondents’ attitudes toward women managers, we used a “woman as managers measurement scale” developed by Terborg et al., (1977). The scale was originally one-dimensional with 21 items and a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. In the current study, after conducting an exploratory factor analysis (EFA), we categorized the scale into two sub-dimensions, namely, attitudes toward equal opportunity for women as managers and attitudes toward competence of women in managerial positions. The total number of items was reduced to 9. Sample items include “*On average, women managers are less capable of contributing to an organization’s overall goals than males*” and “*It is acceptable for women to compete with men for top executive positions.*” Cronbach’s alpha value of the “equal opportunity” dimension was 0.76, and that of the “competence” dimension was 0.843. The details of the procedures are presented in the results section.

### **2.5.3. Control variables**

*Tenure.* Employees' PO might be affected by their length of stay in the organization. As proposed by Pierce et al., (2001), the more an employee invests his/her time on the target of ownership, the more likely he/she is to have PO of the target. Hence, the variable "tenure" is included in the analysis as a control variable.

*Gender.* Women are more likely to be encouraging of women managers than are men. Terborg et al., (1977) noted the same, indicating that female workers show a more favorable attitude toward women managers than male workers. Therefore, in the analysis of the study, the variable "gender" is included as a control variable.

### **2.5.4. Empirical analysis**

#### **2.5.4.1. Reliability and validity**

In addition to examining the Cronbach's alpha values to assess reliability, where all measures in the study resulted in acceptable values ranging from 0.75 to 0.91, we computed the composite reliabilities (CR) of all measures and found that all CR values were above the satisfactory level (>0.70) (Bollen and Lennox, 1991) (Table 3). Before conducting a test of the structural equation model (SEM) of the study hypotheses, a confirmatory factor analysis (CFA) of all measures was performed using Mplus version 8.7 to validate our measurement model. The CFA achieved the criteria for acceptable convergent validity, where all loadings of the items on their respective factors were greater than the threshold of 0.5 and significant at  $p < 0.01$  (Hair et al., 2012) (Table 2). In addition, based on the recommendation by Hair et al. (2012), the average variance extracted (AVE) of all measures was above 0.5, except for the sub-dimension of the measure "opportunity for women as managers", which resulted in an AVE of 0.441. The value of each

construct was higher than the shared variances with the other constructs, indicating that discriminant validity was satisfactory (Shook et al., 2004).

#### *2.5.4.2. Common method variance*

As our data were collected from the same respondents and at the same time point, our results might be subject to common method bias (Tehseen et al., 2017). To ensure that CMV does not affect the findings of the study, a statistical remedy called the partial correlation method using a marker variable that is theoretically distinct from the factors in the model was applied (Podsakoff et al., 2003). The marker variable chosen for the study was a fashion advertising involvement measure, which has a six-item scale. This measurement scale was included in the questionnaire along with the main items when the data were collected from the study participants. A model was run including the marker variable to assess how much variance our marker variable shares with all items. Less than 1% shared variance was found amongst all items and the marker variable, indicating that there is no significant common method bias in the model (Tehseen et al., 2017).

#### *2.5.4.3. Analytical methods*

For both the CFA and SEM analyses, we report the likelihood ratio chi-square statistic and four model fit indices, including the comparative fit index (CFI; Bentler, 1990), Tucker–Lewis’s index (TLI; Tucker and Lewis, 1973), root mean square error of approximation (RMSEA; Steiger and Lind, 1980) and standardized root means square residual (SRMR). We used Hu and Bentler’s (1999) recommendation as a cutoff criterion for our model fit indices, where  $SRMR \leq 0.08$  and at least one of the two ( $RMSEA \leq 0.06$  and/or  $CFI \geq 0.95$ ) is met. We predicted that the proposed measurement and structural model would show a reasonable fit to the data, and the

hypothesized direct relationship between the latent variables would result in a significant effect. Furthermore, we expected that all the indicators would load significantly on their respective factors in the CFA model.

Furthermore, as our data were obtained from six different universities in the country, our data are prone to the issue of dependency. We tested the intraclass correlation coefficients (ICCs), which are an indicator of the proportion of variance between observed variables (Brown et al., 2005). The ICCs of all indicators were very small ( $<0.05$ ) (Brown et al., 2005) except for the two indicators of the prevention-focused PO variable, which resulted in ICCs of 0.06 and 0.10. The small ICCs (intraclass correlation coefficients) indicated that the universities at which the study participants were enrolled did not have a significant effect on the individual responses to the questionnaire items and that conducting a multilevel CFA was not necessary (Brown et al., 2005). In such cases, an alternative method called the “complex model” is proposed in Mplus; this model does not model multilevel structures but still adjusts the dependency that exists in the data (Brown et al., 2005). Therefore, a complex CFA model was employed in this study.

#### *2.5.4.4. Treatment of missing values*

In handling our missing values, with such a large number of variables in the study, the use of Mplus software was of great advantage. Mplus, using ML (maximum likelihood) or MLR estimation, automatically estimates missing values for cases in which at least some variables are observed. Relying on other methods of handling missing values, such as “listwise deletion”, would have resulted in a decreased sample size and mis-specified model, which in turn leads to improper solutions (Brown et al., 2005).

## **2.6. RESULTS**

### ***2.6.1. Descriptive statistics***

In **Table 2**, the descriptive statistics of the variables in the study are presented, including the average scores of all latent variables along with the standard deviations, and their correlation coefficients.

### ***2.6.2. Test of the measurement model***

Second-order CFA was conducted for promotion-focused PO. The “sense of place” dimension was excluded from the first-order factors in the promotion-focused PO CFA model, as the assessment of local strains showed high standardized residuals for the “sense of place” factor indicators, hence leaving the promotion-focused PO factor with three dimensions: efficacy, accountability and self-identity. These three dimensions are the first order factors/indicators of the promotion-focused PO factor. The CFA output of prevention-focused PO also showed a good model fit after excluding the fourth item from the model as it resulted in a highly standardized residual. The two-factor model of the temporal-focus variable showed a good model fit of its CFA.

As mentioned earlier, an exploratory factor analysis (EFA) of the women as managers (WAMS) scale was performed as its unidimensional 21 items scale CFA and resulted in a poor model fit. The first EFA resulted in four factors but indicated that more than half of the items needed to be deleted for two reasons. First, there were high cross-loadings (an item loading with a coefficient of above 0.32 on two or more factors), and second, there were factors that had loadings of only two or fewer items (Cabrera-Nguyen, 2010).

The final EFA results of the WAMS suggested that the scale consisted of two factors instead of one. The EFA was conducted using the Mplus default of geomin rotation strategy with an oblique rotation solution. Geomin rotation has recently received much attention because of its promising potential in giving satisfactory solutions for difficult data sets where other rotation methods fail to do so (Hattori et al., 2017). Another most advantageous characteristic of goemin rotation is its ability to produce cleaner factor structures that are comparable to those produced by CFA (Hattori et al., 2017; Schmitt, 2011).

Ultimately, two factors were retained in the EFA, which resulted in an eigenvalue of more than 1. The first factor loaded on four items that measure attitudes toward equal opportunity of women as managers, and the second factor loaded on six items that measure attitudes toward competence of women for managerial positions.

The factors had a total of 10 items, and the result of the analysis indicated a good model fit with  $X^2(26) = 42.54$ ,  $p = 0.022$ , CFI = 0.975, TLI = 0.956, RMSEA = 0.058 and SRMR = 0.034. Our  $X^2$  is nonsignificant at the 1% level and hence does not reject our null hypothesis, which states that there is no difference between the observed data and our hypothesized two-factor model. In addition, our  $X^2$  is less than two times (1.64) the degrees of freedom, indicating a good fitting model (Dahlström et al., 2015; Tabachnick and Fidell, 2013). **Table 3** presents the entire factor structure, including all the items in the analysis and the percentage of variance explained by each of the two factors.

After EFA, CFA was conducted for the two-factor model of WAMS, together with the other measurement variables. The WAMS scale showed a better model fit as a two-factor model (first-order factor with the two factors) than a second-order CFA (where WAMS is included as the second-order factor). The CFA output indicated that the second item from the attitudes

toward competence factor should be deleted because of its high standardized residual value, leaving a total of nine items.

The proposed measurement model had a significant goodness-of-fit statistic,  $X^2 (331) = 493, p = 0.00$ , CFI = 0.932, TLI = 0.922, RMSEA = 0.047 and SRMR = 0.049. The loadings of all indicators on their respective factors were statistically significant, with standardized values ranging from 0.554 to 0.924 (**Table 4**).

**Table 2. Descriptive statistics and correlations of the variables of interest (N=230)**

	Variables	Mean	SD	1	2	3	4	5	6	7	8
1	Age	35	6.85	1							
2	Gender (1=Female)	.31	0.464	-.274**	1						
3	Tenure	7	5	.0469**	-.0162*	1					
4	Past temporal focus	3.54	0.96	0.02	-.065	.088	1				
5	Future temporal focus	4.30	0.76	-.063	.034	.046	.351**	1			
6	Promotion focused PO	5.00	.80	.153*	.114	.148*	.071	.314**	1		
7	Prevention focused PO	3.08	1.35	-.055	-.052	-.100	.159*	.162*	-.029	1	
8	Attitudes toward women managers	5.57	1.16	-.008	.140*	-.047	-.111	.174*	.236**	.235**	1

Notes: \*\* Correlation coefficients are significant with  $p < 0.01$ . \*Correlation coefficients are significant with  $p < 0.05$ .

**Table 3. WAMS Factor structure matrix rotated to the geomin criterion**

Variables	Factor 1 Equal opportunity	Factor 2 Competence	Communality Coefficient (h <sup>2</sup> )
On the average, women managers are less capable of contributing to an organization's overall goals than are men. (R)	0.275	<i>0.556</i>	0.385
Society should regard work by female managers as valuable as work by male managers.	<i>0.691</i>	0.377	0.619
It is acceptable for women to compete with men for top executive positions	<i>0.692</i>	0.355	0.605
The possibility of pregnancy does not make women less desirable employees than men	<i>0.714</i>	0.300	0.600
Problems associated with menstruation should not make women less desirable than men as employees	<i>0.556</i>	0.322	0.413
On average, a woman who stays at home all the time with her children is a better mother than a woman who works outside the home at least half time. (R)	0.280	<i>0.537</i>	0.367
Women are less capable of learning mathematical and mechanical skills than men. (R)	0.451	<i>0.784</i>	0.818
Women are not ambitious enough to be successful in the business world. (R)	0.341	<i>0.877</i>	0.885
Women cannot be assertive in business situations that demand it. (R)	0.428	<i>0.826</i>	0.865
Women cannot be aggressive in business situations that demand it. (R)	0.410	<i>0.585</i>	0.510
Trace	4.205	1.614	5.819
% of variance	<i>42.05</i>	<i>16.14</i>	<i>58.19</i>

**Notes:** Coefficients greater than 0.50 are shown in italics and retained for that factor. The eigenvalue of the third, unretained factor was 0.805

### 2.6.3. Test of the structural model

We conducted SEM to test our study's hypotheses. **Figure 3** presents a summary of the structural model of the study, with the standardized parameter values. In addition, the control variables "tenure" and "gender" were also included in the model, testing their direct effect on the endogenous variables. In discussing the routes to PO, Pierce et al. (2001) proposed that as an employee invests much of his/her time on the target of ownership, i.e., the longer tenure the employee has in the organization, the higher the degree of PO he/she develops. Therefore, in this

study, we controlled for tenure to obtain a clear effect of temporal focus on PO of both promotion-focused and prevention-focused PO. The direct effect of tenure on promotion-focused PO did not have a significant effect, but tenure and prevention-focused PO were found to be negatively related at  $p \leq 0.05$ .

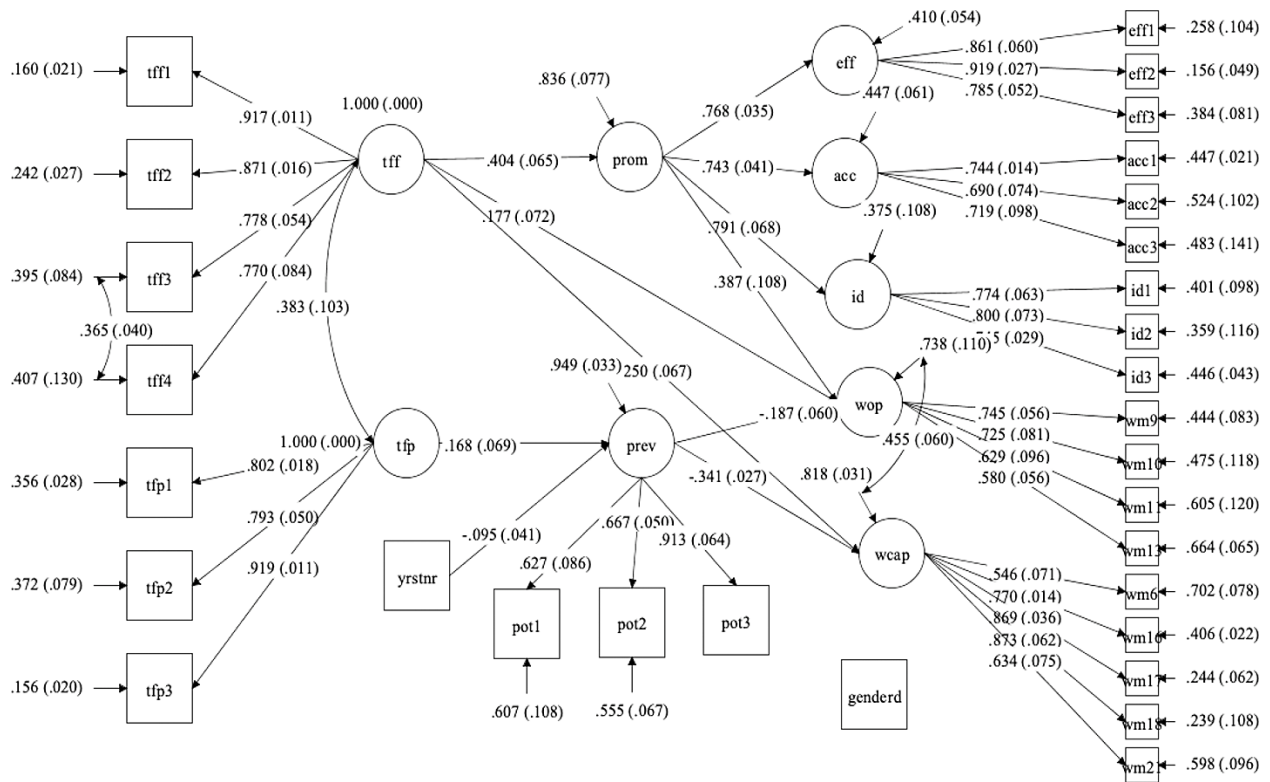
Furthermore, Terborg et al. (1977) found that women have a favorable attitude toward women managers. Therefore, controlling for gender (all participants in the study were first degree holders and above) in this study allowed a clear effect of PO on attitudes toward female managers to be found. The direct effect of gender on the second factor of the “women as managers” factor was not significant and was then tested on the two first-order factors.

The result shows that gender/female has a positive effect (although not significant) on the “attitudes toward competence” factor (with a partially standardized estimate of 0.123, a standard error of 0.067, and  $p = 0.065$ ), implying that women might have a more favorable attitude toward women’s competence for managerial positions than men. There was no effect of gender on “attitudes toward the equal opportunity of women.”

The proposed structural model had a significant goodness-of-fit statistic,  $X^2(384) = 520$ ,  $p = 0.00$ , CFI = 0.951, TLI = 0.944, RMSEA = 0.04 and SRMR = 0.049. The SEM analysis results support the hypotheses of the study. **Table 5** shows the standardized coefficients of the direct effects (according to the hypotheses) and other alternative paths in the model, their standard errors and their significance level.

**Table 4. Reliability and validity analysis and item factor loadings of the CFA**

Constructs and items	Factor loadings
<i>Past temporal focus: Cronbach's alpha: 0.878, CR = 0.876, AVE = 0.703</i>	
I replay memories of the past in my mind	0.804
I reflect on what has happened in my life	0.909
I think about things from my past	0.802
<i>Future temporal focus: Cronbach's alpha: 0.912, CR = 0.91, AVE = 0.716</i>	
I think about what my future has in store	0.917
I think about the times to come	0.87
I focus on my future	0.778
I imagine what tomorrow will bring for me	0.77
<i>Efficacy (Promotion-focused PO sub-dimension): Cronbach's alpha: 0.887, CR = 0.891, AVE = 0.733</i>	
I am confident in my ability to contribute to my organization's success	0.865
I am confident that I can make a positive difference in this organization	0.920
I am confident in setting high-performance goals in my organization	0.793
<i>Accountability (Psychological ownership sub-dimension): Cronbach's alpha: 0.75, CR = 0.754, AVE = 0.506</i>	
I would challenge anyone in my organization if I thought something was done very wrong	0.754
I would not hesitate to tell my organization if I saw something that was done wrong	0.659
I would challenge the direction of my organization to ensure it is correct	0.725
<i>Self-identity (Psychological ownership sub-dimension): Cronbach's alpha: 0.816, CR = 0.813, AVE = 0.592</i>	
I feel that this organization's success is my success	0.774
I feel the need to defend my organization when it is criticized	0.801
I feel that being a member of this organization helps me define who I am	0.744
<i>Psychological ownership (Second Factor CFA output): Cronbach's alpha: 0.723</i>	
Efficacy	0.772
Accountability	0.763
Self-identity	0.756
<i>Prevention-focused PO: Cronbach's alpha: 0.831, CR = 0.786, AVE = 0.558</i>	
I feel that I need to protect my ideas from being used by others in my organization	0.622
I feel that the people I work with in my organization should not invade my workspace	0.661
I feel that I need to protect my property from being used by others in this organization	0.922
<i>Women as managers (opportunity sub-dimension): Cronbach's alpha: 0.76, CR = 0.756, AVE = 0.441</i>	
Society should regard work by female managers as valuable as work by male managers	0.746
It is acceptable for women to compete with men for top executive positions	0.726
The possibility of pregnancy does not make women less desirable employees than men	0.630
Problems associated with menstruation should not make women less desirable than men as employees	0.578
<i>Women as managers (competence sub-dimension): Cronbach's alpha: 0.843, CR = 0.858, AVE = 0.552</i>	
On average, women managers are less capable of contributing to an organization's overall goals than men	0.548
Women are less capable of learning mathematical and mechanical skills than are men	0.774
Women are not ambitious enough to be successful in the business world	0.870
Women cannot be assertive in business situations that demand it	0.875
Women cannot be aggressive in a business situation that demands it	0.636



**Notes:** N=228. Standardized parameter estimates are reported; all parameter estimates are statistically significant. Circles represent latent constructs; rectangles represent measured variables and control variables. Tff (future temporal focus with four indicator items); Tfp (past temporal focus with three indicator items); prom (promotion-focused PO); eff (efficacy dimension with three indicator items); acc (accountability dimension with three indicator items); id (identity dimension with three indicator items); prev (prevention-focused PO with three indicator items); WOp (attitudes toward equal opportunity for women with four indicator items); WCap (attitudes toward women’s competence with five indicator items). Control variables are yrstnr (tenure) and genderd (gender) (0=males, 1=females)

**Figure 3: Structural model with standardized parameter estimates**

**Table 5** depicts the SEM results of the hypothesized relationship and other additional relationships. As can be observed from the table, all our hypotheses are supported by the structural equation model, except for the last hypothesis (H2b), where promotion-focused PO was found to have a non-significant effect on the dimension “attitudes toward the competence of women managers.”

**Table 5. Results of the structural equation model**

Model	B	S.E (Standard error).	P (Level of significance)
<i>Hypothesis 1a</i> : Past Temporal Focus → Prevention-focused PO	0.168	0.069	0.015*
<i>Hypothesis 1 b</i> : Future Temporal Focus → Promotion-focused PO	0.404	0.065	0.000**
<i>Hypothesis 2a</i> : Prevention PO → Attitudes toward the equal opportunity of women for managerial positions	-0.187	0.060	0.002**
Prevention PO → Attitudes toward the competence of women as managers	-0.341	0.027	0.000**
<i>Hypothesis 2 b</i> : Promotion PO → Attitudes toward the equal opportunity of women for managerial positions	0.387	0.108	0.000**
Promotion PO → Attitudes toward the competence of women for managerial positions	0.005	0.085	0.954
Additional paths			
Past Temporal Focus → Promotion Focused PO	-0.104	0.076	0.173
Future Temporal Focus → Prevention Focused PO	0.067	0.039	0.085
Tenure → Promotion focused PO	0.148	0.081	0.068
Tenure → Prevention focused PO	-0.095	0.041	0.019*
Gender → Attitudes toward the equal opportunity for women managers	0.061	0.103	0.551
Gender → Attitudes toward the competence of women managers	0.123	0.067	0.065

Notes: \*\*Significant relationships at  $p < 0.01$ , \*significant relationships at  $p < 0.05$

Supporting our H1a and H1b, future temporal focus was found to have a significant positive effect on promotion-focused PO, while a past temporal focus resulted in a significant positive effect on prevention-focused PO. The last two hypotheses are also significantly supported by the model, as promotion-focused PO positively affects attitudes toward women managers (“equal opportunity” dimension) and prevention-focused PO negatively affects attitudes toward women managers (both dimensions) (**Table 5**).

#### ***2.6.4. Mediation analysis***

In addition to testing the hypotheses, a mediation analysis was conducted to examine the mediation effect of each of the two POs (Psychological Ownership) on the relationship between temporal focus and attitudes toward women managers. The mediation model results were obtained using 2,000 bootstrap resamples and a 95% confidence interval (**Table 6**). The mediation model provided a good model fit to the data, resulting in the same goodness-of-fit statistics as the SEM analysis reported above. **Table 6** depicts the important significant relationships that resulted from the mediation analysis. Future temporal focus was found to have a direct positive effect on attitudes toward women managers in both dimensions such that, promotion-focused PO partially mediates the relationship between future temporal focus and attitudes toward equal opportunity for women managers. In contrast, a past temporal focus has a negative effect on the attitudes toward the competence of women managers such that, prevention-focused PO fully mediates the relationship (**Table 6**).

### **2.7. GENERAL DISCUSSION**

We developed and tested a theoretical model that specifies when and how employees’ psychological ownership (PO) promotes (or hinders) their attitudes toward women as managers.

We found that prevention-focused PO has a negative effect on employees' attitudes toward women in management, while promotion-focused PO has a positive effect on employees' attitudes toward women in management. We also identified a critical antecedent to employees' prevention-focused PO and promotion-focused PO, namely, their temporal focus. In particular, we found that employees' future temporal focus has a significant positive effect on promotion focused PO, whereas a past temporal focus has a significant positive effect on prevention-focused PO.

### ***2.6.5. Theoretical contributions***

Our study contributes to several lines of inquiry. First, the study contributes to the literature concerning attitudes toward women in management by showing that favorable attitudes toward women in management are indirectly the result of the type of temporal focus toward PO and directly the result of the type of regulatory focus with regard to PO. The findings are in line with the long-rooted stereotyping of women in the society as less capable of managerial positions than men. The study confirms that people tend to uphold their previously held beliefs and find it difficult to accept phenomena that deviate from their long-held beliefs. Ethiopia has long been under a patriarchal system, where only men are entitled to assume managerial positions and women have been entitled to stay at home and take care of the children and the husband (Hussein, 2009; Singh and Belwal, 2008; Haile, 2018). However, the findings of the study indicate that wrongly held beliefs should be discarded and that focus should be placed on the future to embrace changes, i.e., accept women as equally capable of managerial positions as men.

Relatedly, we offer contextualized knowledge regarding a critical issue, especially for organizations in the Ethiopian context, namely, the glass ceiling or invisible barrier that women

face as they attempt to advance to the executive ranks of organizations. A review of studies conducted over 20 years (1990–2008) on African women in leadership and management reported that one of the major obstacles to African women in leadership and management is unfavorable attitudes, which is also termed “subtle discrimination and gender stereotyping,” where women are perceived as less capable of assuming managerial and leadership positions (Nkomo and Ngambi, 2009).

In the Ethiopian context, traditionally, it has been assumed that only men shall (be given opportunity) and are able (are competent) to hold managerial positions, as it is a patriarchal society. Only recently did women start assuming higher positions, to the level of membership of the cabinet and even to the presidential seat of the country. Changes affect organizations overall but may not directly affect the individuals in an organization. However, in this study, we were able to show that individuals hold different attitudes toward these changes. In more detail, individuals who have promotion-focused PO have a favorable attitude toward women in managerial positions. These individuals strongly support such changes in organizations, while individuals who have prevention-focused PO have unfavorable attitudes toward women managers or are against such changes in organizations. Furthermore, in the study, we can understand that those with prevention-focused PO have unfavorable/negative attitudes toward both equal opportunities for women and their competence. However, those with promotion-focused PO have a favorable attitude toward the equal opportunity of women, and there is no significant relationship between promotion-focused PO and the attitudes toward the competence of women for managerial positions. Hence, this study contributes to a contextualized understanding of the challenges (and opportunities) that organizations in Ethiopia might face when attempting to introduce timely changes in a patriarchal structure.

**Table 6. Bootstrapped total, direct and indirect effect estimates**

Mediation paths	Effect	SE	LLCI	ULCI
<i>Future temporal focus → PO → Attitudes toward the equal opportunity for women managers</i>				
Total*	0.320	0.124	0.116	0.524
Direct*	0.177	0.102	0.060	0.253
Specific Indirect* (Promotion PO)	0.156	0.059	0.009	0.345
Specific Indirect (Prevention PO)	-0.013	0.013	-0.034	0.009
<i>Past temporal focus → PO → Attitudes toward the equal opportunity for women managers</i>				
Total	-0.211	0.149	-0.457	0.034
Direct	-0.140	0.156	-0.397	0.117
Specific Indirect (Promotion PO)	-0.040	0.034	-0.096	0.016
Specific Indirect (Prevention PO)	-0.032	0.021	-0.067	0.004
<i>Future temporal focus → PO → Attitudes toward the competence of women managers</i>				
Total*	0.229	0.081	0.096	0.367
Direct*	0.250	0.089	0.104	0.396
Specific Indirect (Promotion PO)	0.002	0.061	-0.099	0.103
Specific Indirect (Prevention PO)	-0.023	0.020	-0.055	0.009
<i>Past temporal focus → PO → Attitudes toward the competence of women managers</i>				
Total*	-0.196	0.075	-0.319	-0.073
Direct	-0.138	0.095	-0.294	0.018
Specific Indirect (Promotion PO)	-0.001	0.057	-0.094	0.093
Specific Indirect* (Prevention PO)	-0.057	0.028	-0.103	-0.012

Notes: \*Significant relationships; Effects are presented in a standardized form. Bootstrap confidence interval is calculated using 2000 resamples. SE, standard error; LLCI, lower-level confidence interval; ULCI, upper-level confidence interval

Second, we contribute to PO literature by offering a more comprehensive understanding of PO and uncovering critical antecedents and consequences that have been overlooked in the previous literature. In terms of antecedents to PO, research to date has focused on organizational-level factors. Dawkins et al. (2017), in their review of PO studies, indicated that the most identified antecedents of PO included leadership, participation in decision-making, involvement in stock ownership or profit-sharing schemes, provision of autonomy and structure of the work environment. A more recent review work of PO by Zhang et al. (2021) also discussed the classic antecedents of PO, originally introduced by Pierce et al. (2001), as the “routes” to PO (control, knowing and investment). Zhang et al. (2021) further introduced an emerging antecedent to PO, which they labeled “safety,” in which organizational justice, trust, perceived organizational support, and relational closeness is included. In this study, considering the call for further investigation of the antecedents of PO by Zhang et al. (2021), with regard to “reverse causality,” where people instantly have PO toward a certain target, regardless of control, knowing and investing in the target, we extend this research by introducing an individual-level factor, namely, temporal focus.

In terms of the consequences of PO, previous studies have mainly been concerned with individuals’ attitudes and behaviors toward their organization and their job (Dawkins et al., 2017). Limited research attention has been devoted to studying the effect of PO on attitudes toward organizational change. Limited studies of the consequences of PO on changes have focused on changes that directly affect individuals. In addition, the consequences of promotion-focused PO have received great attention, whereas the consequences of prevention-focused PO have been understudied (Zhang et al., 2021). Thus, our study extends the literature by documenting the effect of both sides of PO on changes at the organizational level that do not

directly affect individuals but affect the organization as a whole, such as attitudes toward women as managers.

Third, our study extends the literature concerning temporal focus. In more detail, our study contributes to the concept of temporal focus by supporting the previous finding that an individual's temporal focus determines his/her desire for organizational change (Shipp et al., 2009). In this study, we found that temporal focus indirectly influences an individual's attitude toward organizational change by identifying that temporal focus is capable of determining the type of regulatory focus individuals hold toward PO (i.e. promotion-focused PO or prevention-focused PO); furthermore, we identified that the regulatory focus of an individual directly affects his/her attitude toward organizational change, i.e. his/her attitude toward women in management, in particular.

#### ***2.6.6. Policy and managerial implications***

This study reveals the mechanism through which gender inequality is infused in organizations. This study shows the influence of PO in determining individuals' attitudes toward women managers. This new finding is especially important in countries where most managerial positions in organizations are assumed by males and society accepts the leadership of males more than females. This study paves the way for understanding the reason some people find it difficult to accept critical changes in an organization, such as women assuming higher managerial positions.

Organizations should further investigate individuals who resist such changes and show the benefits that such critical changes provide to the organization and the community. Organizations achieve such benefits by supporting individuals to develop the desired PO (promotion-focused PO) through the mechanisms suggested by previous studies, i.e., controlling, knowing and investing in the target (Pierce and Jussila, 2011). Organizations can also provide

psychological training for employees that focuses on the influence of temporal focus on accepting critical changes and that encourages letting go of the unpleasant past and holding on to a better future.

Public policymakers can also benefit from the study by understanding the root cause of the problem that influences some people to compromise gender equality or any other critical changes. Our finding is especially important given the long-rooted gender stereotyping in the context of the study. People in such a context might choose to resist such changes because of their high focus on the past, where women were considered by society less capable than men in assuming managerial positions. Therefore, the finding of this study is believed to be a valuable input for gender policymakers considering past influences and exerting additional effort to correct wrongly held beliefs.

### ***2.6.7. Empirical contribution***

Prior to examining the effect of PO on organizational changes, we tested and revised the scale “women as managers scale” developed by Terborg et al. (1977). Originally, the scale was developed as a one-factor scale with 21 items to measure attitudes toward female managers in general. In this study, we conducted an EFA of the 21 items and found that the items loaded on two factors instead of one. With the two factors, we can separately measure attitudes with regard to “equal opportunity of women for managerial positions” and attitudes with regard to “competence of women in managerial positions.” This study contributes to the scale by modifying the scale to a more precise and clearer two-factor scale.

## **2.8. LIMITATIONS AND FUTURE RESEARCH**

Our study is not without limitations. First, our research design is cross-sectional, which does not allow to infer causality and might be subject to common method bias. Although our test of common method bias suggests that this problem might not be acute in our study, we urge future research to use a longitudinal design and collect information from multiple respondents.

Second, in modifying the “women as managers scale” originally developed by Terborg et al. (1977), two factors were identified, namely, “attitudes toward equal opportunity” and “attitudes toward competence.” Although the indicator items on each factor clearly imply the name given for each factor (equal opportunity vs. competence), in the EFA, the items that load on the second factor are all reverse-worded, which is against the recommendation of Brown (2015) that factors should not be evaluated based on reverse-worded items. We decided to adhere to the two-factor model of the “women as managers scale” because, first, the one-factor model resulted in a bad model fit, making it impossible to use as a measure. In addition, the two-factor model resulted in more meaningful indicator items under their respective factors. We suggest further studies on the women as managers scale, with more data.

Third, we found that the kind of PO individuals have is influenced by the type of temporal focus they have, and in turn, their PO affects their attitudes toward organizational changes regardless of the type of organization they are in and regardless of their position in the organization. We, therefore, recommend further investigation of the PO of individuals with regard to the type of organization they are in and the position they hold in the organization.

## **2.9. CONCLUSION**

Focusing on different time frames indicates the kind of ownership feelings individuals have toward a certain target. Past focus implies living in the past as those who highly focus on the past become territorial or preventive of what they own psychologically and, as a result, resist significant changes, such as attitudes toward women in management. On the other hand, future focus implies eagerness for what the future brings, and those who focus on the future open up to their environments, are promotive of what they own psychologically and, as a result, embrace changes.

Note

1. In terms of the research philosophy, as suggested by Muiis (2004), we applied a pragmatist approach. We use quantitative research methods as our aim to test a theoretical model.

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# **Paper 2**

## **Chapter 3. Workplace spirituality and entrepreneurial behavior among employees in organizations: the role of psychological ownership**

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## **Abstract**

*This study aims at understanding the mechanisms through which workplace spirituality affects employees' entrepreneurial behavior. It proposes and tests a mediation model in which psychological ownership (PO), a feeling of ownership regardless of legal ownership, mediates the relationship between workplace spirituality and employees' entrepreneurial behavior. An empirical analysis was conducted with survey data collected from 351 postgraduate students who were also currently working. Structural equation modelling (SEM) was applied to test the hypotheses using Mplus software. Workplace spirituality is associated with employees' entrepreneurial behavior and psychological ownership (PO) fully mediates this relationship. The findings highlight that psychological ownership (PO) is the missing link that connects workplace spirituality and employees' entrepreneurial behavior. This study offers organizations a new insight by showing that psychological ownership (PO) plays a key role in contributing to the entrepreneurial behavior of employees who consider themselves spiritual.*

**Keywords:** *Workplace spirituality, Psychological ownership, Employees' entrepreneurial behavior*

## **3.1. INTRODUCTION**

There is growing interest in the field of spirituality among organizational and management researchers (Afsar and Rehman, 2015; Farrukh *et al.*, 2020; Karakas, 2010; Milliman *et al.*, 2003; Osman-Gani *et al.*, 2013; Saks, 2011). Recently, attention has been given to the relationship between workplace spirituality and the entrepreneurial behavior of employees (Balog *et al.*, 2014; Block *et al.*, 2020). While spirituality reflects that one can have a relationship with a higher power or the transcendent that influences how one operates in the world (Fry, 2003), workplace spirituality entails the influence of such relationship on employees' experience of transcendence through the work process, (Krahnke, Giacalone & Jurkiewicz, 2003). Workplace spirituality is also defined as "the recognition that employees have an inner life that nourishes and is nourished by meaningful work, that takes place in the context of the community" (Ashmos and Duchon, 2000, p.137).

One of the major arguments in this research is that spirituality/religion by itself does not guarantee entrepreneurial behaviors. Rather, it promotes certain values relevant to working

contexts; these values encourage positive work outcomes, including entrepreneurial behaviors (Block et al., 2020; Dana, 2010; Neubert and Dougherty, 2013). For example, most religions promote values such as hard work and responsible work behavior (Abu Bakar *et al.*, 2018; Balog *et al.*, 2014; Obregon *et al.*, 2021). In addition, some religious individuals value their work as their ‘calling’ in life and hence identify themselves with their work (Houghton *et al.*, 2016). These values, which have not been empirically investigated, could therefore explain the positive relationship between workplace spirituality and some positive organizational behaviors, including the innovative and entrepreneurial behavior of employees (Afsar and Rehman, 2015; Farrukh *et al.*, 2020). While this argument is consistent with psychology research that has indicated the fulfillment of intrinsic needs and values is a dominant predictor of individuals’ behaviors (Ryan and Deci, 2017), the theoretical understanding of the mechanisms that connect workplace spirituality and employees’ entrepreneurial behavior remains limited. Accordingly, building on self-determination theory (SDT) and psychological ownership (PO) theory, we aim to address this gap by proposing that psychological ownership is the ‘why’ in the relationship between workplace spirituality and employees’ entrepreneurial behavior. PO is defined as "the state in which individuals feel as though the target of ownership or a piece of that target is ‘theirs’" (Pierce *et al.*, 2001, p.299). We suggest that the work-related values inherent in holding high levels of spirituality and religiosity in the workplace are conducive to the development of PO, which in turn promotes employees’ entrepreneurial behavior (Bernhard and O’Driscoll, 2011; Morais *et al.*, 2021; Sieger *et al.*, 2013). We, therefore, propose that PO is likely the missing link that connects workplace spirituality and employees’ entrepreneurial behavior.

The mediating role of PO in the relationship between workplace spirituality and employees’ entrepreneurial behavior can be further explained by drawing on self-determination

theory (Ryan and Deci, 2017). SDT holds that when employees possess intrinsic work values and goals, they are autonomously motivated to complete their work and tend to accept their work/organization as their own; this, in turn, yields important work outcomes (Deci *et al.*, 2017; Gagné and Deci, 2005).

In this study, we have rigorously tested the above propositions with a sample of employees working in different organizations in Ethiopia, where religion is important for almost the entire population, according to Gallup global reports from 2009 (Crabtree, 2010). In such contexts, the concepts of spirituality and religion are understood to be integrated and overlapping, unlike contexts where religion is less important for the largest part of the population (Phipps and Benefiel, 2013). As prior studies have mainly focused on contexts where spirituality is considered a phenomenon distinct from religion, the extant measures have been developed accordingly (Ashmos and Duchon, 2000; Obregon *et al.*, 2021). The uniqueness of our study context thus called for the development of a specific scale of workplace spirituality that does not artificially separate spirituality from religion. We developed this scale following the guidelines presented by Hinkin (1995) and the best practices for scale development in entrepreneurship and management research (Fornaciari *et al.*, 2005). This study thus contributes to the spirituality and religiosity literature through the development of the novel workplace spirituality measure, which is specific to previously uncovered contexts, i.e., where religion and spirituality are considered integrated concepts.

Using structural equation modeling (SEM), we have found that workplace spirituality is associated with PO and that PO entirely mediates the relationship between workplace spirituality and employees' entrepreneurial behavior. These findings suggest that psychological ownership is likely the missing link that connects workplace spirituality and employees' entrepreneurial

behavior. This study thus contributes to the corporate entrepreneurship literature by further strengthening recent findings showing that entrepreneurial behaviors and activities in established firms can also be influenced by spirituality (Afsar and Rehman, 2015; Farrukh *et al.*, 2020). Furthermore, it expands the spirituality literature by revealing how the work-related values of spirituality contribute to the development of employees' psychological ownership toward their organizations. Finally, the introduction of psychological ownership as a mediating relationship between workplace spirituality and employees' entrepreneurial behavior is one of the major contributions of the study to the psychological ownership literature.

We have organized this paper into four sections. In the first section, we elaborate on the theoretical foundations of the study, presenting a thorough discussion of the following points: spirituality vs. religiosity in the workplace and the Ethiopian context; corporate entrepreneurial behavior of employees; workplace spirituality and employees' corporate entrepreneurial behavior; psychological ownership in organizations; workplace spirituality and PO; and PO's function as the missing link between workplace spirituality and employees' entrepreneurial behavior. We develop our hypotheses with these theoretical foundations. In the second section, we test these hypotheses using data from 351 respondents, and we describe our scale development and validation process. In the following sections, we present our results and discuss them. Finally, we conclude the study by outlining its theoretical contributions, policy and managerial implications, and limitations.

## 3.2. THEORETICAL FRAMEWORK AND HYPOTHESES

### 3.2.1. *Spirituality vs. religiosity in the workplace*

Spirituality is defined as the pursuit of a direction toward a meaningful life, which may or may not stem from adherence to a certain religion (Obregon *et al.*, 2021). The recognition that spirituality/religion is intrinsic, i.e., in the inner life, of individuals (Ashmos and Duchon, 2000; Houghton *et al.*, 2016), whereby “they cannot take off like a hat” or park at the door when they enter their workplace, has contributed to the growth of spirituality research on work settings (Farrukh *et al.*, 2020, p.2; Hicks, 2003). As prior studies have been conducted in different contexts, they have contributed to the disparate views on spirituality and religion (Phipps and Benefiel, 2013); hence, the conceptualization of the term "workplace spirituality" has developed inconsistently over time (Houghton *et al.*, 2016; Phipps and Benefiel, 2013). Studies conducted in contexts where religion is less important for most individuals favor the concept of spirituality and conceptualize it as distinct from religion (Phipps and Benefiel, 2013). Such studies further assert that while religion is “negative and exclusive,” spirituality is “positive and inclusive” (Zinnbauer *et al.*, 1999), suggesting that the study of spirituality from a religious perspective is “antagonistic” and inappropriate (Rocha and Pinheiro, 2021) because religiosity fosters division in an organization where not every member is affiliated with it (Houghton *et al.*, 2016; Phipps and Benefiel, 2013). Such studies thus promote workplace spirituality by claiming that employees should bring their whole person to work, emphasizing the importance of religiously neutral language in work contexts to prevent the exclusion of anyone not affiliated with a certain religion (Phipps and Benefiel, 2013).

As a result, prior studies have not paid enough attention to employees whose spirituality is grounded in clear and specific religious traditions (Miller, 2002), i.e., to contexts where

religion is important for most of the population. Phipps and Benefiel, (2013) note that, in contexts where religion is important for most of the population, spirituality, and religion are conceptualized as integrated, i.e., spirituality is considered to overlap with religion. In such contexts, religion is understood as a broader construct that encompasses spirituality, and spirituality is considered the heart and function of religion (Zinnbauer *et al.*, 1999). Studies that hold this view have claimed that the decoupling of spirituality and religion is a recent phenomenon that developed when people detached themselves from religion (Houghton *et al.*, 2016; Zinnbauer *et al.*, 1999). However, in contexts such as Africa, where a substantial portion of the population still believes that religion is important for life, studying workplace spirituality while excluding the concept of religion is problematic (King, 2008).

### ***3.2.2. The study context***

Religiosity and spirituality are deeply rooted in Africa; indeed, they are the reason for living for many people (Namatovu *et al.*, 2018). Spirituality in Africa is defined as the values and actions people follow that stem from their religious faith and influence their everyday life—most of all, their work and business life (Balcomb *et al.*, 2017). Empirical evidence suggests that the centrality of religious beliefs in Africa is the main factor driving entrepreneurial journeys (Namatovu *et al.*, 2018). Namatovu *et al.* (2018) contend that in Africa, religious beliefs are the main motivating factors for entrepreneurs, regardless of the availability or shortage of resources. Women entrepreneurs in Ghana, for example, claim that they rely on God or expect the provision of key resources from God (Reid *et al.*, 2015). In addition to contributing by being a motivating factor for entrepreneurship, religious beliefs provide resilience in business (Namatovu *et al.*, 2018).

This study was conducted in Ethiopia, one of the most religious countries in Africa (Gallup global reports, Crabtree, 2010) where almost 100% of the population believes religion is important in their life. Ethiopia is the second most populous nation in Africa, next to Nigeria, with approximately 117 million people (World Bank, 2022). According to the U.S. government report in 2016, 44% of the population adheres to Ethiopian Orthodox Christians, 31% are Muslim, and 23% belong to evangelical Christians and Pentecostal groups. The remaining less than 5% of the population includes Roman Catholics, members of The Church of Jesus Christ of Latter-day Saints, Jehovah's Witnesses, Jews, and practitioners of other indigenous religions (U.S Department of State, 2022). Ethiopian Orthodox Christianity was introduced to Ethiopia in the 4<sup>th</sup> century, by Egyptian and Syrian missionaries, whereas the introduction of Islam dates to the 7<sup>th</sup> century, attributing its expansion to trade (Tolera, 2017). These two religions take the largest number of followers in the population. Protestantism, the third-largest religion in the country was introduced in the 19<sup>th</sup> century by Scandinavian missionaries (Girma, 2018). These reports suggest that Ethiopia is a multi-religious country (Tolera, 2017) and almost all members of the population belong to a particular religious group. In Ethiopian history, during the time of the Socialist Derg (Provisional Military Government of Socialist Ethiopia) from 1974 to 1991, restrictions on religious expressions were made on all religions (Haustein & Østebø, 2011). But since the 1991 political transition (when the Ethiopian Peoples' Democratic Front came to power), religion became even more evident in public and this led to boosting of religious activities and religious diversity, equally strengthening all religious groups, (Haustein & Østebø, 2011). The current Ethiopian government also establishes freedom of religious choice and practice, prohibits religious discrimination, and requires separation of state and religion (U.S Department of State, 2022).

Thus, in this context, spirituality cannot be discussed without religion. In light of the suggestion of Phipps and Benefiel (2013) that researchers in this field should clarify whether they are studying spirituality, religion, or both, we primarily assert in the context of our study, spirituality and religiosity are overlapping concepts. Therefore, in this study, the concept of workplace spirituality stems from religious beliefs; as spirituality is primarily rooted in religion, the study of spirituality should be inclusive of religious beliefs and practices (Lynn *et al.*, 2009; Phipps and Benefiel, 2013).

There are guidelines and values that one should follow in each religion, and religiosity is the extent to which one commits himself/herself to these guidelines and values (Obregon *et al.*, 2021). For example, in most religions, including Ethiopian Orthodox, Islam, and Protestant, which are followed by the majority population in Ethiopia, there are guidelines regarding the duties and responsibilities of employers and employees that encourage employees' engagement at work (Obregon *et al.*, 2021). Hence, this context is unique and well suited for studying the workplace spirituality of religious employees, which is different from the Western context where workplace spirituality is examined regardless/without the religiosity of employees (Obregon *et al.*, 2021).

### ***3.2.3. Entrepreneurial behavior of employees***

Entrepreneurial behavior of employees is an individual-level behavior and is a comprehensive term that captures all actions taken by an organization's members that are strongly tied to the discovery, evaluation, and exploitation of opportunities (Kuratko *et al.*, 2005). Entrepreneurial behavior is conceptually distinct from the firm level entrepreneurship constructs including corporate entrepreneurship (CE) and entrepreneurial orientation (EO) (Sieger *et al.*, 2013). Corporate entrepreneurship (CE) refers to firm level activities involved in the creation of a new

business (corporate venturing), or in opportunity and advantage-seeking behaviors to achieve improved performance (strategic entrepreneurship) (Sieger et al., 2013, Fayolle, 2017; Kuratko, 2017). Likewise, entrepreneurial orientation (EO) is a firm level construct that is conceptualized in terms of five dimensions that describe and distinguish key entrepreneurial processes that serve as the foundation for entrepreneurial decisions and actions (Sieger et al., 2013).

Entrepreneurial behavior is the conduit through which corporate entrepreneurship (CE) is practiced in established organizations (Mustafa et al., 2016). According to Sieger et al., (2013), the entrepreneurial behavior of employees can range from innovative suggestions and ideas to improve the organization, to working with others to find new ways to improve the organization's products and services. Employees' entrepreneurial behavior at all levels, therefore, is crucial to achieving the ongoing competitive advantages that lead to higher organizational performance and sustaining corporate entrepreneurship (Kuratko et al., 2005; Sieger et al., 2013). Managers are constantly seeking ways of changing the behavior of employees to enable and sustain entrepreneurship and innovation in established organizations. It is not the organization that innovates, takes risks, and is proactive, it is the individual entrepreneurs who innovate, take risks, and are proactive within an established organization (Marvel et al., 2007, De Jong et al., 2015, Fayolle, 2017, Haq et al., 2018, Mustafa et al., 2016).

Many factors contribute to employees' entrepreneurial behavior in established organizations where the emphasis is strongly on management support, i.e., the role of top managers in inducing employees' entrepreneurial behavior (Fayolle, 2017); it follows other motivators, including organizational structures and reward systems (Marvel *et al.*, 2007). Nevertheless, less emphasis is placed on the individual-level antecedents to the entrepreneurial behaviors of employees (Mustafa *et al.*, 2016) that come from within individuals, driving them to

engage in entrepreneurial activities such as new product development, process, and administrative improvements, or work role innovations (De Jong et al., 2015).

Accordingly, building on the research that has demonstrated the link between spirituality and entrepreneurship, we consider workplace spirituality a critical antecedent to employees' entrepreneurial behavior.

#### ***3.2.4. Workplace spirituality and employees' entrepreneurial behavior***

Although spirituality/religion is part of one's *inner life*, i.e., is *intrinsic* to a person, it is a behavior that is revealed outwardly in different environments, mostly in the work environment (Ashmos and Duchon, 2000; Balcomb *et al.*, 2017; Krishnakumar and Neck, 2002). Most definitions note that workplace spirituality concerns the search for meaningful work that contributes to the community (Ashmos and Duchon, 2000; Saks, 2011) and that this search must be satisfied through involvement in and contribution to something outside of oneself. The search for meaningful work goes beyond routine 'Monday to Friday' office work; it entails giving life to the mundane and being passionate and engaged in efforts that can bring about significant changes and improvements (Ashmos and Duchon, 2000). This explains how workplace spirituality relates to 'creativity' (Houghton *et al.*, 2016), 'innovativeness' (Afsar and Badir, 2017) and, as a recent study has revealed, 'entrepreneurial behavior' in one's organization (Farrukh *et al.*, 2020); these are distinct from day-to-day activities. Hence, we argue that spiritual individuals' search for purpose can be fulfilled through their involvement in entrepreneurial behavior in their organizations.

Therefore, we propose the following:

***Hypothesis 1: Employees' workplace spirituality is positively related to their entrepreneurial behaviors.***

### ***3.2.5. Psychological ownership in organizations***

People desire a sense of possession, i.e., a feeling of ownership of an object or a target, whether legal ownership or psychological ownership (Etzioni, 1991). Possessiveness is therefore the core of psychological ownership that indicates being psychologically tied to a target (Pierce *et al.*, 2001). This need for possessive feelings is also apparent in organizations, where employees may develop psychological ownership regarding their organization without having any legal ownership (Pierce *et al.*, 2001; Van Dyne and Pierce, 2004). PO exists in organizations because employees seek to satisfy their need for autonomously controlling their work (efficacy), defining themselves through their work/organization (self-identity), and establishing a place in their organization (belongingness) (Pierce *et al.*, 2001). Controlling one's work, associating, and identifying oneself with one's work, and establishing one's feeling of belongingness in one's organization induce a sense of ownership in one's organization; hence, one's organization is the ownership target throughout this process (Liu *et al.*, 2012; Pierce *et al.*, 2001). In addition to these motivations, PO is facilitated by accountability, i.e., the expected right to hold others accountable and the expectation that one is accountable (Avey *et al.*, 2009).

While efficacy, self-identity, belongingness, and accountability are the motives for PO, there are routes or paths through which employees in organizations come to feel ownership (Pierce *et al.*, 2001). As these routes—i.e., control that is exercised over a target of ownership, intimate knowledge of the target of ownership, and self-investment into the target of ownership—are the classic routes to PO, they give rise to PO in organizations (Pierce *et al.*, 2001). In addition to these routes, many other factors that contribute to the development of PO have been identified, including leadership, participation in decision-making, autonomy, and safety (Dawkins *et al.*, 2017; Zhang *et al.*, 2021). PO is also known for its influence on diverse

types of outcomes, including employees' attitudinal and performance outcomes (Zhang *et al.*, 2021), such as job satisfaction, organizational commitment, and entrepreneurial behavior (Dawkins *et al.*, 2017; Sieger *et al.*, 2013), and other performance outcomes, among which organizational performance is the most important (Zhang *et al.*, 2021).

### ***3.2.6. Workplace spirituality and psychological ownership***

Spirituality/religion contains work-related values and goals that those who follow a certain religion seek to attain. Most religions promote loyalty at work and ethical work behaviors (Obregon *et al.*, 2021). Furthermore, individuals who consider themselves spiritual regard their work as a significant part of their life (Obregon *et al.*, 2021), considering their work their 'calling' in life (Houghton *et al.*, 2016). Most importantly, workplace spirituality fosters meaningful work that contributes to the community (Ashmos and Duchon, 2000). Accordingly, we argue that these values of workplace spirituality help open the paths that lead to the development of PO. First, spiritual employees are more likely to act autonomously in their work because workplace spirituality promotes the significance of work in people's lives (Houghton *et al.*, 2016). Maintaining the belief that work is the most significant part of one's life creates the intrinsic motivation to act autonomously in one's work (Deci *et al.*, 2017). Additionally, spiritual/religious employees are also more likely to invest themselves in their work because their workplace spirituality entails the value of engaging in meaningful work. This autonomous motivation toward and self-investment in work are among the paths that lead to the development of PO.

Self-determination theory (Ryan and Deci, 2017) supports this reasoning. According to SDT, when people identify a target that is consistent with their personal goals and values, they are likely to be self-determined or to act autonomously to achieve it by accepting it as their own

(Gagné and Deci, 2005). In work contexts, employees who consider working an important part of their lives feel greater freedom and autonomy regarding their work because it is more congruent with their personal goals and identities (Gagné and Deci, 2005). Thus, they fully internalize their work, which allows them to be truly autonomous, i.e., to feel ownership of their work and their organization. Therefore, we hypothesize the following:

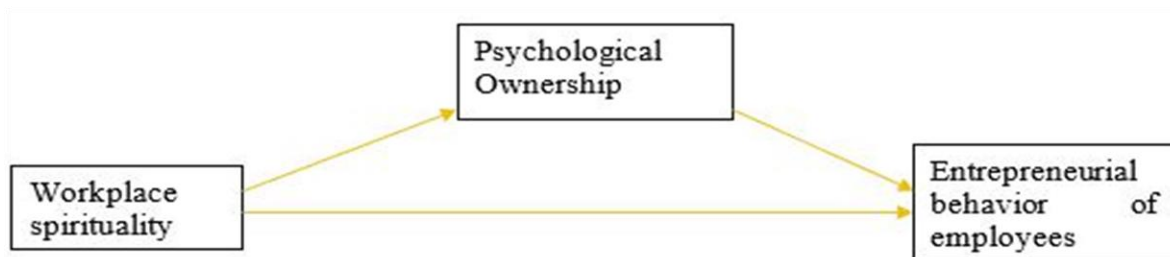
***Hypothesis 2:** Employees' workplace spirituality is positively related to their psychological ownership.*

### ***3.2.7. Psychological ownership: The missing link between workplace spirituality and employees' corporate entrepreneurial behavior***

Individuals who develop PO regarding their organization are likely to feel a psychological connection to their organization's performance, as they find it personally fulfilling (Avey *et al.*, 2009; Bernhard and O'Driscoll, 2011). Thus, such individuals are likely to behave entrepreneurially because entrepreneurial behavior is seen as a competitive advantage and an important behavior that fosters performance in organizations of any type (Kuratko *et al.*, 2005). Once again, self-determination theory reinforces this perceptive, positing that in work environments, intrinsically motivated employees fully internalize their work, which in turn yields important work outcomes, including the creativity and innovation that ensures effective performance (Gagné and Deci, 2005). Hence, when employees develop PO, they become highly engaged in organizational activities that require the exploitation of their potential to behave entrepreneurially (Kaufman, 2018; Sieger *et al.*, 2013). Furthermore, studies suggest that PO is an antecedent factor in employees' entrepreneurial behavior in organizations (Bernhard and O'Driscoll, 2011; Morais *et al.*, 2021; Sieger *et al.*, 2013).

Accordingly, given the hypothesized relationship between workplace spirituality and employees' PO (Hypothesis 2) and the above arguments that indicate the relationship between PO and employees' entrepreneurial behavior, we argue that PO is likely the critical element that connects workplace spirituality and employees' entrepreneurial behavior, thereby explaining this relationship. **Figure 4**, below, illustrates our conceptual model of this relationship. PO is, therefore, the proposed mechanism that links workplace spirituality and employees' entrepreneurial behavior. As a result, we hypothesize the following:

*Hypothesis 3: Employees' psychological ownership fully mediates the relationship between their workplace spirituality and corporate entrepreneurial behaviors.*



**Figure 4 :Conceptual model showing the direct and indirect relationship between workplace spirituality and employees' entrepreneurial behavior**

### **3.3. METHOD**

We conducted multiple studies and employed multiple methods. First, in Study 1, we used a sample of 15 participants to generate items to develop a scale for workplace spirituality. Given the distinctiveness of the Ethiopian context, where spirituality and religion are integrated concepts (Phipps and Benefiel, 2013), no scales developed to capture workplace spirituality in a Western context were applicable. Second, in Study 2, we used a sample of 35 academics to assess the content validity of the scale generated in Study 1. Thereafter, in Study 3, we used a sample of 230 employees to further validate this scale. Finally, in Study 4, we used survey data

from a sample of 351 employees to test our hypotheses. For Study 3 and Study 4, our target population was employees working in different organizations in Ethiopia. But since we do not have nationwide registers containing the full information of all employees in the country, we derived a random sample from the population of employed individuals based on a convenience sampling technique. We thus involved MBA and related program students, in a part-time program, from different universities in the country, to participate in the study. We ensured that all these students are full-time employees from different organizations in the country, including governmental, private, and non-governmental organizations (NGOs).

### ***3.3.1. Samples and data collections***

#### *Study 1: Sample and data collection*

We first selected a sample of 15 employees from different organizations recognized by their immediate supervisors for their contributions to their organization. One of the researchers personally interviewed each of the 15 employees. Most of the interviews lasted approximately 2 hours, with a range of 1 to 3 hours. The interview format was semi-structured. We employed 9 standard questions that interrogated why the respondents behaved the way they did in their workplaces. For the 12 respondents who presented themselves as spiritual individuals and declared their adherence to a certain religion, we asked follow-up questions concerning what their spirituality means for them in their workplaces.

#### *Study 2: Sample and data collection*

We next selected a sample comprising 35 university lecturers and assistant professors with academic experience to conduct a content validity study. We selected these academics from different fields of study; 40% of them were from management, and the rest were from different fields of study, including economics, psychology, the social sciences, and technology.

### *Study 3: Sample and data collection*

We next selected a sample of 230 employees from different organizations enrolled at 6 different universities in the country who were earning an MBA or a related field of study on a part-time, to further evaluate the convergent and discriminant validity of our scale. We recruited these sample participants by approaching them at the end of their class lectures and asking them to fill out the survey questionnaire we had prepared for this study. Originally, we distributed 235 questionnaires, and collected 230, achieving a 98% response rate because we waited for our participants to complete their questionnaires while they were still in their classrooms. The average age of these participants was 35, and 69% were male. The participants had 7 years of tenure in their respective organizations, on average.

### *Study 4: Sample and data collection*

To test our hypotheses, we collected data from a sample of 351 employees working full-time in different organizations. These employees were part-time MBA and related program students attending 9 different universities in Ethiopia.

All the survey questions were prepared in English because it is the medium of instruction in all the universities where the students were enrolled. Since the questionnaires were distributed and collected by entering these students' classrooms at the end of their lectures, a 100% response rate was achieved.

The participants in this survey were an average age of 35. More than half of them were in the age group of 30 to 40 years, and 55% had more than 5 years of work experience in their organizations. Males represented 66% of all these participants.

### ***3.3.2. Development and validation of the scale of workplace spirituality***

#### ***3.3.2.1. Scale development***

As mentioned above, in Study 1, we used the inductive approach suggested by Hinkin (1995) to create a list of items capturing workplace spirituality. Specifically, we interviewed 15 employees from different organizations who considered themselves religious. From these interviews, we derived 52 items that capture the different behaviors that such employees exhibit in the workplace. We then classified these items into 6 categories based on common themes (Hinkin, 1995). The category of *workplace spirituality* comprised 8 items. In Appendix 1, the 8 items that capture *workplace spirituality* are listed.

To validate the classification of these items into their respective categories, we performed content validity in Study 2 by engaging 35 university lecturers and assistant professors with academic experience and asking them to rate these items in terms of their categories on a scale from 1 = *does not fit at all* to 5 = *fits very well*. Based on these responses, we conducted exploratory factor analysis (EFA) in Mplus. The default rotation strategy in Mplus, namely, geomin rotation, is believed to produce more satisfactory solutions for datasets than the other rotation methods (Hattori *et al.*, 2017). The EFA of workplace spirituality we conducted loaded in a one-factor model, but poor model fit information required us to remove some items. The final factor structure thus included four items that all significantly loaded on the one-factor model, with geomin rotated loadings of 0.82 and above.

Four model fit indices are reported for the EFA output. These fit indices are the comparative fit index (CFI), Tucker–Lewis’s index (TLI), root mean square error of approximation (RMSEA; Steiger and Lind, 1980), and standardized root means square residual (SRMR). The model fit information met the criteria suggested by Lloret *et al.* (2017) for

retaining the EFA output results in Mplus at CFI (comparative fit index) = 0.998, TLI (Trucker and Lewis' index) = 0.995, RMSEA (root mean square error of approximation) = 0.051, and SRMR (standardized root mean square residual) = 0.012. Furthermore, the reliability test on the 4 items, conducted via SPSS, showed a 0.93 Cronbach's alpha value, indicating the internal consistency of the measure (Hair *et al.*, 2006). We also noted that these four items capture the domain of workplace spirituality present in the literature (Ashmos and Duchon, 2000; Farrukh *et al.*, 2020; Neal, 1997). This factor structure, with the four items significantly loading in the one-factor model, is presented in **Table 7**.

**Table 7. Geomin rotated loadings in the one factor model**

Items	Loadings
I work responsibly in this organization because I believe in the golden rule, "treat others as you would wish to be treated".	0.839
In my religion, I am taught to work hard as if I am working for myself.	0.821
Giving all the good I have (knowledge, skill, helping others...) makes me satisfied in life.	0.912
My conscious drives me to work loyally in this organization.	0.926

### 3.3.2.2. Scale validation

Study 3 involved 230 participants to assess the convergent and discriminant validity of our scale by exploring its relationship with other work-related constructs, including measures of organizational affective commitment (Rhoades *et al.*, 2001) and job satisfaction (Konrad *et al.*, 1999). Correlation analyses confirmed that workplace spirituality positively correlates with the work-related constructs of *affective commitment* and *job satisfaction*, with correlation coefficients of  $r = .285$ ,  $p = .00$ , and  $r = .244$ ,  $p = .00$ , respectively.

We then conducted confirmatory factor analysis via Mplus for our newly developed measure. The above four model fit indices were also reported for the CFA (Confirmatory Factor Analysis). Hu and Bentler’s (1999) recommended criterion for the model fit indices was applied. Hence, the CFA result of our newly developed measure showed a good model fit at CFI = 0.991, TLI = 0.974, RMSEA = 0.086, and SRMR = 0.017. **Table 8** presents the four items of the *workplace spirituality* measure with their respective factor loadings via CFA

**Table 8. CFA output of workplace spirituality**

<b>Items</b>	<b>Factor loadings</b>
I work responsibly in this organization because I believe in the golden rule, “treat others as you would wish to be treated”	0.762
In my religion, I am taught to work hard as if I am working for myself.	0.657
Giving all the good I have (knowledge, skill, helping others...) makes me satisfied in life.	0.818
My conscience drives me to work loyally in this organization.	0.824

### ***3.3.3. Hypothesis testing***

In Study 4, structural equation modeling via Mplus was used to test all three hypotheses. SEM was chosen because it is the appropriate model to analyze latent variables (Hair *et al.*, 2006). As mentioned above, the study participants were working on MBA or other related programs students enrolled at 9 different universities and colleges in the country. To clarify dependency, due to the 9 cluster universities in this study, an intraclass correlation coefficient (ICC) was conducted for all the indicators of the measurement variables. Small ICC values (<0.05) were obtained for all the indicators, implying that the observations are nearly independent (Brown, 2015). In such cases, instead of conducting multilevel SEM, Mplus software offers an option

called ‘complex’ analysis, which adjusts the model goodness-of-fit statistics, and the standard error of the parameter estimates in the data (Brown, 2015). Hence, a complex model was employed in this study. In addition, the bootstrapping method was used to assess the incremental effect of the mediator (Preacher and Hayes, 2008), producing 5000 bootstrap resamples in Mplus with a 95% confidence interval.

### **3.3.4. Measures**

*Entrepreneurial behavior.* This variable was measured using a six-item scale developed by Sieger *et al.* (2013). These items are suitable for measuring entrepreneurial behavior at the individual level. Respondents rated their level of agreement with these items on a scale from 1 = *strongly disagree* to 7 = *strongly agree*. Some sample items include ‘*I often make innovative suggestions to improve our business*’ and ‘*I often generate new ideas by observing the world.*’ The Cronbach's alpha of this scale was 0.926.

*Workplace spirituality.* The four items in this newly developed measure capture an integrated domain from previous spirituality and religiosity studies on work contexts. The items for this measure concern the notion that workplace spirituality is expressed through searching for and engaging in meaningful work (Ashmos and Duchon, 2000); through commitment, hard work, and loyalty, even under hostile circumstances, due to religious values and beliefs (Farrukh *et al.*, 2020); and through contributing to society in a meaningful way (Neal, 1997). Some sample items include ‘*In my religion, I am taught to work hard as if I am working for myself*’ and ‘*Giving all the good I have makes me satisfied in life.*’ This Likert-type scale ranged from 1 = *strongly disagree* to 6 = *strongly agree*. Cronbach's alpha of the scale was 0.93.

*Psychological ownership.* PO was measured using the 12-item scale developed by Avey *et al.* (2009). The original measure was composed of promotion-focused PO and prevention-

focused PO. Promotion-focused PO denotes a positively oriented aspect of PO, while prevention-focused PO denotes a territorial form of PO. 16 items are in the original scale; the first 12 measure promotion-focused PO and the last 4 measure prevention-focused PO. In this study, only promotion-focused PO was explored because our focus was limited to the positive side of PO. In promotion-focused PO, there are 4 sub dimensions, namely, efficacy, accountability, belongingness, and self-identity. Each dimension consists of 3 items. Some sample items, one from each dimension, include “*I am confident in my ability to contribute to my organization’s success,*” “*I would challenge anyone in my organization if I thought something was done wrong,*” and “*I feel this organization’s success is my success.*” The Cronbach's alpha value for the sub dimension ‘efficacy’ was 0.89, 0.782 for ‘accountability,’ and 0.802 for ‘self-identity.’ The Cronbach’s alpha value for PO was 0.726.

### **3.3.5. Control variables**

*Intention to own a business and turnover intention.* As studies have indicated that it takes stability to behave and act entrepreneurially in an organization (Morais *et al.*, 2021), the effect of employees’ *intention to own a business* and their *turnover intention* was controlled for in this study. The *intention to own a business* was measured as a dichotomous variable (0 = nonexistence of intention and 1 = existence of intention). *Turnover intention* was measured using a four-item 5-point Likert-type scale developed by Bluedorn (1982), ranging from 1 (strongly disagree) to 5 (strongly agree). Some sample items on the *turnover intention* scale include “*I often think about quitting*” and “*It is likely that I will actively look for a new job next year.*” After dropping one item from the *turnover intention* scale because of a low Cronbach’s alpha value, the new alpha value was 0.874.

*Leader support.* Previous research has revealed the relationship between management support and employees' entrepreneurial behavior (Kuratko *et al.*, 2005). Therefore, leader support was used as a control variable in this study via a 5-item 5-point Likert-type scale developed by House and Dessler (1974), ranging from 1 (strongly disagree) to 5 (strongly agree). Some sample items include "My leader asks employees for their suggestions on what assignments should be made" and "My leader gives advance notice of changes." The Cronbach's alpha value was 0.93.

Furthermore, *gender* and *age* were used as individual-level control variables, as studies have suggested that these factors might impact employees' entrepreneurial behavior (Pirhadi and Feyzbakhsh, 2021; Sieger *et al.*, 2013). *Age* was measured as a continuous variable, and *gender* was measured as a dichotomous variable, where 1=female and 0=male.

*Since establishment.* In addition to controlling for the above variables due to their effect on employees' entrepreneurial behavior, the variable 'since establishment' was controlled for due to its effect on psychological ownership. Intimately knowing one's target and investing oneself in this target are among the routes that lead to the development of PO (Pierce *et al.*, 2001). The variable 'since establishment' thus indicates whether employees have been in their organization since its establishment, i.e., whether they intimately know their organization and have invested substantial time in it. *Since establishment* was measured as a dichotomous variable, where 0 = no, did not work since establishment and 1= yes, worked since establishment.

### 3.3.6. Empirical analysis

#### 3.3.6.1. Reliability and validity

**Table 9. Reliability and Validity analysis**

Constructs and items	Factor loadings
<b>Workplace spirituality: Cronbach's alpha: 0.875, CR = 0.877, AVE = 0.641</b>	
I work responsibly in this organization because I believe in the golden rule, "treat others as you would wish to be treated".	0.762
In my religion, I am taught to work hard as if I am working for myself.	0.657
Giving all the good I have (Knowledge, skill, helping others...) makes me satisfied in life.	0.818
My conscience drives me to work loyally in this organization.	0.824
<b>Entrepreneurial behavior: Cronbach's alpha: 0.926, CR = 0.926, AVE = 0.678</b>	
I often make innovative suggestions to improve our business.	0.82
I often generate new ideas by observing the world.	0.83
I often come to new ideas when observing how people interact with our products and services.	0.895
I often generate new ideas by observing our customers.	0.881
I boldly move ahead with a promising new approach when others might be more cautious.	0.791
I devote time to helping others find ways to improve our products and services.	0.711
<b>Efficacy (Psychological ownership subdimension): Cronbach's alpha: 0.89, CR = 0.896, AVE = 0.742</b>	
I am confident in my ability to contribute to my organization's success.	0.834
I am confident I can make a positive difference in this organization.	0.925
I am confident in setting high-performance goals in my organization.	0.827
<b>Accountability (Psychological ownership subdimension): Cronbach's alpha: 0.782, CR = 0.782, AVE = 0.544</b>	
I would challenge anyone in my organization if I thought something was done very wrong.	0.780
I would not hesitate to tell my organization if I saw something that was done wrong.	0.667
I would challenge the direction of my organization to assure it is correct.	0.776
<b>Self-identity (Psychological ownership subdimension): Cronbach's alpha: 0.802, CR = 0.802, AVE = 0.575</b>	
I feel this organization's success is my success.	0.794
I feel the need to defend my organization when it is criticized.	0.767
I feel being a member of this organization helps me define who I am.	0.722
<b>Psychological Ownership (Second factor CFA output): Cronbach's alpha: 0.726</b>	
Efficacy	0.718
Accountability	0.762
Self-identity	0.803

*Note: CR, composite reliability; AVE, average variance explained*

Reliability was assessed by examining Cronbach's alpha values, which ranged from 0.802 to 0.93, and were deemed acceptable (Robinson *et al.*, 1991). The composite reliability (CR) of all constructs (see **Table 9**) was computed, and all were above the satisfactory level (>0.70) (Bollen and Lennox, 1991). Furthermore, the average variance extracted (AVE) of all constructs was above 0.5, as recommended by Hair *et al.* (2012). In addition, discriminant validity was satisfactory, as the AVE of each construct was higher than the shared variances with other constructs (Shook *et al.*, 2004).

**Table 10. Descriptive and correlation statistics**

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
Age	35	7.2	1								
Gender (1=Female)	.34	0.47	<b>-.241**</b>	1							
Intention to own a business (1=yes)	.82	.39	-.110	-.008	1						
Since establishment (1=yes)	.17	.376	<b>.202**</b>	-.032	.092	1					
Leader Support	3.42	1.14	.028	-.030	.000	.06	1				
Turnover intentions	3.08	1.05	<b>-.193**</b>	.092	.076	<b>-.227**</b>	<b>-.376**</b>	1			
Workplace spirituality	5.29	.86	-.031	.032	.091	.048	<b>.207**</b>	<b>-.118*</b>	1		
PO	4.74	.89	<b>.143**</b>	-.025	-.058	<b>.176**</b>	<b>.402**</b>	<b>-.445**</b>	<b>.518**</b>	1	
Entrepreneurial Behavior	4.95	1.31	.095	<b>-.131*</b>	.016	<b>.141*</b>	<b>.266**</b>	<b>-.225**</b>	<b>.333**</b>	<b>.496**</b>	1

**\*\*Correlation is significant at the .01 level.**

**\*Correlation is significant at the .05 level.**

To validate the measurement models, CFA via Mplus 8.7 was conducted for all the measures in the study. Following Hair *et al.* (2012), the CFA demonstrated the criteria for acceptable convergent validity, i.e., all loadings of items on their factors were greater than the threshold of 0.5 (see **Table 10**) and were significant at  $p < .01$ . The variable psychological ownership was measured as a second-order factor that incorporates three first-order

factors/dimensions, namely, efficacy, accountability, and self-identity. However, the dimension ‘belongingness,’ which is in the original PO scale of Avey *et al.* (2009), was excluded from this analysis, as it resulted in poor model fit information.

### 3.3.6.2. *Common method variance (CMV)*

In the current study, since the source of data for both the dependent and the independent variables comprised the same respondents, it was important to evaluate CMV. The procedural remedy we used to minimize CMV was protecting the anonymity of the respondents, which can help minimize method bias in the reporting stage (Tehseen *et al.*, 2017). We also emphasized in the questionnaire that there are no right or wrong answers and that the respondents should feel free to provide their honest answers. In addition, we adopted a statistical remedy to ensure that CMV did not affect our findings. That is, to evaluate common method bias, we used the partial correlation method, applying a marker variable that was theoretically unrelated to the other factors in the model, as recommended by Podsakoff *et al.* (2003). Hence, we used a 6-item scale for *fashion advertising involvement* as a marker variable; its items were added along with the main items in the questionnaire, and these data were collected from the target respondents. This marker variable was included in the model to assess how much variance was shared among all the items. We found less than 1% variance among all the items and the marker variable, suggesting that there was no substantial common method bias in our model (Tehseen *et al.*, 2017).

## 3.4. RESULTS

### 3.4.1. Descriptive statistics

Table IV presents the descriptive statistics and correlations for all the variables in the study. All correlations are below 0.7, a threshold that indicates that there is no multicollinearity in the study (Hair *et al.*, 2006). Moreover, the correlations provide preliminary support for our hypotheses. That is, workplace spirituality is strongly correlated with PO and employees' entrepreneurial behavior ( $r = .518, p < .01$  and  $r = .496, p < .01$ , respectively).

### 3.4.2. Testing the structural model

Hypothesis 1 entails examining the direct effect of workplace spirituality on employees' entrepreneurial behavior. After controlling the effect of age, gender, intention to own a business, leader support, and turnover on the dependent variable (entrepreneurial behavior), SEM was applied to examine the direct effect. Four indices were used to evaluate the fit of the models in the study. We followed Hu and Bentler's (1999) recommended thresholds for these indices, which are close to 0.95 for CFI and TLI, close to 0.08 for SRMR, and close to 0.06 for RMSEA. The SEM results showed a significant positive effect of workplace spirituality on employees' entrepreneurial behavior ( $\beta = 0.291, p < .001$ ), supporting our first hypothesis. A good model fit was indicated, with CFI = 0.964, TLI = 0.958, RMSEA = 0.048, and SRMR = 0.047. The goodness of fit indices for all the hypotheses of the study is summarized and reported in **Table 11**.

**Table 11. Goodness of fit indices for structural equation models**

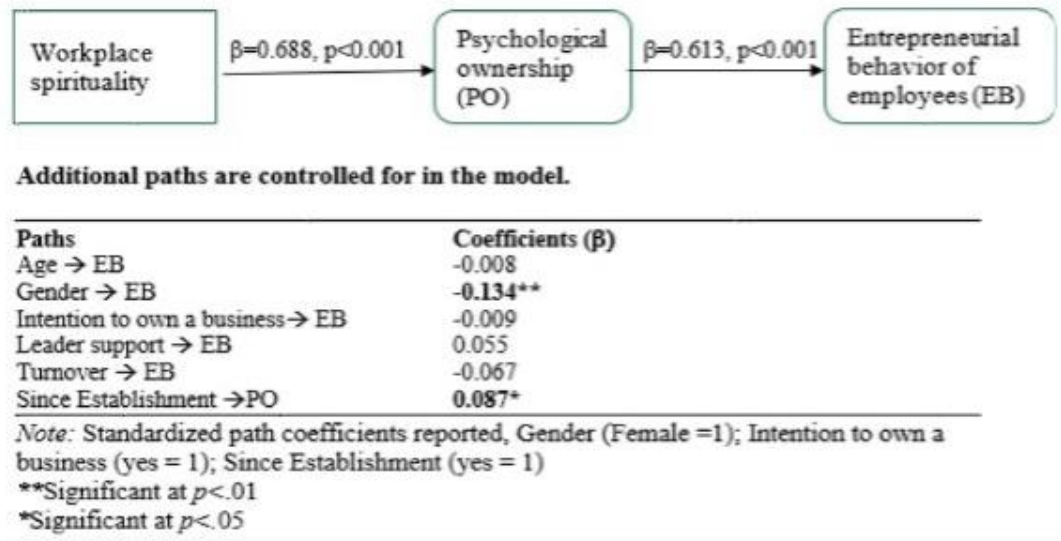
Hypotheses	X <sup>2</sup>	df	CFI	TLI	RMSEA	SRMR	p Value
Hypothesis 1 (Spirituality to Ent. Behavior)	311	180	0.964	0.958	0.048	0.047	< 0.00
Hypothesis 2 (Spirituality to PO)	144	73	0.962	0.953	0.054	0.055	< 0.00
Hypothesis 3 (Mediation Model)	684	415	0.946	0.940	0.046	0.086	< 0.00

The second hypothesis of the study was also supported by the results of our SEM, indicating a direct positive effect of workplace spirituality on the psychological ownership of employees ( $\beta = 0.690, p < .001$ ) after controlling for the variable ‘since establishment’. This resulted in a good model fit, where CFI = 0.962, TLI = 0.953, RMSEA = 0.054, and SRMR = 0.055.

### **3.4.3. Mediation analysis**

Employing SEM in Mplus 8.7, a mediation model was used to test our third hypothesis. The effect of age, gender, intention to own a business, leader support, and turnover on the dependent variable (entrepreneurial behavior) and the effect of ‘since establishment’ on PO were controlled for. Contrary to our first hypothesis, which was supported by our findings indicating a significant direct relationship between workplace spirituality and employees’ entrepreneurial behavior, the mediation model resulted in a nonsignificant relationship between these two variables ( $\beta = -0.125, p = 0.59$ ). Therefore, this indicated that the mediator variable *psychological ownership* fully mediates their relationship. The mediation model provided a good fit to the data, where CFI = 0.946, TLI = 0.940, RMSEA = 0.046, and SRMR = 0.086.

Overall, these results provide strong support for our third hypothesis. We also found a stronger indirect effect of workplace spirituality on psychological ownership ( $\beta = 0.688, p < .001$ ), which in turn strongly affects employees' entrepreneurial behavior ( $\beta = 0.613, p < .001$ ). The total indirect effect of workplace spirituality on employees' entrepreneurial behavior was also significant at  $\beta = 0.422, p = 0.06$ , resulting in a significant combined effect (direct effect (-0.125) plus an indirect effect (0.422)) of  $\beta = 0.296, p = .002$ . **Figure 5**, below, offers a summary of these mediation model results.



**Figure 5 :Mediation model results**

The unique indirect effect of the mediator PO was examined in Mplus via 5000 bootstraps at a 95% bias-corrected confidence interval. These results indicated that PO significantly and fully mediates the relationship between workplace spirituality and employees' entrepreneurial behavior. **Table 12** presents the results of the bootstrapped total, direct and indirect estimates.

**Table 12. Bootstrapped total, direct, and indirect effect estimates**

Hypothesized mediation path	Effect	SE	LLCI	ULCI
Workplace spirituality →PO→EB				
Total	0.296	0.097	0.136	0.457
Direct	-0.125	0.234	-0.510	0.259
Indirect	0.422	0.230	0.044	0.799

*Note:* Effects are presented in a standardized form. The bootstrap confidence interval is calculated using 5000 resamples. SE, standard error; LLCI, lower-level confidence interval at 5%; ULCI, upper-level confidence interval at 5%.

### 3.5. DISCUSSION

This study has presented an integrative model of the relationship between workplace spirituality, psychological ownership, and employees' entrepreneurial behavior. To determine the relationship between spirituality and employees' entrepreneurial behavior, we hypothesized and revealed a positive relationship between workplace spirituality and employees' entrepreneurial behavior. This study thus clearly demonstrates that PO is the mechanism that connects workplace spirituality and employees' entrepreneurial behavior. Specifically, we have shown that PO fully mediates the relationship between workplace spirituality and employees' entrepreneurial behavior. In addition, we have introduced and validated a scale of workplace spirituality that is specifically applicable in the context of the study, where the concepts of spirituality and religiosity are integrated.

#### *3.5.1. Theoretical contributions*

The findings of this study offer novel contributions to the literature on entrepreneurship, workplace spirituality, and psychological ownership. First, this study responds to the call to incorporate complementary paradigms, such as the theological/spiritual paradigm, into the

economic paradigm in entrepreneurial research (Smith *et al.*, 2021) to shed light on employees' motivations for entrepreneurial behavior. By emphasizing the effect of workplace spirituality on employees' entrepreneurial behavior, we have extended the discussion from *spirituality and entrepreneurship* to *workplace spirituality and entrepreneurial behavior among employees in established organizations*, highlighting how spirituality influences not only entrepreneurs but serves as a conduit for corporate entrepreneurs. In previous studies, the antecedents to employees' entrepreneurial behavior have mainly comprised external environmental factors, such as technology, and organizational level factors, such as managerial support, rewards, and incentives (Mustafa *et al.*, 2016; Pirhadi and Feyzbakhsh, 2021). Moreover, the individual-level factors used in previous studies have been limited to entrepreneurs' traits, such as age, education level, and confidence in the innovation of their organization (Pirhadi and Feyzbakhsh, 2021). Hence, by reaffirming the recent findings of Farrukh *et al.* (2020), who have introduced *religiosity* as a novel individual-level antecedent to employees' entrepreneurial behavior, our study underscores how the work values and beliefs of spirituality/religion can trigger individuals to autonomously behave and act entrepreneurially in the absence of external factors.

Second, this study contributes to the psychological ownership literature by demonstrating PO's mediating role between spirituality and entrepreneurship. As suggested by Block *et al.* (2020), more attention should be given to the moderated and mediated relationships between spirituality and entrepreneurship. In this study, we have hypothesized and shown that the relationship between workplace spirituality and employees' entrepreneurial behavior is entirely mediated by psychological ownership. Indeed, our results indicate that PO clarifies the blurred understanding of the relationship between the two. With this finding, we identify the 'why' of the effect of workplace spirituality on employees' entrepreneurial behavior. Accordingly, this

study expands the psychological ownership literature by introducing workplace spirituality as an antecedent to PO and increasing the extant number of such antecedents.

Finally, concerning research on workplace spirituality, this study elaborates on the effects of spirituality on work settings by examining whether it contributes to an organization by influencing the entrepreneurial behavior of its employees. Thus far, research on workplace spirituality studies has focused on the influence of spirituality on employees' positive organizational behaviors, e.g., work engagement, job satisfaction, or organizational commitment (Afsar and Badir, 2017; Benefiel *et al.*, 2014; Obregon *et al.*, 2021). Extending such research by investigating the impact of spirituality on organizations, we suggest that workplace spirituality, through the search for meaningful work, can play a strong role in facilitating competitive advantage through entrepreneurially oriented employees (Kuratko *et al.*, 2005). The essential elements of workplace spirituality—i.e., a search for meaningful work, for a change from a routine, and for actions that contribute to one's organization and community in a meaningful way—are clearly shown, via our inclusion of employees' entrepreneurial behavior, to be an outcome variable.

In addition, this study is a response to the call by Phipps and Benefiel (2013); that is, the concept of workplace spirituality is better understood in the context of the study, which entailed an empirical investigation of *workplace spirituality* that is unique to this context. In contrast to contexts where the concept of spirituality is distinguished from institutionalized religion (Karakas, 2010), to evaluate Africa/Ethiopia, where religion is important for most of the population, we have constructed a context-specific *workplace spirituality* measurement scale. We believe that this new measurement scale and further empirical investigations of workplace

spirituality in such environments can offer novel insights that provide researchers with a broad understanding of workplace spirituality.

### ***3.5.2. Policy and managerial implications***

In addition to its theoretical contributions, this study's findings have a policy and managerial implications. First, research suggests that spirituality/religion plays a strong role in shaping people's behavior, including that in their professional and work life (Obregon *et al.*, 2021). In a country such as Ethiopia, where our study was conducted, nearly the entire population considers religion the most important part of their life (Crabtree, 2010). This implies that organizations should not disregard the role of religion in shaping employees' behavior; as religion can have a significant impact on organizational performance, organizations should account for individuals' religiosity in their approaches to human resources. Organizations should thus design policies that can accommodate employees who follow any type of religion.

In similar religious contexts, discussing the issue of workplace spirituality and its impact on employees' behaviors is essential. Our findings offer an understanding of the mechanisms through which workplace spirituality may offer benefits to an organization. Fostering psychological ownership of employees in organizations can positively link employees' workplace spirituality to their entrepreneurial behavior. That is, individuals who consider themselves spiritual/religious are more likely to develop psychological ownership regarding their organization. Hence, policies and strategies should be designed to nurture and utilize the ownership feeling in these individuals to help them feel important and exercise their inner motivation and potential for entrepreneurial activities. As a result of this study, organizations can work on fostering psychological ownership, the sense of ownership for their employees. Though Ethiopia is one of the fastest-growing economies in the world, it is still an impoverished and

extreme environment (World Bank, 2022) that is in much need of entrepreneurial activities in various organizations. Thus, there is a need to investigate what influences entrepreneurial behavior among employees in organizations. The entrepreneurial behavior of employees can contribute to cooperate entrepreneurship (Mustafa et al., 2016) resulting in new products, new businesses, new organizations, and new business models impacting organization performance, the economy, and society at large. Thus, company policies should be devised and implemented to foster psychological ownership, which would in turn positively affect the entrepreneurial behavior of employees. Consequently, government policies on the working environment should be designed to facilitate the sense of ownership of employees in the organizations they work in.

### **3.6. LIMITATIONS AND FUTURE RESEARCH**

This study is not without limitations. First, we relied on cross-sectional data, which did not allow us to explore causality and might have been subject to common method bias. Although our test for common method bias suggested that this problem might not be critical, future research is strongly recommended to use a longitudinal design and collect information from multiple respondents to further explore the hypothesized relationships. Second, because we do not have nationwide registers containing the full information of all employees in the country from which we could collect data about employed individuals, we had to rely on convenience samples which comprised employed individuals in different organizations who are enrolled in MBA and related program studies, as a part-time student, in 9 different universities in the country. We recommend future research to target a wider range and more representative sample of employed individuals when investigating the relationship between workplace spirituality and employees' entrepreneurial behavior.

The third is the issue of controlling the effects of diverse types of religion and the degree of religiosity in the study. Notably, while we have focused on all types of religion while considering the same level of religiosity across all the focal employees, spiritual/religious employees typically differ in their degree of religiosity, and the values and beliefs that a certain religion holds may differ from those of another. Thus, future research will need to examine the effects of different religions and levels of religiosity on employees' entrepreneurial behavior, especially given how many contexts follow diversified types of religions.

Lastly, we have developed a workplace spirituality scale for this study, which comprises four items targeting the behaviors of religious individuals in the workplace. We deemed the existing measurement scales for spirituality mostly focused on Western contexts, where spirituality and religion are considered mutually exclusive (Karakas, 2010). This is not applicable in the context of our study, where spirituality and religion are considered integrated (Phipps and Benefiel, 2013) because religion is important for most of the population. Hence, we believe that more detailed and systematized research and a more adequate measurement of the construct of *workplace spirituality* that can be applied to such phenomena are required for future research.

### **3.7. CONCLUSION**

If entrepreneurial activities exist in established organizations, then their reason for existence must come from various sources, e.g., entrepreneurial employees. Among the many behavioral effects of spirituality/religion on employees in the workplace, how it shapes employees' performance in entrepreneurial activities is crucial. This study has therefore revealed the mediating role of psychological ownership to explain the effect of workplace spirituality on employees' entrepreneurial behavior.

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## **Paper 3**

### **Chapter 4. Developing a Contextualized Psychological Ownership Measurement Scale in the East African Context**

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## **Abstract**

*Employees of an organization can develop psychological ownership (PO) toward the organization regardless of any legal claims of ownership. To understand the construct of PO in the context of Ethiopia and other East African countries, it is necessary to capture the needs and motivations of individuals that are associated with PO in this context. Accordingly, this research develops and validates a contextualized measure of individuals' PO toward their organizations that can be applied to the context of East African countries. I conduct four studies to ensure consistent reliability and scale structure. I further demonstrate convergent, discriminant, and nomological validity. This newly developed measure can advance research on PO by giving researchers the opportunity to capture its meaning in this context.*

**Keywords:** *psychological ownership, human needs, measurement scale, East Africa, Ethiopia*

## 4.1. INTRODUCTION

Psychological and management researchers widely recognize psychological ownership (PO) as crucial to favorable work outcomes (Pierce et al., 2001; Sieger et al., 2013). Studies have shown that among other factors, PO influences organizational citizenship behavior (Park et al., 2013), affective organizational commitment (Liu et al., 2012; Sieger et al., 2011), and job satisfaction (Mayhew et al., 2007). Defined as “the state in which individuals feel as though the target of ownership or a piece of that target is ‘theirs’” (i.e., “It is MINE!”) (Pierce et al., 2001, p. 299), PO is conceptualized as a construct that allows psychological needs, such as the needs for self-efficacy, self-identity, and belongingness, to be fulfilled. Avey et al. (2009) extended this conceptualization and developed a multidimensional PO scale including the five dimensions of self-efficacy, accountability, belongingness, self-identity, and territoriality. However, studies have indicated that needs and motivations are context-bound; for example, cultural or economic contexts influence the needs and motivations of individuals (Adler & Gundersen, 2002). Therefore, even if PO scales are considered to be universal, they cannot capture the context-bound needs and motivations of individuals in a different part of the world, specifically in East African countries.

To overcome the Western-centric nature of PO and the scale used to measure it, scholars have begun to develop and validate context-specific scales to measure PO. For example, Shukla and Singh (2015) developed and validated an Indian-centric measure of PO by deploying a mix of qualitative and quantitative techniques. Similarly, Olckers (2013) developed a scale for measuring PO in a South African context. In this paper, I follow this previous research by developing and validating a scale that can be used to measure PO in East Africa. Empirically, I focus on Ethiopia, which has the second-largest population in Africa (with approximately 117

million people) after Nigeria and is among the fastest-growing economies in the world (World Bank, 2022). Ethiopia embodies common characteristics of countries in the region of East Africa in terms of economic development, cultural values, and governance trends (African Development Bank Group, 2021; Hofstede, 2011; Ibrahim Index of African Governance, 2020).

I developed the measure by conducting four studies with reference to samples of employees working for different organizations in the country. In the first study, I interviewed employees working in diverse types of organizations to develop the initial list of items. In the second study, I categorized these items into appropriate dimensions and conducted a content validity test. In the third study, I purified the scale by reference to a sample of 230 MBA students and students in related programs employed by various organizations. Finally, in the fourth study, I validated the scale, demonstrated its reliability and scale structure, and verified convergent, discriminant, and nomological validity. In the fourth study, I focused on a sample of 351 MBA students and students in related programs who were also employees of different organizations. The final scale is a 19-item, four-dimensional measure of contextualized PO as a second-order construct.

Before illustrating the scale development process in detail, I provide an overview of the conceptual background of PO, briefly discuss the relationship between human needs and PO, and present existing measures of PO. I next present the general context of the study, i.e., East Africa and Ethiopia. A discussion and conclusion follow the detailed reporting of the scale development process.

## **4.2. CONCEPTUAL BACKGROUND AND EXISTING MEASURES**

The notion of PO in organizations has its roots in the psychology of possession (Dittmar, 1992), according to which people experience psychological connections between themselves and

various targets of possession (Pierce et al., 2001). This strong link between possession and one's sense of self influenced the conceptualization of PO and led to the conclusion that feeling of ownership toward a variety of targets (in which context the target could be an organization and/or parts of it) are part of the human condition (Pierce et al., 2001). PO has been proven to be conceptually and empirically distinct from related organizational constructs such as organizational commitment, organizational identification, and job satisfaction (Brown et al., 2014; Pierce et al., 2001). The core distinguishing factor of PO is its explicit focus on possessiveness, as it asks the question "How much do I feel this organization is mine?" while related constructs do not pose such questions in their conceptualization (Van Dyne & Pierce, 2004).

The growing understanding of the existence of such a "feeling of ownership" in organizations led Pierce et al. (2001, 2003) to recognize three needs that can be fulfilled by PO, which these authors labeled the roots of PO. The authors contended that PO serves to satisfy these three fundamental human needs. The first is the need for efficacy (i.e., people want to be competent and efficacious and accordingly want to have control over their environments). The second is the need for self-identity (i.e., people want to explore, reflect, and communicate their identity to others). Finally, the third is the need for belongingness (i.e., people want to have a place in which to dwell). In addition to Pierce et al.'s (2001, 2003) conceptualization of PO as reflecting feelings of possessiveness and thereby fulfilling these three needs, other researchers have noted that PO also reflects the need for responsibility (Parker, Wall, & Jackson, 1997) and accountability (Avey et al., 2009). In addition to these needs and motivations, which are the reasons underlying the emergence of PO, researchers have also identified the routes taken for the development of PO in organizations (Brown et al., 2014). These routes are control over the target

of ownership, intimate knowledge of the target of ownership, and investment of the self into the target of ownership (Pierce et al., 2001, 2003).

Further extending the conceptualization of PO, Avey et al. (2009, 2012) suggested that PO has two sides: promotive and preventive. Based on regulatory focus theory (Higgins, 1998), Avey et al. (2009) argued that people can exhibit a promotion-focused PO when they focus their self-regulation on achieving their aspirations and dreams. In contrast, people who take a preventive self-regulatory approach focus on goals intended to minimize the chance of punishment.

In addition, PO is also believed to be perceived at a group level, which is known as collective PO; in this case, members feel that a target is collectively “theirs” (Pierce & Jussila, 2010). These authors argued that individuals could develop a shared mindset regarding their feeling of ownership toward a particular target. A very recent study discussed the emergence of collective PO extensively in the unique context of the development of new venture teams, suggesting that the preconditions for the emergence of collective PO are the psychological needs for belonging, knowledge, control, and entrepreneurial creation (Yttermyr & Innberg, 2022).

Taken together, these studies conceptualize PO as associated with various kinds of human needs at different levels. In the following section, I discuss this association in detail, taking into account the context-specific nature of human needs.

#### ***4.2.1. Human needs and psychological ownership***

The five basic human needs highlighted by Maslow (1954) are believed to activate people’s motivation to work in organizations. Maslow posits a hierarchy of human needs, suggesting that to motivate the desired work behavior, lower-order needs (physiological, safety, and social needs) must be fulfilled first, followed by higher-order needs (esteem and self-actualization

needs) (Adler & Gundersen, 2002). The two types of factors that contribute to human needs identified by Herzberg (1968), i.e., extrinsic (external factors that do not contribute to motivation but rather to demotivation) and intrinsic (internal factors that contribute to motivation) factors, correspond to the lower-order and higher-order needs in Maslow's hierarchy, respectively (Adler & Gundersen, 2002; Herzberg, 1968).

Hofstede (2001) criticizes this theorization of Maslow and Herzberg and argues that their theorization does not necessarily hold true in all contexts; that is, in certain countries, one or two of these five needs remain most important for motivation regardless of the hierarchy. For example, collectivist societies such as Pakistan prioritize social needs over self-actualization needs, unlike the United States (Adler & Gundersen, 2002). Furthermore, Hofstede confirms that Herzberg's theorization of needs does not apply to several countries other than the United States (Adler & Gundersen, 2002; Hofstede, 2001). To summarize, studies have found that although basic human needs remain universal, the order of importance of these basic needs is determined by the individual's frame of reference (O'Reilly & Roberts, 1973).

Pioneers in PO research have linked PO closely with human needs (Pierce et al., 2001, 2003). To date, such studies have indicated that PO fulfills the human needs for efficacy, self-identity, accountability, responsibility, belongingness, and autonomy (Avey et al., 2009; Olckers, 2013; Pierce et al., 2003) (see **Table 13**). According to Maslow's account of basic human needs, the identified needs that PO fulfills can be classified as higher-order needs, i.e., self-actualization needs (Adler & Gundersen, 2002; Maslow, 1954) and as intrinsically motivated needs (Herzberg, 1968), with the exception of the need for belongingness, which is classified as a 'social' need. PO has been widely studied and measured in Western contexts, where higher-order needs are given priority (Adler & Gundersen, 2002). This situation could explain why extant studies have

conceptualized PO as mostly associated with the higher-order needs of individuals. PO studies conducted in non-Western contexts have reported inconsistent results. For example, Olckers (2013) developed a new measure of PO for use in the South African context. Although Olckers (2013) argued that the previous measures of PO developed by Avey et al. (2009) failed to function as a comprehensive measurement tool in the South African context, the new measure she developed is also associated with higher-order human needs. Peng and Pierce (2015, p. 163), in their assessment of PO in organizations in China, reported that “...feelings of ownership manifest themselves within an eastern and collectivistic culture in much the same way as in a Western and largely individualistic context”. Contrary to these findings in China, Indian scholars, Shukla, and Singh (2015) argued for the need to develop a context-specific PO scale that is ill suited to India’s unique cultural beliefs and value systems, which are different from Western ideologies and concepts.

**Table 13. Conceptualization of PO in association with human needs**

<b>Studies</b>	<b>Needs associated with PO</b>	<b>Need category in the Hierarchy (Maslow, 1954, Taormina and Gao, 2013)</b>	<b>Intrinsic vs. extrinsic factors (Herzberg, 1968, Taormina and Gao, 2013)</b>
<b>Pierce et al., 2001, 2003</b>	Efficacy	Self-actualization	Intrinsic
	Self-identity	Esteem	Intrinsic
	Belongingness	Social	Intrinsic
<b>Avey et al., 2009</b>	Efficacy	Self-actualization	Intrinsic
	Self-identity	Esteem	Intrinsic
	Accountability	Self-actualization	Intrinsic
	Belongingness	Social	Intrinsic
<b>Olckers, 2013</b>	Identity	Esteem	Intrinsic
	Responsibility	Self-actualization	Intrinsic
	Autonomy	Self-actualization	Intrinsic

In the following section, I will present some widely used measures of PO, discuss the dimensions used to measure PO and report a few studies that applied these measures.

### ***4.2.2. Existing Measures of PO***

Many existing measures of PO are based on the foundation of Pierce et al.'s (2001, 2003) view that PO fulfills certain human needs. In addition to the needs suggested by Pierce et al. (2001, 2003), some researchers have continued to investigate other human needs and motivations that could be satisfied by feelings of ownership and incorporated these needs and motivations as subdimensions for measuring PO within an organization (Avey et al., 2009; Olckers, 2013).

#### ***4.2.2.1. The Measure of PO Developed by Van Dyne and Pierce (2004)***

This measure represents the first empirical construct validation for PO in an organizational context (Van Dyne & Pierce, 2004). This PO scale was developed based on the conceptualization of PO by Pierce et al. (2001, 2003), such that possession is emphasized as the basis of the attitudinal measure of the PO construct. It is a one-dimensional measurement scale, and the 7 items included in the scale reflect possessive vocabulary; for example, "That idea was MINE" (Van Dyne & Pierce, 2004). Several studies have confirmed the factorial structure of the measure (e.g., Liu et al., 2012; Sieger et al., 2013) by utilizing either the original 7 items included in the scale or a shortened version containing 3 items (Han et al., 2010) to 6 items (Brown et al., 2014). Furthermore, using this measure, studies have found that PO is related to many work-related outcomes, such as job satisfaction (Mayhew et al., 2007), organizational commitment (Han et al., 2010), and organizational citizenship behavior (Park et al., 2013). Although this measure of PO has been used in several organizational studies, it has also been criticized for failing to incorporate the needs-related components of PO that contribute to its emergence (Avey et al., 2009).

#### *4.2.2.2. The Measure of PO Developed by Avey et al., (2009)*

Avey et al. (2009) also focused on the definition and conceptualization of PO developed by Pierce et al. (2001, 2003) and developed a multidimensional construct that encompasses the needs/motivations of people in organizations that are satisfied by PO. Avey et al. (2009) argued that accountability (the feeling of responsibility) should be included as an additional need that could be fulfilled by PO in addition to the three needs of efficacy, self-identity, and belongingness suggested by Pierce et al. (2001, 2003). These authors further proposed that PO should be considered in two forms and measured accordingly. The first such form is promotive PO, which is measured in terms of the four needs/motivations mentioned, and the second form is preventive-focused PO, which is measured in terms of territoriality (the perception of possession exclusively by oneself) (Avey et al., 2009). Thereby, Avey et al. (2009) posited that PO in organizations may not necessarily be associated with positive behavior that benefits the organization, i.e., promotion-focused PO, and introduced the notion of territoriality to highlight the preventive form of PO, which is reflected by individualistic behavior that focuses more on self-benefit.

The PO measure developed by Avey et al. (2009) consists of 5 dimensions reflected by 16 item indicators. Twelve items measure promotive-focused PO, which is categorized into four dimensions, i.e., efficacy, self-identity, accountability, and belongingness, each of which includes 3 items. The promotive form of PO is therefore conceptualized and measured as a second-order factor. The remaining 4 items measure prevention-focused PO and are included in the unidimensional factor of territoriality. All these items are measured on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Avey et al.'s (2009) model structure has been confirmed by further studies (e.g., Avey et al., 2012; He et al., 2021). These authors' introduction of the two forms of PO (promotive and preventive) to their conceptualization and measure of PO has received much attention (e.g., Singh, 2019). However, Olckers et al. (2017) reported that this measure faces widespread limitations when applied to the South African context and suggested two reasons for the inconsistency. First, these authors argued that this inconsistency is the result of cultural differences, suggesting that feelings of ownership vary according to the context in which the individual operates (Pierce et al., 2003). Second, they noted that the factor structure of the measure developed by Avey et al., (2009) includes only three items under each dimension of the promotive PO, which is at odds with the suggestion of Hair (2010) that at least four items should be included per dimension to reflect the true measure of a construct (Olckers et al., 2017).

#### *4.2.2.3. The Measure of PO Developed by Olckers (2013)*

Building on the arguments mentioned above, Olckers (2013) developed a new measure of PO for application in the South African context. The new measurement instrument developed by Olckers (2013), following Avey et al. (2009), measures both the promotive and preventive forms of PO. The instrument is composed of four dimensions and features 35 items in total, in which context the three dimensions of identity, responsibility, and autonomy include 16, 8, and 6 items, respectively, to measure promotive PO and territoriality includes 5 items to measure preventive PO (Olckers et al., 2017). These authors argued that the dimensions of self-identity and belongingness should be included in one dimension (identity), contradicting Avey et al.'s (2009) argument for the distinctiveness of these two constructs. Studies conducted in South Africa have confirmed the factor structure of Olckers' (2013) measure of PO (Olckers et al., 2017).

#### *4.2.2.4. The Measure of PO Developed by Shukla and Singh (2015)*

These scholars developed a context-based measure of PO that could be applied to the Indian (or Asian) context. These authors argued that the PO construct is based on theory and research and is amenable to change and improvement and that Western ideologies and concepts regarding PO are not well suited for India's unique cultural beliefs and value systems (Shukla & Singh, 2015). Based on this argument, they developed and validated a second-order PO scale that could be applied to India and related contexts; this scale features three first-order factors (affection, connectedness, and obligation) that include four indicators each. Unlike the previous measures of PO discussed, this measure is not based on a conceptualization of PO in association with human needs. Instead, these authors tried to capture the meaning of PO by examining "how one is expected to behave if one has PO for his/her organization" (Shukla & Singh, 2015, p. 234). Recent studies conducted by Shukla (2019) and Ismail and Hilal (2022) confirmed the factor structure of Shukla and Singh's (2015) measure of PO.

Studies have indicated that human needs may not be prioritized uniformly across different contexts due to different frames of reference that determine their order of importance. This study aims to investigate the association between PO and human needs in the East African context with the aim of developing and validating a contextualized measure of PO for use in this region.

### **4.3. SETTING: EAST AFRICA AND ETHIOPIA**

The East Africa region covers 13 countries, including Burundi, Comoros, Djibouti, Ethiopia, Eritrea, Kenya, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania, and Uganda (African Development Bank Group, 2021). Apart from the two island nations in East Africa, i.e., Comoros and Seychelles, the region can be divided geographically into two subregions, namely,

the Great Lakes Region, which includes Uganda, Kenya, Tanzania, Rwanda, and Burundi, and the Horn of Africa, which consists of Ethiopia, Eritrea, Sudan, South Sudan, Djibouti, and Somalia (Ogola et al., 2015). The East African landscape is defined by the Great Rift valley, the source, and the largest stretch of the Nile River, which extends from Ethiopia to Mozambique. This region is also defined by the two highest mountains in Africa, Mount Kilimanjaro in Tanzania, and Mount Kenya in Kenya (Ogola et al., 2015). East Africa is home to the second most populous nation in Africa, Ethiopia, in which nearly 2 million persons reach working age every year (World Bank, 2022). The population of the whole region is young, with more than 62% of the population being younger than 25 years of age (Ogola et al., 2015).

East African countries share common characteristics in terms of economic development, cultural values, and governance. First, East Africa has been the fastest-growing region on the continent and featured the fastest-growing economies, including Ethiopia, Djibouti, Kenya, Rwanda, Tanzania, and Uganda (African Development Bank Group, 2021). Regardless of these fastest-growing economies, the region continues to depend on a narrow range of economic activities, and progress toward industrialization and value-added production remains limited. The industrialization sector is still in its infancy, contributing to less than 15% of GDP on average throughout the region (African Development Bank Group, 2021). The region is highly dependent on rainfall, making it highly sensitive to drought, as it mainly relies on agriculture to feed its increasing population (Haile et al., 2019). As of 2019, the share of the population in the region living in extreme poverty was approximately 33%, which is equivalent to 122 million persons; this number was predicted to increase in several years (African Development Bank Group, 2021).

Second, East African countries share more common cultural values than other countries; for example, these countries exhibit a collectivist society, in which individuals are expected to look after one another (Hofstede, 2011). Furthermore, the cultural orientation of power distance is very high in this region, such that less powerful members (nonmanagement employees) of the organization accept and expect the fact that power is distributed unevenly and favors the most powerful members (leaders) of the organization (Hofstede, 2011). According to Hofstede's insights, the Power Distance Index Scores of countries in this region tend to be higher, i.e., as high as 70 for Ethiopia, Kenya, and Tanzania, which can be compared to South Africa's score of 49 (Hofstede Insights, 2022).

Finally, regarding the leadership and governance of the region, the Mo Ibrahim Foundation index suggests that the annual assessment of the quality of governance in East African countries remains below average, although this trend is slowly improving (Ibrahim Index of African Governance, 2020). The leadership and governance assessment of the Mo Ibrahim Foundation regarding the overall governance of these countries has implications for the leadership practices of organizations (George et al., 2016).

The extant literature on East Africa and the rest of the continent contains information regarding the challenges faced by organizations in the region, but the questions of why these challenges exist and how they are managed have received little attention (Mellahi & Mol, 2015). For example, the rationale underlying employees' behavior in organizations and their work relations remains under-researched (George et al., 2016). Most organizational studies conducted in the region have applied Western theories without modifying them to suit the East African/African context, thus failing to contribute to indigenous knowledge and the task of solving context-specific challenges (Zoogah, 2008). In addition to their contribution to the

African literature, contextualized studies can influence existing theories and generate new theories in management (George et al., 2016). This study tries to identify the needs of individuals that are specific to the East African context and that are associated with their feelings of ownership towards organizations with the aim of contributing to indigenous knowledge regarding the PO of individuals in this context and influencing the existing Western-centric theorization of PO.

Due to the common characteristics that Ethiopia shares with other East African countries, I believe that focusing on the empirical context of Ethiopia is appropriate. To obtain representative samples, I focused on independent samples throughout all the stages of the scale development process and targeted diverse organizations in Ethiopia.

#### **4.4. SCALE DEVELOPMENT**

To develop and validate the measure of PO in this context, I followed the methodological procedures suggested by Hinkin (1995, 2005) and Worthington and Whittaker (2006). Considering the uniqueness of this context, as suggested by Hinkin (1995), I used the inductive approach to develop a list of items that capture PO. Hence, I began the study by searching for employees working in various organizations in the country who are highly recognized by their supervisors and colleagues for their unreserved contributions to the organization. I searched for employees who are known to behave as owners of the organization for which they work, i.e., employees whose actions and behaviors indicate that they work in the organization with a mindset of “it is mine” (Pierce et al., 2001, p. 299). I then conducted the following four studies: Study 1 to generate items, Study 2 to assess the content validity of the items, Study 3 to refine and purify the scale, and Study 4 to validate the scale.

#### ***4.4.1. Study 1: Item Generation***

As mentioned above, I selected 15 highly distinguished employees from different organizations for my sample. I interviewed each of the 15 employees in person for about 2 hours; the interview duration was 1.5 to 3 hours. I used a semi-structured interview format, which included 9 standard questions that asked the interviewees to describe their feelings toward their organizations (Hinkin, 2005) and thus helped me confirm their feelings of ownership. I then posed a follow-up question regarding why they felt and behaved as they did in their workplaces (Furr & Funder, 2018). Based on these interviews, I was able to derive responses constituting a total of 44 items that highlight the diverse needs the respondents believed were met by their organizations and that they identified as the reason for their feelings of ownership toward their organizations. I observed that the needs reported by the respondents could be grouped into five different themes, which I classified as 1) the need to have a trustworthy leader whom they can follow as a role model, 2) the need to have a job that they regard highly, 3) the need to have a mission in life, 4) the need for personal development, and 5) the need to have a better future. In Appendix 1, all 44 response items are listed alongside their respective categories. Finally, based on these categorizations, I was able to identify 5 possible dimensions for the scale, which I labeled imitating the leader, sharing the mission, passion for the job, chance for personal development, and future-oriented thinking.

#### ***4.4.2. Study 2: Content Validity and Reliability Assessment***

Subsequently, I approached 35 university lecturers and assistant professors working in different fields, including management, economics, psychology, and other social sciences. I first confirmed that these academicians had experience in the scale development process. After

providing them with the conceptual definitions of the 5 dimensions and presenting the scale items in a random order, I asked them to sort the items into their appropriate categories to determine which items best reflected each of the five dimensions by rating each item on a scale ranging from 1 (does not fit at all) to 5 (fits very well). The purpose of this study was to determine the extent to which the academicians' view of each item reflected the content domain of the underlying dimension (Worthington & Whittaker, 2006) that I originally classified.

Their responses led to deletion of some items, resulting in a final pool of 25 items that captured the proposed content domains of the 5 dimensions most effectively, including 5 items in each dimension. In addition, in this study, I examined the Cronbach's alpha values of each dimension to test their reliability, and all dimensions demonstrated acceptable values:  $\alpha=.96$  for imitating the leader,  $\alpha=.95$  for sharing the mission,  $\alpha=.95$  for passion for the job,  $\alpha=.96$  for a chance for personal development, and  $\alpha=.92$  for future-oriented thinking.

#### ***4.4.3. Study 3: Scale Purification***

The scale purification study focused on a sample of 230 employees who were also attending studies for an MBA or related programs at 6 different universities throughout the country. In this study, I prepared a survey questionnaire including the 25 items under their respective dimensions, and study participants were asked to evaluate each item on a 6-point Likert scale ranging from 1 (strongly disagree) and 6 (strongly agree). I recruited the study participants by going to their classrooms when their class ends and requesting them to complete the questionnaire; in this way, I was able to achieve a 100% response rate. The average age of our participants was 35 years, and 32% of the participants were female.

Exploratory factor analysis (EFA) was conducted for this study to produce an agreeable factor model before conducting confirmatory factor analysis (CFA), as recommended by scale

development researchers (Worthington & Whittaker, 2006). I used Mplus software to conduct the EFA using a goemin rotation, for the benefit of getting more satisfactory solutions as recommended by Hattori et al., (2017). The EFA initially resulted in a five-factor solution based on eigenvalues. On further analysis, some items were removed based on their factor loadings. I followed Tabachnick and Fidell's (2007) suggestion by retaining items with factor loadings of 0.3 and above to minimize the risk of eliminating items prematurely. Through this process, the deletion of items led to the exclusion of the dimension chance for personal development from the model. After the rejection of one factor, the model confirmed a four-factor solution based on eigenvalues greater than 1. In addition, there was a significant chi-square difference between the four-factor solution and a three-factor solution ( $\Delta\chi^2(17) = 221, p < .001$ ) (Brown, 2015). The EFA results are summarized in **Table 14**.

**Table 14. Exploratory factor analysis (EFA) results: Study 3**

<b>Dimensions and Items</b>	<b>Geomin rotated loadings</b>
<b>Imitating the leader</b>	
I want to behave like my leader.	.65
I am inspired by my leader.	.90
I believe that my leader is my role model.	.95
I follow my leader.	.86
I perceive my leader works hard.	.77
<b>Sharing the mission of the organization</b>	
I believe in the mission of the organization.	.67
I share the mission of the organization.	.37
I try my best to help the organization live up to its mission.	.75
It was my dream to work for this organization.	.92
I look for ways to contribute to this organization.	.72
<b>Passion for the job</b>	
I enjoy working hard.	1.0
I get disappointed when I work less.	.85
I love my job/my profession.	.64
I have much respect for my job.	.42

I believe that respecting one's job/profession is respecting oneself.	.50
<b>Future-oriented thinking</b>	
I don't want to miss another opportunity by ruining what I already have today.	.76
I am hopeful for the future of the organization.	.64
I have a chance of achieving a higher position in this organization.	.75
I have a chance of developing my career/profession in this organization.	.84
I believe I will have my own business soon or later.	.77
	<b>N = 230</b>

#### 4.4.4. Study 3: Confirmation of Scale Structure

In Study 3, I conducted CFA using Mplus 8.8 to confirm the final structure of the proposed scale and to verify that the four factors captured the appropriate dimensions of PO. After the deletion of one item from the dimension sharing the mission, overall goodness-of-fit indicated that the data fit the model well ( $\chi^2(144) = 253.66, p = .00$ ; root mean square error of approximation (RMSEA) = .058; confirmatory fit index (CFI) = .96; and standardized root-mean-square residual (SRMR) = .04) (Hu & Bentler, 1999). Apart from one item with the lowest factor loading (.56,  $p < .01$ ), all items loaded significantly on their respective dimensions at a value greater than .65 ( $p < .01$ ), and more than half of the items loaded between .80 and .95. The four factors also correlated with each other. The CFA results are summarized in **Table 15**.

Subsequently, I conducted a second-order CFA to verify that the four factors loaded on the construct of psychological ownership. This second-order model yielded satisfactory overall goodness of fit statistics ( $\chi^2(146) = 273.9, p = .00$ ; RMSEA = .06; CFI = .96; and SRMR = .06). The factor loadings of the four 1st-order factors on the latent construct PO are presented alongside the other factor loadings in **Table 15**.

**Table 15. Confirmatory factor analysis (CFA) results: Study 3**

Dimensions and Items	Item means	Four-factor model		One-factor model	
		Factor loadings	z-scores	Factor loadings	z-scores
<b>Imitating the leader</b>					
I want to behave like my leader.	3.75	.71	20.7	.52	9.8
I am inspired by my leader.	3.96	.93	77.0	.58	11.7
I believe that my leader is my role model.	3.66	.95	98.6	.58	11.7
I follow my leader.	3.73	.88	51.7	.58	11.9
I perceive my leader works hard.	4.27	.78	28.0	.55	10.8
<b>Sharing the mission of the organization</b>					
I believe in the mission of the organization.	5.35	.71	17.4	.49	9.1
I share the mission of the organization.	4.78	.56	10.8	.40	6.9
I try my best to help the organization live up to its mission.	5.12	.78	21.8	.61	13.3
I look for ways to contribute to this organization.	5.41	.73	18.8	.54	10.9
<b>Passion for the job</b>					
I enjoy working hard.	4.96	.85	34.5	.74	21.6
I get disappointed when I work less.	5.06	.83	30.9	.76	23.7
I love my job/my profession.	5.17	.81	29.3	.68	16.7
I have much respect for my job.	4.24	.65	15.3	.63	14.8
I believe respecting one's job/profession is respecting oneself.	4.95	.83	31.2	.75	22.5
<b>Future-oriented thinking</b>					
I don't want to miss another opportunity by ruining what I already have today.	4.85	.84	35.1	.75	22.3
I am hopeful for the future of the organization.	4.66	.68	17.1	.59	12.8
I have a chance of achieving a higher position in this organization.	4.95	.74	21.6	.68	17.8
I have a chance of developing my career/profession in this organization.	4.76	.76	23.4	.67	16.6
I believe I will have my own business soon or later.	4.64	.89	44.1	.77	24.6
<b>Psychological ownership (Higher-order construct)</b>					
Imitating the leader		.44	7.1		
Sharing the mission of the organization		.79	19.1		
Passion for the job		.97	27.4		
Future-oriented thinking		.74	16.0		

To assess the appropriateness of the second-order model of PO including four dimensions in further detail, I compared the goodness of fit of the proposed second-order PO model to those of

a single-factor model (first-order model) and other alternative 3-factor models that represented all possible combinations of the four dimensions. The goodness of fit statistics for all the models is presented in Table 4. The four-factor PO model demonstrated a significant improvement in overall fit over the single-factor model ( $\Delta\chi^2(4) = 1062.45$ ,  $p < .001$ ) and all the alternative models presented (see **Table 16**).

**Table 16. Comparison of the four-factor contextualized PO model with alternative models:**

**Study 3**

Models	Factors	$\chi^2$	df	$\Delta\chi^2$	RMSEA	CFI	SRMR
<b>Model 1</b>	4 factors as dimensions of contextualized PO (Second-order model)	273.9	146		.06	.96	.06
<b>Model 2</b>	All items loading to a single contextualized PO factor (One-factor model)	1316.12	150	1062.45*	.18	.62	.13
<b>Model 3</b>	3 factors as dimensions of contextualized PO (SH, FU, IM&PA merged)	773.44	147	499.53*	.14	.80	.18
<b>Model 4</b>	3 factors as dimensions of contextualized PO (PA, FU, IM&SH merged)	692.09	147	418.18*	.12	.85	.16
<b>Model 5</b>	3 factors as dimensions of contextualized PO (PA, FU, IM&FU merged)	723.61	147	449.7*	.13	.81	.16
<b>Model 6</b>	3 factors as dimensions of contextualized PO (IM, SH, PA&FU merged)	453.29	147	179.4*	.095	.90	.06
<b>Model 7</b>	3 factors as dimensions of contextualized PO (IM, FU, PA&SH merged)	324.45	147	50.54*	.07	.94	.05
<b>Model 8</b>	3 factors as dimensions of contextualized PO (IM, FU, PA&SH merged)	458.89	147	180.98*	.096	.90	.075

IM = Imitating the leader, SH = sharing the mission, PA = passion for the job, FU = future-oriented thinking

\* $p < .001$

I further computed the average variance extracted (AVE) for each factor. As recommended by Fornell and Larcker (1981), the AVE for each factor exceeded the cutoff point (.5). Discriminant validity among the four factors was also assessed, in which context the AVE

for each factor exceeded the squared correlation between the focal construct and each of the other latent constructs. The discriminant validity analysis results are presented in **Table 17**, with the square root of the AVE shown in brackets on the diagonal of the correlation matrix. As the results suggest, each factor explains more unique variance than shared variance with any of the other factors, thus providing evidence of discriminant validity among the four dimensions of the scale.

**Table 17. Descriptive statistics, correlations, and discriminant validity: Study 3**

<b>Factors</b>	<b>Mean</b>	<b>SD</b>	<b>AVE</b>	<b>Mimicking the leader</b>	<b>Sharin g the mission</b>	<b>Passion for the job</b>	<b>Future-oriented thinking</b>
Imitating the leader	3.88	.17	.74	(.86)			
Sharing the mission	.03	.62	.62	.38	(.79)		
Passion for the job	.19	.07	.53	.24	.70	(.73)	
Future-oriented thinking	.55	.09	.56	.48	.70	.60	(.75)

*Note:* In brackets are the square-root of the AVE values for each factor.

In addition, I viewed the task of evaluating common method bias as important and employed a statistical remedy to ensure that common method variance (CMV) did not affect the findings (Podsakoff et al., 2003). I used a partial correlation method by including a marker variable (fashion advertising involvement measurement scale) that was theoretically distinct from the other factors included in the model (Podsakoff et al., 2003). Therefore, in the questionnaire, the marker variable items were incorporated along with the other items. I found less than 1% variance amongst all the items and the newly included marker variable, thus indicating that there was no significant common method bias in the model.

#### ***4.4.5. Study 4: Scale Validation***

##### ***4.4.5.1. Comparison to the Previous Measure***

In Study 4, I compared the new measure with the previous measure of PO developed by Avey et al. (2009) for two purposes. First, I intended to determine whether the dimensions of the two measures were significantly correlated with the aim of verifying the convergent validity of the new measure. Second, I intended to investigate whether the newly developed measure exhibited better psychometric properties than the existing measure to ensure that the new measure would represent an improvement regarding the context of the study.

Data was collected from a sample of 351 postgraduate students studying MBA and related programs in 9 different universities in Ethiopia. These students also worked full-time for different organizations. Survey questions were set in English, as English was the language of instruction at all the universities in which the working students were registered. The participants were then asked to respond to the newly developed 19-item, four-dimensional PO scale and the 12-item, four-dimensional PO scale of Avey et al., (2009). I included other measures that could be used for further validity study in the questionnaire. I distributed and collected the questionnaire by approaching the students in their classrooms at the end of lectures, and a 100% response rate was achieved. The average age of the participants in this study was 35, and over half of the participants were in the age group ranging from 30 to 40 years. A total of 55% of the participants had 5 years or more tenure in their organizations. 34% of the participants were females.

The results show that all the dimensions of the newly developed PO scale were significantly correlated with all the dimensions of the existing PO scale of Avey et al., (2009). The correlation scores support the convergent validity of the new scale, suggesting a very good

convergence between the old and the new PO scales (Carlson & Herdman, 2012). **Table 18** includes the correlation scores between the dimensions of the two scales.

**Table 18. Correlation scores of the contextualized PO and existing PO dimensions: Study 4**

Dimensions	1	2	3	4	5	6	7	8
<i>Existing PO</i>								
<b>1. Efficacy</b>	1.00							
<b>2. Self-identity</b>	.55*	1.00						
<b>3. Accountability</b>	.56*	.62*	1.00					
<b>4. Belongingness</b>	.36*	.79*	.58*	1.00				
<i>Contextualized PO</i>								
<b>5. Imitating the leader</b>	.20*	.54*	.37*	.54*	1.00			
<b>6. Sharing the mission</b>	.58*	.72*	.56*	.55*	.36*	1.00		
<b>7. Passion for the job</b>	.57*	.54*	.51*	.42*	.21*	.64*	1.00	
<b>8. Future thinking</b>	.44*	.70*	.55*	.69*	.51*	.59*	.42*	1.00

\* $p < .001$

Subsequently, I conducted second-order CFAs (Confirmatory Factor Analysis) on the two PO scales separately using Mplus 8.8. According to the CFA output, the new measure was found to have better overall goodness of fit ( $\chi^2(142) = 312.8, p = .00$ ; RMSEA = .059; CFI = .96; and SRMR = .06) than the previous measure developed by Avey et al.'s (2009) ( $\chi^2(49) = 178.9, p = .00$ ; RMSEA = .087; CFI = .946; and SRMR = .06). This finding suggests that while the previous measure is not fundamentally weak, the new scale provides a stronger and more psychometrically reliable measure of PO in the context of East Africa.

#### 4.4.5.2. *Nomological and Discriminant Validity*

In this study, I next tested the nomological and discriminant validity of the new scale to determine whether it was related to but distinct from theoretically related constructs. Pierce et al. (2001) argued that PO is related to but conceptually distinct from the organizational commitment

construct. Sieger et al. (2011) further reported evidence to support the distinction between PO and job satisfaction. In addition to these measures, I also viewed it as important to explore the nomological network of PO, including both its antecedent – leader humility (Owens et al., 2013; Wang et al., 2018) – and its outcome – organization-based citizenship behavior (Lee & Allen, 2002). Studies have examined the role played by leaders in influencing the development of employees' PO in organizations and the consequences of PO on different organizational behaviors, including organizational citizenship behavior (Bernhard & O'Driscoll, 2011; Dawkins et al., 2017).

To test this possibility, as mentioned earlier, I included measures of affective organizational commitment, job satisfaction, leader humility, and organizational citizenship behavior in the survey questionnaire I used for Study 4. Affective organizational commitment was assessed using an instrument developed by Rhoades et al. (2001). Responses were made on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). A sample item from the scale is "I feel a strong sense of belonging to my organization." Job satisfaction was measured using Konrad et al.'s (1999) global job satisfaction scale. Responses were made on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). The CFA output suggested that two reverse-scored items should be excluded from the job satisfaction scale. A sample item from the global job satisfaction scale is "Overall, I am pleased with my work." I used Owens et al.'s (2013) measure of leader humility, which is scored a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is "My leader actively seeks feedback, even if it is critical." To assess organization-based citizenship behavior, I used the instrument developed by Lee and Allen (2002). Responses were made on a 7-point

Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). A sample item of the scale is "I offer ideas to improve the functioning of the organization".

**Table 19** presents descriptive statistics and reliability scores for the newly developed contextualized measure of PO, its dimensions and other related constructs, and **Table 20** summarizes the correlations among these constructs. The new PO scale, including all its dimensions, is significantly correlated ( $p < .001$ ) with the measures of affective organizational commitment, job satisfaction, leader humility, and organizational citizenship behavior. Overall, the sizes of these correlations suggest that these scales measure distinct but related constructs, hence confirming the discriminant validity of the scale. These findings also demonstrate that the newly developed PO can reliably be measured as a second-order factor comprised of the four dimensions.

**Table 19. Descriptive statistics and reliability scores of contextualized PO, its dimensions, and related constructs: Study 4**

Constructs	Mean	SD	Items	Cronbach's alpha
Contextualized PO	4.74	.89	19	.74
<i>Imitating the leader</i>	3.89	1.42	5	.92
<i>Sharing the mission</i>	4.78	1.04	4	.92
<i>Passion for the job</i>	5.11	.85	5	.83
<i>Future-oriented thinking</i>	4.49	1.08	5	.79
Affective organizational commitment	3.69	1.02	6	.91
Job satisfaction	3.38	.84	3	.76
Leader humility	3.48	1.14	9	.95
Organizational citizenship	5.33	1.85	8	.93

**Table 20. Correlation coefficients of contextualized PO, its dimensions and related constructs: Study 4**

Constructs	1	2	3	4	5	6	7	8	9
<b>1. Contextualized PO</b>	<b>1.00</b>								
<b>2. Imitating the leader</b>	<b>.60*</b>	<b>1.00</b>							
<b>3. Sharing the mission</b>	<b>.77*</b>	<b>.47*</b>	<b>1.00</b>						
<b>4. Passion for the job</b>	<b>.56*</b>	<b>.33*</b>	<b>.44*</b>	<b>1.00</b>					
<b>5. Future-oriented</b>	<b>.79*</b>	<b>.48*</b>	<b>.61*</b>	<b>.45*</b>	<b>1.00</b>				
<b>6. Commitment</b>	<b>.84*</b>	<b>.51*</b>	<b>.65*</b>	<b>.47*</b>	<b>.66*</b>	<b>1.00</b>			
<b>7. Job satisfaction</b>	<b>.76*</b>	<b>.46*</b>	<b>.59*</b>	<b>.43*</b>	<b>.60*</b>	<b>.82*</b>	<b>1.00</b>		
<b>8. Leader Humility</b>	<b>.64*</b>	<b>.39*</b>	<b>.49*</b>	<b>.36*</b>	<b>.51*</b>	<b>.55*</b>	<b>.54*</b>	<b>1.00</b>	
<b>9. Citizenship</b>	<b>.74*</b>	<b>.45*</b>	<b>.57*</b>	<b>.42*</b>	<b>.59*</b>	<b>.72*</b>	<b>.57*</b>	<b>.48*</b>	<b>1.00</b>

*\*p<.001*

In addition, I compared the correlation scores of the two measures of PO, i.e., the existing measure and the contextualized measure, with the related constructs and found that the contextualized PO exhibits an improved correlation level compared to the existing PO. The results indicate that contextualized PO shows only a slight improvement when correlated with organizational affective commitment and organizational citizenship behavior but a dramatic improvement when correlated with job satisfaction and leader humility (see **Table 21**).

**Table 21. Comparison of correlation levels of the contextualized PO vs the existing PO with related constructs**

	Affective commitment	Job satisfaction	Leader humility	Organizational citizenship
Existing PO	.82*	.69*	.51*	.73*
Contextualized PO	.84*	.76*	.64*	.74*

*\*p<.001.*

## 4.5. DISCUSSION

Scholars have suggested that cross-cultural differences should be considered when examining the formation and effect of PO in organizations (Dawkins et al., 2017; Pierce et al., 2001); in particular, with regard to the further development of the theory, they have recommended that researchers should investigate the nature of the needs that PO serves (Pierce et al., 2001). Moreover, studies have indicated that context influences human needs and determines the prioritization of needs (Adler & Gundersen, 2002). Based on these suggestions and the conceptualization of PO as a construct that is associated with contextualized human needs, I designed the study to focus on a non-Western setting, i.e., East Africa, and developed an East Africa-centric measure of PO.

During the scale development process, I identified human needs specific to this context and included them as dimensions of the contextualized measure of PO. These needs are focused on the following factors: 1) the individual's leader/supervisor (the need to have a trustworthy leader who functions as a role model – imitating the leader), 2) the job (the need to have a secure and meaningful job – passion for the job), 3) the mission of the organization (the need to be part of the mission – sharing the mission), and 4) the future of the individual (the need to have a better future – future-oriented thinking). I believe that the needs thus identified are well suited for the context of the study and capture the true meaning of PO in such a context.

The needs identified in this context, particularly the need to have a trustworthy leader and the need to have a better future, highlight the unique characteristics of the context. First, it is a context featuring high 'power distance,' such that employees of an organization perceive that their leaders are unreachable and untrustworthy (Hofstede, 2011). Such contexts are characterized by leaders who expect others to follow them without involving those others in

decision-making (Fisher, 2014). Furthermore, the quality of governance scores in this region is below average (Ibrahim Index of African Governance, 2020), which also has implications for the leadership of organizations (George et al., 2016). These factors indicate much work is needed to secure employees' trust in top managers. Hence, in such situations, one can assume that the need to have a trustworthy leader who can serve as a role model for employees could be one of the most important needs of employees in organizations. Both previous studies and anecdotal evidence have suggested that ethical managers in all organizations can serve as role models for lower-level employees (George et al., 2016).

Second, although East Africa represents the fastest-growing economy in Africa, it suffers from high unemployment rates and rapid population growth (World Bank, 2022). As most of the population in this region is young and is currently reaching working age, it is reasonable for people in such contexts to prioritize their need for a better future. The increasing number of members of the working population in East Africa is not only a challenge but can also promote the search for entrepreneurial opportunities (George et al., 2016). When examining employees' rationales for their psychological ownership toward the organization for which they work, I received the following response from one interviewee: "I work in this organization as if it is my own because I believe I will have my own business sooner or later" (see Appendix I). This implies that the 'future' of the individual in the need for a better future is not necessarily with the organization, it can be with his/her own business. The study shows that employees in this context associate their feelings of ownership (PO) with their safety needs, which are represented by the two needs just discussed. Researchers in the field of motivation theory have suggested that safety needs include the need for trustworthy leadership, job security, and financial security (Taormina & Gao, 2013).

The remaining two needs identified in this study, i.e., the need to have a meaningful job and the need to be part of the mission of the organization, show that individuals in such contexts can also associate PO with the need to contribute to something outside of themselves, i.e., the need for self-actualization (Taormina & Gao, 2013). This need can emerge either after they have fulfilled their safety needs at an appropriate level (Kaufman, 2018) or, in some cases, without regard for the existence of unmet safety needs (Bridgman et al., 2019).

By conducting the four studies, I establish that the contextualized measure has a four-dimensional scale structure (consisting of the four identified needs of individuals in this context) and verify convergent, discriminant, and nomological validity. I evaluate the generalizability of the measure by testing its validity with reference to a diverse selection of samples drawn from different organizations.

#### ***4.5.1. Theoretical Contributions***

This contextualized measure is a way of addressing the call for research to investigate the formation and effects of PO in diverse cultural contexts (Dawkins et al., 2017). To my knowledge, this paper presents the first contextualized measure of PO to incorporate the prioritized needs of individuals in the East African context. I believe this measure's formulation can enable researchers to investigate PO, its antecedents, and influences in organizations in this context.

In addition to the contextualized measure, this study contributes to PO literature by discovering human needs associated with PO and thus providing novel insights into the conceptualization of PO in organizations. Unlike the Western context, in which PO is known to fulfill mainly the higher-order needs of individuals, in this context, the fulfillment of both safety needs (lower-order) and self-actualization needs (higher-order) facilitate the development of PO.

Finally, this study contributes to the literature on human needs and motivations in organizations by providing empirical evidence for existing theories that posit that cultural and economic contexts determine what people need and how they prioritize their needs (Adler & Gundersen, 2002).

#### ***4.5.2. Managerial and Policy Implications***

Following the suggestion of Mellahi and Mol (2015, p. 201) that “literature needs to move away from merely considering Africa to be a challenging place to do business towards studying how firm strategies in Africa are actually created and implemented”, I suggest two managerial and policy implications for organizations in this region. First, this study provides managers with contextualized PO, thus enabling them to observe the links between the PO of individuals and their context-specific needs. Managers should include the development of the PO of individuals within the organization in their human resource management as a central focus and should persistently search for strategies to secure the PO of employees by satisfying the needs associated with PO.

Second, the findings from this study indicate that the need for a trustworthy leader is prioritized in this context. Lower-level employees in this context appreciate leaders trustworthy about their coworkers and the organization. They consider such leaders to be role models and want to follow them to the extent that they develop PO toward the organization. This situation suggests a very important implication for managers/supervisors; namely, if they want to achieve the desired success in organizations, they should be leaders who are trustworthy and who can serve as role models for their subordinates. Furthermore, it should be the policy of organizations to search for and appoint leaders with these qualities at all levels.

#### **4.6. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

Despite these contributions, this study also faces certain limitations. First, although I was able to include employees from different organizations throughout the country, I used the convenience sampling approach, which might put the generalizability of the results in question. In addition, this research is cross-sectional; hence, the results capture only a glimpse of PO at a single point in time. Thus, future research on ways of contextualizing PO could adopt a longitudinal research design, as the needs of individuals and their prioritization of those needs could change over time.

Second, I did not incorporate the preventive side of PO in the study, and I focused on and developed a contextualized measure of promotive PO. I believe that contextualizing preventive PO could provide insights into some unfavorable work behaviors exhibited by employees; therefore, I recommend that future research should consider developing a contextualized measure of preventive PO.

Finally, I believe that this research can encourage future researchers to investigate the association between context-specific needs and PO in various unexplored contexts. Furthermore, this research can promote further discussion of the development of PO in organizations, whether PO fulfills human needs, whether fulfilled human needs facilitate the development of PO, and whether this relationship goes in both directions.

#### **4.7. CONCLUSION**

Psychological ownership is contextualized and measured in the East African context. A contextualized measure of PO that incorporates context-specific human needs is developed and validated for use in this context. This measure provides a multidimensional and comprehensive perspective on PO in organizations that can be applied in this and related contexts.

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## **CHAPTER 5. GENERAL DISCUSSION**

### **5.1. OVERALL CONTRIBUTION OF THE DISSERTATION**

This dissertation contributes to the literature on psychological ownership in organizational settings. While the current literature on PO has mainly focused on organization-level factors for the development of PO, this dissertation moves the discussion to individual-level factors. The following new individual-level antecedents to PO are introduced in the study: temporal focus and workplace spirituality. Through the introduction of these individual-level factors, this study explains why employees might develop prevention-focused PO, despite the effort organizations are making to trigger promotion-focused PO in employees.

In addition, this dissertation further contributes to PO literature by introducing context-specific outcomes of PO. Considering the long-rooted patriarchal system in Ethiopia (Haile, 2018), this study investigates the influence of PO in determining the attitudes of employees toward women in management, as it is one of the critical changes occurring in contemporary Ethiopian organizations. In addition, in previous PO studies, attention was given to promotion-focused PO, while little was known about the role of prevention-focused PO. This dissertation addresses this gap by identifying the antecedents and outcomes of prevention-focused PO. Furthermore, this dissertation contributes to PO literature by introducing the mediating role of PO in explaining certain relationships in organizational settings. Finally, in this dissertation, a contextualized measure of PO that applies to the context of Ethiopia and related contexts is developed and validated.

The findings of this dissertation also have implications for literature on temporal focus. Although temporal focus has been linked with many employee behaviors in earlier literature

(Shipp & Aeon, 2019), this dissertation is the first to explore the relationship between temporal focus and PO. Additionally, this study contributes to the temporal focus literature by identifying its indirect effect on critical changes in organizations, i.e., attitudes of employees toward women in management, through the mediation of PO.

This dissertation further contributes to the literature on workplace spirituality and entrepreneurship. Different from earlier studies on the role of spirituality in entrepreneurship, which mainly focused on the motivating role of spirituality on entrepreneurs who start their firms (Block et al., 2020), this study contributes to the entrepreneurship literature by showing that entrepreneurial behavior among employees in established organizations is also influenced by workplace spirituality. This finding strengthens the finding that entrepreneurial behaviors and activities in established firms can be influenced by the religiosity of employees (Farrukh et al., 2020). Farrukh et al. (2020) focused on the relationship between religiosity and entrepreneurial behavior in established organizations but did not use PO to explain the rationale behind the relationship. This dissertation introduces PO as the missing link that mediates the relationship between employee workplace spirituality and employee entrepreneurial behavior. Additionally, the paper contributes to the spirituality and religiosity literature through the development of the novel workplace spirituality measurement scale, which is unique to the context of the study where religion and spirituality are considered integrated concepts.

## **5.2. PRACTICAL IMPLICATIONS**

The antecedents and consequences of PO in an organizational setting suggest that PO is influenced by the behaviors of employees in the workplace and plays a vital role in influencing and explaining the behaviors of employees. PO not only results in desirable employee behaviors in organizations but also explains why some employees exhibit desirable behavior while others

exhibit the opposite. For this reason, managers should pay attention to employee PO toward their organizations and strive to nurture such ownership feelings to obtain the best results for the organization's success. Managers should understand the individual-level antecedents to PO and identify employees who possess characteristics of these antecedents. The identification of such types of employees helps managers develop ways for employees to experience feeling of ownership toward their organization, which leads them to perform the desired behavior in the organization, including entrepreneurial behavior and behavior that embraces and promotes positive changes in the organization.

Furthermore, since context determines the development of the PO of individuals, organizations should be aware of the context-specific factors that contribute to the development of employee PO and work toward that. In this dissertation, in addition to the context-specific factors that influence PO at an individual level, the dimensions that measure PO in a specific context are also identified. Among these dimensions is the role of leaders at all managerial levels in the organization in determining the PO experienced by individuals. This strongly implies that managers at all levels must lead by being role models that display feelings of ownership toward the organization they work for; hence, their subordinates will follow. In addition, organizations should consider assigning individuals who have PO toward the organization to managerial positions.

### **5.3. ETHICAL CONSIDERATION**

Many research participants were involved throughout the study. Before conducting the study, full consent was obtained from the participants, and the true aims and objectives of the research were communicated to all participants. Furthermore, the anonymity of the participants is ensured.

The dissertation is communicated with transparency, and all the preprimary data findings are represented appropriately. The affiliations of the researchers who participated in the study are declared.

#### **5.4. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

This dissertation is not without limitations. First, the research design throughout all the papers is cross-sectional, which might result in the problem of common method bias. A test of common method bias was conducted to minimize this problem. However, future researchers should consider using a longitudinal design and collecting information by involving various participants to understand the hypothesized relationships over time. Using a longitudinal design will be important because psychological characteristics are prone to change over time.

Second, although the antecedents and outcomes of prevention-focused PO are covered in the dissertation, further investigation is still needed. Future researchers are encouraged to investigate employees' territorial behavior and its outcomes in organizations. Specifically, future research can investigate the effect of prevention-focused PO on the entrepreneurial behavior of employees and other pro-organizational behaviors of employees. The mediating and/or moderating role of prevention-focused PO among employee behavior in organizations can also be investigated in future research.

Third, the PO experienced by employees at different hierarchical levels in organizations (for example, employees' PO at the managerial level vs. non-managerial level), across various organizations (for example, employees' PO at privately owned organizations vs. government-owned organizations), and across various industries needs further investigation. Future researchers can compare the PO experienced by individuals across diverse groups and investigate

the rationale for the differences. Specifically, in contexts such as Ethiopia, where there are various government organizations, investigation of the ownership feelings of individuals working in government-owned organizations and comparison with the ownership feelings of individuals working in privately owned organizations will be a step forward toward understanding employee behaviors in government organizations.

Finally, since there are no nationwide registers containing the full information of all employees in the country exist in Ethiopia, the dissertation applied convenience sampling techniques using data from full-time employed individuals working in various organizations in Ethiopia, that were part-time postgraduate students enrolled in different universities within the country. Future research should target a wider range and a more representative sample of employed individuals who have different occupational and educational levels, when investigating the hypothesized relationships in the study.

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## Appendices

### Appendix 1: Generated items for the workplace spirituality scale

1. I work in this organization loyally because I believe being loyal pays me back.
2. I work responsibly in this organization because I believe in the golden rule, "treat others as you would wish to be treated".
3. I am raised and trained to be ethical everywhere I go.
4. In my religion, I am taught to work hard as if I am working for myself.
5. I believe that my religious leaders expect me to do the right thing.
6. Giving out all the good I have (knowledge, skill, helping others.) makes me satisfied in life.
7. My conscience drives me to work loyally in this organization.
8. By contributing to this organization, I am contributing to my community.

## Appendix 2: Interview response items classified

Response items	Categories
1. I believe that I learn the easiest way to do work from my leader.	Need to have a leader they can trust and follow as a role model.
2. I believe that my leader has good manners.	
3. I want to behave like my leader.	
4. I am inspired by my leader.	
5. I believe that my leader is my role model.	
6. I have noticed my leader working with low-level workers.	
7. I perceive my leader works hard.	
8. I follow my leader.	
9. I feel that my leader expects a lot from me.	
10. I want to make my leader proud of me.	
11. I get support from my leader to become a better person.	
12. I want to be supportive of others like my leader is for me.	
13. I enjoy working hard.	Need to have a job they highly regard.
14. I get disappointed when I work less.	
15. I love my job/my profession.	
16. I have much respect for my job.	
17. I believe respecting one's job/profession is respecting oneself.	
18. I believe that I have inherited a habit of working hard from my ancestors.	
19. I am inspired by my family members who are very hard-working.	
20. I am used to working hard since my childhood.	Need to live up to the mission of the organization.
21. I have been part of the organization since its inception/establishment.	
22. I believe in the mission of the organization.	
23. I have seen the organization grow.	
24. I feel the fate of the organization is in my hand.	
25. I look for ways to contribute to this organization.	
26. I share the mission of the organization.	
27. I try my best to help the organization live up to its mission.	
28. It was my dream to work for this organization.	
29. I have always wanted to work in this job/profession.	
30. I am a product of this organization.	Need for personal development.
31. I have gained a lot in this organization.	
32. I learned a lot of skills for free in this organization, other than my profession.	
33. I am exposed to meeting many important people in this organization.	
34. I am able to have networks of people through this organization.	

35. I developed confidence in working in my profession in this organization.	
36. I got opportunities to develop my career/profession in this organization.	
37. I am able to make friends and socialize in this organization.	
38. I want to be a better person in the future by achieving what I am expected to in life.	Need to have a better future.
39. I don't want to miss another opportunity by ruining what I already have today.	
40. I am hopeful for the future of the organization.	
41. I want to make my family members /my relatives proud who expect me to attain a higher position in life.	
42. I have a chance of achieving a higher position in this organization.	
43. I have a chance of developing my career/profession in this organization.	
44. I work in this organization as if it is my own because I believe I will have my own business soon or later.	